Thesis and Dissertation Guidebook

By Thomas Syre Jr. & Thomas Syre Sr.

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Thesis and Dissertation Guidebook

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About the First Edition Authors

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Thomas Syre Sr. is a retired Associate Professor of Health Care Administration from James Madison University. In retirement, he has periodically visited Ethiopia to lecture, edit master's theses and doctoral dissertations, and advise students in MPH and Ph.D. programs at Haramaya University and the University of Gondar. His diplomas include a B.S.Ed., MPH, and Ph.D. He resides in Virginia.

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Background on Pan African University

Pan African University (PAU) is the culmination of Africa's continental initiatives of the Commission of the African Union to revitalize higher education and research in Africa. It is a project that exemplifies excellence, enhances the attractiveness and global competitiveness of African higher education and research, and further establishes the African University at the core of Africa's agrarian, social, technological, and economic development.

Pan African University's mission is to greatly boost Africa's quality of life; to retain high-level human resources; to provide quality knowledge outputs and attract the best intellectual capacity within Africa and from around the world.

Institutes

The headquarters of PAU is located in Addis Ababa, Ethiopia, the home of the African Union. PAU consists of Institutes hosted in five geographic regions of Africa (East, North, West, Central, South). As of 2018, the Institutes of the Pan African University are hosted and supported as follows:

Eastern Africa: PAU Institute for Basic Sciences, Technology and Innovation (PAUSTI) at the Jomo Kenyatta University of Agriculture and Technology, Nairobi, Kenya. This Institute offers the following degrees and academic disciplines:

Master's Degree (M.Sc.)
Master in Molecular Biology and Biotechnology
Master in Mathematics Financial Option
Master in Mathematics Computational Option
Master in Mathematics Statistics Option
Master in Civil Engineering Structural option
Master in Civil Engineering Arid and Semi-Arid Land option
Master in Electrical Engineering Telecommunications option
Master in Electrical Engineering Power Systems option
Master in Mechatronic Engineering
Master in Mechanical Engineering

Doctoral Degree (Ph.D.)
Ph.D. in Molecular Biology and Biotechnology
Ph.D. in Mathematics Financial option
Ph.D. in Mathematics Computational option
Ph.D. in Mathematics Statistics option

Ph.D. in Electrical Engineering Telecommunications option
Ph.D. in Electrical Engineering Power Systems option

Northern Africa: PAU Institute for Water and Energy Sciences (including Climate Change) (PAUWES) at the Abou Bekr Belkaid University of Tlemcen, Algeria. This Institute offers for following degrees and academic disciplines:

Master's (M.Sc.)
Master in Energy Engineering
Master in Energy Policy
Master in Water Engineering
Master in Water Policy

Western Africa: PAU Institute for Life and Earth Sciences (including Health and Agriculture) (PAULESI) at the University of Ibadan, Nigeria. This Institute offers the following degrees and disciplines:

Master's Degree (M.Sc.)
Master in Geosciences Mineral Exploration
Master in Geosciences Mineral Exploration
Master in Reproductive Health Science
Master in Reproductive Biology Sciences
Master in Plant Breeding
Master in Environmental Management
Master in Photochemistry and Medicinal plants
Master in Sport Sciences
Master in Veterinary Medicine, Avian Medicine option
Master in Veterinary medicine, Vaccine Production, and Management

Doctoral Degree (Ph.D.)
Ph.D. in Geosciences Mineral Exploration
Ph.D. in Petroleum Geosciences
Ph.D. in Reproductive Health Sciences
Ph.D. in Reproductive Biology Sciences
Ph.D. in Plant Breeding
Ph.D. in Environmental Management

Central Africa: PAU Institute for Governance, Humanities and Social Sciences (PAUGHSS) at the University of Yaoundé, Cameroon.

Master's Degree (M.A)
Master in Governance and Regional Integration
Master in Trans-Border languages Kiswahili option
Master in Conference Interpreting
Master in Translation

Doctoral Degree (Ph.D.)
Ph.D. in Governance and Regional Integration
Ph.D. in Translation

Fifth Institute: South Africa
The fifth hub is located in Southern Africa and focuses on Space Sciences (PAUSS). It will be established in South Africa and hosted by a consortium of eight universities led by the Cape Peninsula University of Technology. The European Union and the United States of America plan to become Thematic Partners of PAUSS.

Sixth Institute: E-University
The Pan-African E-University has a sixth institute hosted at the PAU Rectorate in Cameroon that is planned to provide e-learning programs to a broad audience of students and researchers throughout the African continent.

An Invitation and Challenge to Pan African University Students

Dear Master's and Ph.D. Degree Students:

You are invited on a unique academic journey with PAU. We challenge you to action.

Writing a master's thesis or a doctoral dissertation is an academic journey like no other. It is a long, intellectually challenging, and sometimes exasperating journey to scholarship. You have written research-based papers for classes at previous schools and PAU. However, this is different.

A thesis or dissertation takes you on a new and different trip. It will empower you with new skills and knowledge, including enhanced analytical problem-solving skills, more robust research and statistics proficiencies, and increased understanding of a subject matter.

In your research and writing effort, you are developing the expertise to support the development of Africa. Your subject matter will be in one of the areas of specialization and in one of the Institutes. You may, for example, be completing an M.Sc. in molecular biology and biotechnology in Nairobi's Institute, or a Ph.D. degree in plant breeding in Ibadan's Institute. Regardless of the specialization and Institute location, thesis or dissertation writing will academically mature you, and the journey from beginning to end can be one of the greatest successes in your life.

You are becoming an expert in an academic discipline. However, importantly, the thesis or dissertation writing experience provides you the opportunity to improve your writing skills. It is not enough to develop expertise with statistical software and testing, data manipulation, research design, or subject matter. Scholars must have a command of the English language and express themselves in written format. With commitment, effort, and time on this journey, you will become a better writer.

From reading and editing scores of theses and dissertations in Africa, Asia, and North America, we know there is a need for this guidebook. We have come to understand the strengths of these theses, but also the problems. We discuss many of these problems and their solutions in this guidebook.

This guidebook is written from advising scores of students in the preparation of theses and dissertations. We have participated as evaluators in over one hundred oral thesis defenses and attended multiple dissertation defenses. Our evaluation revealed a broad range of scholarship, research rigor, and English language use. Thesis and dissertation format, style, content, and English language use varied widely within and across continents. The oral defenses ranged in quality from remarkable scholarship to disappointment.

Regardless of academic rigor, subject complexity, statistical finesse, or findings, we saw problems with language, style, and format. Strange chapter terminology, peculiar chapter contents, the absence of objectives or hypotheses, multiple font types, odd margins, confusing tables, computational errors in the narrative and tables, and varied colors were common. Problems included mixed styles for citations and references. Many of the references were incomplete or incorrect, and any attempt to locate and read the sources was pointless.

English language problems included long, convoluted sentences, incomplete sentences, colloquialisms, tense confusion, gender bias, punctuation errors, and a panoply of style and grammar problems. Some sentences did not make sense.

Guidebook Contents

This guidebook is about what a thesis and dissertation look like and what they include. It tackles what you need to accomplish to create a praiseworthy scholarly document and what you can learn from the effort.

The guidebook discusses style and format issues, and the structure of a thesis proposal and dissertation proposal, along with and citations and references. It also goes over plagiarism and English language pointers for Pan African University writers. Practical tips for thesis and dissertation advisor selection and websites that help you with writing and language are included.

A seven-part guidebook, the first presents the visuals of style and format—fonts, margins, headings and subheadings, line spacing and paragraph format, page numbering, and setup, and table and figure presentation. We offer language advice.

The second part discusses thesis and dissertation proposal writing with the understanding that a well-organized, logically conceptualized, and well-written proposal leads to a better final document. The sections of a thesis and dissertation proposal are discussed from cover page to the and proposal approval sheet.

Thesis and dissertation writing is the third part. The structure and the sections from cover page to the last appendix are explained. Learn about the mainstream thesis and dissertation chapter titles and what is included in each of them.

Part four of the guidebook discusses citations and references. Complete references in the proper style are required for a passing thesis and dissertation, and a comprehensive literature review of your topic and research questions will yield dozens of sources. These sources will be included in the proposal as citations and references. Proper presentation of these sources is expected in a scholarly paper. The formatting of these citations will follow the style approved by PAU.

Academic ethics, plagiarism, and plagiarism detection websites are discussed in part five. Listed are websites and software packages that can assist in your writing and tracking sources to avoid unintentional plagiarism.

The oral thesis and dissertation defense are memorable lifetime events. Part six discusses this defense and emphasizes the need for preparation. From our many defense experiences, we share suggestions for a successful defense.

Finally, part seven provides samples of pages included in the and dissertation proposal and dissertation. Established formatting for these pages is suggested within and across universities.

Call to Action

As a student with the responsibility of completing a thesis or dissertation as partial fulfillment of your degree, support the following actions at PAU:

Request a meeting of the students and academicians to discuss the format and style of a thesis and dissertation. Ideally, this convention is conducted on a semi-yearly basis or more often.

It is routine practice at universities in Europe and North America to post a guidebook on their university websites. PAU has an approved guidebook on its website for easy access and reference. A PAU Facebook page limited to thesis and dissertation discussion among master's and Ph.D. students and academic staff is planned for dialogue and exchange of ideas.

Create thesis and dissertation writing support groups in your departments and Institutes. Writing a thesis or a dissertation can lead to isolation. Mutual support of researchers is often absent. However, it does not have to be this way. Find other students in your Institute and form small groups of three or four to talk about progress and encourage writing. Also, read each other's drafts and comment on them, knowing that if you have problems with content, style, or format, the advisors and evaluators surely will. Thesis and dissertation student support groups are common in North America and Europe, and they contribute to enhanced scholarship, improved collaboration skills, and building writing discipline.

Closing

Writing a thesis or dissertation is an opportunity to learn and a chance to become an expert and scholar to contribute to the enhanced and continuing development of Africa. The thesis or dissertation is not an additional duty for a degree; it is the capstone scholarship experience for earning your degree and, from start to submission, it will take several hundred hours and many months to complete. Embrace this invitation for the journey with enthusiasm. It can be a positive life-changing experience.

Enjoy the journey.

The Authors

What is a Thesis and a Dissertation?

A thesis and dissertation are scholarly research-based documents that add new knowledge to a discipline. They do not just retell facts that have already been assembled and shared; they present new knowledge. They demonstrate your mastery of a subject matter, your analytical thinking abilities, researching expertise, and writing skills. They are a unique document of your scholarship in the PAU course of study.

Thesis Versus Dissertation

A thesis is completed to earn a master's degree while a dissertation is completed for the doctoral (Ph.D.) degree. In North America, a thesis is generally shorter than a dissertation, and not as complex in nature.

A master's degree student takes advanced coursework and gains knowledge and experience in a select single research project. The student takes responsibility for a project. Normally, publications result at the end of the project. The project may be focused on one particular research question and in one geographical area.

The dissertation research project is more complex. It is not unusual to attempt to answer two or more research questions with two or more projects from which results are derived with publications during the dissertation research. The dissertation project usually requires a more extended time period because of the complexity of the study. At PAU, one or more publications during the ongoing research are an expectation of the doctoral student.

Commonalities

Both a thesis and a dissertation requires a great deal of work and should be treated seriously. These documents showcase your knowledge and skills as both a seasoned researcher and writer. The purpose of a thesis or dissertation is to research a relevant and unexplored issue, establish a viewpoint on a particular attribute of this issue, and present compelling evidence through investigating the literature. It involves planned data collection, statistical analyses, a detailed examination, and a discussion of research findings, conclusions, and recommendations. The findings add to the literature.

Topic consideration and approval are critical. The rehashing of previous research with little new knowledge is a waste of time, energy, money, and other resources. The topic should be timely. Determining your thesis or dissertation topic requires significant research.

In contrast to other types of university papers where the academic instructor does not see your work until you submit it as a final product, a thesis or dissertation evolves from idea conceptualization to a final scholarly document through a cooperative effort between your advisors and you. You develop and maintain a collaborative relationship with your thesis or dissertation advisors. Ideally, they become your mentors.

The proposal topic is formally approved before you commence research. This approval ensures that you have a thesis or dissertation statement and a grasp of the objectives. The research is not duplicative, too broad, too narrow, or too simple. Throughout research and writing, the advisors evaluate your progress and make recommendations for improvements.

Depending on the subject matter and data collection methods, your work on a thesis or dissertation consumes one or more calendar years. With a timely topic, excellent research activities, significant findings, and solid writing, you can plan to publish your work in peer-reviewed journals and other credible publications.

Part 1. Style and Format

Pan African University expects a thesis and dissertation to have a consistent style and format, with the writing following established language guidelines. The style and format guidelines presented on the following pages are those commonly used in select universities in Africa, the United States, Canada, Australia, and other nations. Often, institutions of higher education will have a thesis and dissertation style and format tailored to varied disciplines in, for example, the hard sciences or humanities. Check with your PAU instructors and confirm it with the accepting office for theses and dissertations.

Scholarly writing in English can be a challenge if it is your second or even third language. Moreover, thesis or dissertation writing provides you the opportunity to enhance your writing skills. Academic English language writing is an essential byproduct of writing a thesis or dissertation if assistance and guidance are provided. Ask your advisors, English-first colleagues, and others with strong writing skills to read your proposal or dissertation drafts and make editorial comments. Make it a learning process.

Thesis and dissertation writers often choose careers as academic staff members at universities. Enhance your writing skills through writing so you may assist your future university students with writing matters.

Font

Times New Roman 12-point font is used in writing the body of a thesis and dissertation. A second choice is Calibri 12-point font. Do not use multiple fonts in proposals or theses; one font type is used throughout. You present the cover and title pages in 14-point bold font and 14-point font for first-level headings with no bolding of text. Black font color should solely be used. URL website addresses are underlined and printed in black.

Margins

Provide a margin of 3.0 cm on the left side of the page for binding purposes. The right, top, and bottom margins shall have 2.5cm of space. Apply the same margin dimensions to all pages. Margins do not vary with figures or tables. All pages of the proposal and dissertation follow margin rules.

Headings and Subheadings

Write each title of the chapter in bold uppercase letters. The text of the chapter titles is centered on the page.

Chapter headings are numbered with Arabic numerals starting from 1 for the introduction and end with 7 or 8 for the appendix. The Arabic numerals are followed by a period, a space, and the chapter title without the word "chapter" included—i.e., 1. Introduction.

Number the second level headings, or subheadings, consecutively with Arabic numerals in an outline numbering system. For example, 1.1 and 1.2. Also, use the outline numbering system for lower level headings. An example is 1.1.1 and 1.1.2. To have a numbered subheading, there must be at least two subheadings under the higher-level heading.

For second-level headings, capitalize the first letter of each word. Write the lower level headings in sentence case format. Capitalize only the first letter of the heading unless otherwise required by grammatical or nomenclature rules.

Align second level and lower level heading text to the left. Separate the headings from the narrative with an extra line. Do not underline or italicize headings, subheadings, or captions of tables or figures. Follow the language rules for underlining and italicizing. Visit websites like www.grammarly.com/handbook, www.scribens.com, or www.languagetool.org for additional guidance.

Line Spacing and Paragraph Format

The line spacing for all narrative text is 1.5 lines. This allows for easier reading. However, apply single line spacing to captions of tables and figures. Keep an extra line (1.5 lines of space) between paragraphs above and below all headings, subheadings, and captions. Justify the narrative text in block paragraph format. Use the block paragraph format throughout the document.

Page Numbering and Setup

Begin each section of the thesis and dissertation on a new page. Assign a number to every page of the proposal and thesis or dissertation except the cover page. Use small Roman numerals—i.e., ii, iii, iv —for the preliminary sections (up until the introduction). Do not number the title page. Use Arabic numerals from the first page of the introduction to the last page of the appendix. Center the page numbers at the bottom of each of the pages in 12-point font. Do not include periods or dashes with the page numbers.

Decide on the most appropriate way to present your research data. Do not use tables and figures for the same data discussed in the narrative. Tables and figures add to and do not duplicate information. Put borders above and below the column headings, and below the last row of the table. Bold the headings within the tables and figures. Place tables and figures logically and near the first citation in the narrative.

Limit the tables and figures to single pages whenever possible. Multiple pages of tables and figures confuse the reader and make data interpretation difficult. Tables and figures should provide critical explanatory information to the thesis and dissertation and not act as tangential additions.

Validate computational correctness. For example, do you have total percentages of 103 or 99? Check the data and arithmetic computations. The numerical values cited in the narrative must match those in the tables. Indicate significance levels with an asterisk.

Give all tables and figures a clear and concise caption. Use table notes to describe the contents of the caption with superscripted numbers. For readability, use landscape rather than portrait orientation. Do not use more than two returns between tables and figures and the narrative text. Present the tables and figures clearly; they should be self-explanatory.

Additional Style and Format Issues

Scientific names, the use of italics, and the country's currency are concerns.

- Write scientific names in italic font with the genus name starting with a capital letter and the species epithet appearing in lowercase letters. According to APA, italics are also appropriate for titles of books, journals and periodicals, films, and videos.
- Give all measurements in metric units.
- Use the country's currency for budget discussions. These may include, for example, ETB, NGN, KES, DZD, and CFA franc.

Avoid wordy, complicated, and awkward sentences. Be cautious of sentences that are more than twenty-five words long. Lengthy sentences often baffle the reader. Write short and easily understandable sentences, so the reader focuses on content rather than language difficulties. Follow correct language rules when it comes to the capitalization of proper names and places and the use of punctuation. Use the active voice. Avoid gender bias.

- Do not use contractions such as shouldn't, can't, and won't in these scholarly documents.
- Personal pronouns such as I, you, and we may be used. The trend in the last decade is that "I" is used rather than "the researcher." The pronoun "I" is used for the author of the thesis or dissertation. "We" is not appropriate, as it suggests the document has been co-authored. You are the writer who is solely responsible for the document.
- "Respectively" at the end of sentences is used only rarely. While convenient for the writer, these sentences almost always confuse the reader.
- Colloquialisms, slang, clichés, and informal phrases used in English do not belong in a thesis or dissertation proposal or final document. Examples include, for example, screw up, ASAP, on the other hand, stuff, get in touch with, acid test, and bitter end. The thesis and dissertation are scholarly documents. Do not include informal language.
- Minimize technical jargon. Define technical words or phrases so a reader who is not familiar with the field of study can understand.
- Do not misspell words or allow grammatical errors in your proposal or final document. Use the Spelling and Grammar check in your word processor software to avoid English language spelling and grammar mistakes. You may wish to use the free Grammarly website at www.grammarly.com, BibMe at www.bibme.com, owl.english.purdue.edu/owl, or www.scribens.com. Other sites are discussed in a later section of this guidebook. PAU uses American rather than British spelling.
- Think thoughtfully when choosing your thesis or dissertation advisors. Choose with care. Graduates of your program can best advise you on the preferred advisors. Advisors are academic staff members, and all are busy with teaching, advising, researching, program activities, writing for publication, and consulting. Identify those who will be available to you and provide you advice. You and your advisors are a team in the effort, and this

cooperation begins with advisor selection. The journey is long from topic conceptualization to the final defense and submission to PAU. Aside from research and statistical questions, you can ask for guidance in document style, formatting, and English language. Their role of advisors is that of mentor and teacher. Benefit from their wealth of education and experience.

- Visit the academic dean at PAU and examine well-written theses and dissertations. Visit the library and investigate theses and dissertations of graduates to observe the correct style and format. Do not guess. Learn from your predecessors.

Research Protocol with Human Subjects

The majority of the theses and dissertations completed with PAU involve human or animal subjects. Please follow a proper research protocol when researching subjects:

- Know the benefits and risks of the subjects involved in the research.
- Deliver the planned and exact information to the study subjects.
- Be aware of special incentives that subjects may receive for participation in the study.
- Know the procedures for verifying informed consent of the study subjects.
- Detail how you will secure and keep all of the collected data confidential.

When studying human and animal subjects, be respectful and mindful of them. Methods used with studying subject must be ethical. In any interviewing of humans, consider language, literacy, vocabulary, and cultural matters. Above all, do not harm or offend your subjects.

PAU's Ethics Review Committee must formally approve- in writing- the proposed research study before the research begins. Keep the approval letter as oral defense members may ask to see it. Also, when you submit manuscripts of your research for publication, journal editors may request a copy of the letter. This ethics committee approval must be mentioned in the thesis and dissertation and all manuscripts submitted for publication.

Part 2. Thesis and Dissertation Proposal Writing

The ultimate success of a thesis or dissertation depends on a well-conceptualized and well-written proposal. You have carefully selected an original and relevant topic, and the Institute's selection committee has approved your topic in an oral defense session. Importantly, the advisors must support the research topic, general and specific objectives, research design, statistical testing procedures, and geographic location.

Do not proceed with proposal writing without unanimous approval by your advisors. Meet as a team to confirm approval and take official notes at this meeting for future reference. Do not waste time having to select a new topic, new objectives, or alternate research design after you have begun writing.

Your proposal topic and research design should be innovative and groundbreaking. Do not duplicate the research of other previously-written theses or dissertations with the same or similar topics, general and specific objectives, populations, or research designs.

In the public health discipline, for example, similar research topics with slight geographic location variation are difficult to defend at PAU because of the published, consistent, and predictable results, conclusions, and recommendations reported. These duplicative theses and dissertations add little to the knowledge base in the discipline.

Upon completion, the proposal must be approved and signed by the advisors and PAU. The proposal adheres to what has been formally approved at the onset of research. The sections of the and dissertation proposal are carefully crafted.

Organization of a Thesis and Dissertation Proposal

Submit your proposal with clearly defined sections. Begin each of these sections on a new page. Write all section titles in uppercase letters.

Cover Page

The cover page includes expected information—it is simple, informative, and unpretentious. It should include:

- Pan African University
- Institute Name
- Department
- Title of Thesis or Dissertation Proposal
- Full name of the student with the academic degree(s) previously earned
- Date submitted
- Institute location
- Date

The thesis or dissertation should have a specific and concise title that accurately describes the topic, research, and the area or region. Avoid phrases such as "The Study of" or "An Investigation into" The title should capture the central theme of the proposed study. Scientific and medical words in the title are accepted where appropriate.

Acknowledgements

Rarely included in a thesis or dissertation proposal, an acknowledgements page includes two or three sentences that recognize the persons and institutions you are grateful to for guidance and support in the preparation of the proposal. As PAU is a secular university, do not acknowledge or thank religious deities as Allah or Jesus Christ.

Abbreviations and Acronyms

List the abbreviations and acronyms with explanations in alphabetical order on a single page. Do not list SI Units and internationally known abbreviations.

In the text, define each abbreviation and acronym—other than Standard International Units—in full when they are first used, followed by the abbreviations or acronyms in parentheses. Do not italicize abbreviations and symbols.

Table of Contents

All headings and entries in the table of contents correspond exactly in wording, font, and case with headings and entries as they appear in the text of the proposal. Subdivisions of headings should not exceed four levels. You may use the built-in style of MS Word or another word processor to create the table of contents.

List of Tables

A list of tables is a reference tool that allows your readers to quickly and easily navigate to data in your proposal. Construction of a list is similar to creating a table of contents. Format appropriately. Check that page numbers are correct. Note that a list of tables rarely occurs in a proposal.

List of Figures

A list of figures is also a reference tool that allows your readers to quickly and easily navigate to information in your proposal. Again, format appropriately and check page numbers. Note that a list of figures rarely occurs in a proposal.

Summary

In this section, include the background of the thesis or dissertation topic, study objectives, and the planned research methods. The summary should be concise and less than one page in length. Present it in one single block-form paragraph using 1.5 line spacing without subtitles or divisions.

Chapters of a Thesis and Dissertation Proposal

Your proposal is a planning document. You logically organize it into chapters to present a research topic with a plan for collecting and analyzing data to answer questions. Proposals with Pan African University generally include six chapters. These are an introduction, a literature review, a methods chapter, a plan of activities, a budget, a references chapter, and appendix. The approval sheet is the last page of the proposal. The proposal chapters are presented below.

Introduction

The introduction is the first chapter of a proposal. It is brief and provides pertinent background information on the research project. It includes a clear statement of the nature and extent of the problem and the objectives that specify the research goals, information to be gathered, and questions or hypotheses to be tested. Subheadings may include background, statement of the problem, the significance of the study, and objectives of the study, which includes both the general objective and specific objectives.

If carefully crafted, this chapter is usually no more than five pages in length. Use the future tense as appropriate.

Literature Review

The literature review is a critical analysis of relevant knowledge on the proposed research topic. This chapter will discuss the strengths, limitations, and, most importantly, the gaps identified in previous studies. Make an effort to use citations that are recent and only from the past eight years. Scholars describe the Internet as the open library to the world of knowledge for the latest published research.

As a prototypical and exemplary African university, PAU asks that seventy-five percent of the references be published within the last eight years. Recent publication assures the reader that you have conducted a comprehensive search on the topic and are not relying on, for example, older similar theses, dissertations, or outdated published books as primary or secondary reference documents.

Limit citations that are nine years and older except to provide a historical perspective. In particular, avoid old citations in the areas of the technologies, the hard sciences, and health where advancements are constant and accelerated.

Do not reference unpublished documents or lay sources. Be cautious in referencing magazines and newspapers as some are not scholarly sources of information. Do not reference your class notes. You may review them, but do not include in your literature review, citations, or references.

Indications of a well-researched literature review include contents from peer-reviewed publications. Pursue studies or articles in reputable journals and websites with recent dates of publication and high relevance to the topic.

The university libraries throughout Africa continue to evolve, and the problems with limited hard-copy journals and books in university libraries are diminishing. Fortunately, many, if not most sources today are from online searches. Examples of sites include PLOS and the BMC journal series. Recent ministerial and government documents also contribute to the review of the literature.

International non-governmental agency reports, both Internet-based and hard copy, on your subject can be informative and useful. Visit, for example, the International Mathematical Union, World Federation of Engineering Organizations, International Seed Federation, or World Health Organization for current reports. Regardless of the subject, little cannot be found on the Internet today with aggressive searching.

Depending on the thesis or dissertation topic, focus first on the published research studies from African nations and the developing nations. Published research from advanced global regions or countries like Europe, Australia, the United Kingdom, and the United States should be evaluated for relevance. For example, advanced medical technologies and experimental reproductive drug therapies conducted in London, U.K. are not relevant to the technologies and drug therapies available and used in a government hospital located in rural eastern Ethiopia. Select water irrigation technologies and equipment used in Germany may not be relevant to those used in Kenya.

African Journals Online (AJOL) is an excellent website. As of 2018, AJOL hosts 521 journals, including 245 open access journals. Also, HINARI, PLoS, ELDIS, and BMC are just a few of the dozens of Internet platforms to find the latest research studies published in the last few years on most any topic.

Visit the Directory of Open Access Journals (DOAJ) on the Internet. Also, international global organizations present current research on their websites. Again, government and non-government reports, journals, and books can also be helpful for the literature review if recently published.

Search out Africa's scholars and their work in their countries. The research and publication efforts by university academic staff over the last two decades in Africa are both admirable and noteworthy. Also, many of the national and private universities in Africa publish at least one reputable peer-reviewed journal.

Methods

The methods chapter describes what you plan and how you will conduct your research. Be clear in your discussion. If, for example, you are conducting a community based cross-sectional study, what exactly are your methods for data collection? Discuss the proposed questionnaires, any focus group discussion aids, and all other instruments employed in data collection. What is the sample population? Are you using a published standardized questionnaire, but with a translation? Describe your methods for analyzing the data. Be specific.

In this chapter, discuss the appropriate procedures to attain the proposed objectives of the study. Research methods must be suitable to the problem area, i.e., the statement of the problem, the

objectives, and hypotheses. When selecting your research methods, again, think of how you will conduct the proposed research.

Consider the affordability of the research. Do you have the money required to conduct the research you plan? The expense of equipment, the necessary office and laboratory supplies, travel costs, and labor outlays have to be considered.

Address the methods of data collection, data quality control, and data analysis procedures. Be clear about what you plan to do. The methods chapter usually includes:

- Definitions of terms
- Definitions of variables
- Description of the study area—region, state/province, zone
- Study period to collect data
- A study design that is clearly explained.
- Description of the population: the source population, the study population, the sample population, and inclusive and exclusive criteria.
- Sampling methods: clear and specific details of sample size formulae, calculations, and sampling methods.
- Data collection methods are many and depend upon the academic discipline. For social and behavioral sciences, they could include questionnaires completed by the research subjects, formal observations, focus group discussions, and in-depth personal interviews. Equipment checklists, specimen collection, and laboratory analyses are other methods.
- Describe the methods, techniques, and statistical tests used for data analysis. Also, identify software names with version numbers planned for use (i.e., SPSS Statistics Version 21.0, SAS Version 9.4, Epi Info Version 7.2) in the and dissertation proposal. Consider all of the statistical packages as some are open-source, public domain, freeware, and proprietary.
- Discuss how to check data collection instruments, plans for ensuring data confidentiality, and the reliability and validity of instruments used in the research. If an international organization's questionnaire, or an adaptation of it, will be used, then state this in the proposal and discuss any available reliability and validity issues of the instrument.

Plan of Activities

The fourth chapter includes a brief narrative of the research plan and a timetable or chart. Focus on time management for the research project. Assign periods for the completion of various activities of the proposed research. Include only major research activities and your corresponding periods in the table. Use a Gantt chart to explain your schedule. Gantt charts illustrate the start and finish dates of the critical elements of the and dissertation research project.

Budget

The budget chapter is a narrative of the costs of the research. It describes in sentence format the financial resources required to conduct the research project. Aside from the discussion, you then list precisely the costs for personnel per diem days, data collection days, travel costs, the equipment, expendable supplies, materials, and associated services for the project. Presenting the

financial information in tables is helpful, but a narrative discussion is required. A budget section with only tables is grossly incomplete.

Occasionally, PAU, governmental organizations, or non-governmental organizations will financially support research in small amounts. Partial funding is especially true if the research topic is of timely concern to an institution or organization. You may wish to approach these sources by writing small grant proposals or letters that include the requested amount with a justification for funds requested. The actual costs of the budget items for the research must be accurate. Inflated costs in the budget diminish any funding considerations.

References

This chapter includes all works cited in the proposal. If there is a citation in the text, there must be a reference for it. The American Psychological Association (APA) style and Vancouver style for in-text citations and references are commonly used. However, Harvard and Chicago Manual of Style are two others that may be used for your thesis or dissertation.

Organize your references according to the citation style required. As a scholarly document, there is an expectation of exactness in the references with the author's name, date, title, volume, and pages. Adhere to proper capitalization, commas, placement of dates, italicized numbers, and other details.

You will have many web page citations. Be sure to include the author, title, date posted (if provided), retrieval date, and the exact URL. If the thesis or dissertation evaluators are unable to find the sites, they have the option to delay the oral and dissertation defense or decline signing the and dissertation until viewed.

Citation management software and websites are helpful. Described as a digital filing cabinet, these are your bibliography creators. Multiple programs and websites come with digital annotating, keyword assignments, automatic article updates, and suggested papers. These programs bring consistency to the documents. The software and websites assist in maintaining accurate sources for citations and references. For example, http://guides.lib.uchicago.edu provides comparison information such as working with or without internet connection, word processor compatibility, importing citations from web pages, and other matters.

Citation software allows the integration of information with MS Word and provides for an effortless style change. Reordering of citations that comes with editing and drafting your document is also possible. Furthermore, citation software makes it possible for you to save and track references that they identify in the course of your research. Zotero, Mendeley, and Endnote are three excellent sources. The first two are available for download at no cost. Endnote requires a subscription or purchase.

Learn to use a citation manager as it will provide ease and flexibility. Learning a preferred software and using it leads to more accuracy and reduced errors in the proposal citations and references. Some software packages also examine the document for plagiarism.

Appendix

The appendix is the final chapter of the thesis and dissertation proposal. It often includes a sample questionnaire or focus group discussion guideline in English with a translation into a local language planned for use in data collection. Please note that even with Internet translation software, linguists remind us of the many challenges in translating documents from English into another language because of idioms, colloquialisms, syntax, and cross-cultural differences. Thesis and dissertation researchers using a translated questionnaire or another document for data collection are wise to conduct reliability and validity testing.

Often the documents and their translations are carefully studied by the thesis and dissertation readers and examiners. Questions arise in the oral defenses about the accuracy of the translations. The Internet provides guidance on more effectively translating documents.

The appendix may also include a sample of the consent forms, an observation checklist, a conceptual framework, a map of the research area, and photographs of engineering, medical, or farm technologies used in the research.

Approval Sheet

The approval sheet is the last page of the thesis and dissertation proposal. Original signatures are required on the original and dissertation proposal and all copies.

Part 3. Thesis and Dissertation Writing

A master's thesis and Ph.D. dissertation are much more than research papers. The scope is broader, and they provide the student an opportunity to develop a career skill: to develop and write logical and systematic arguments on an academic topic. Writing a thesis or a dissertation is one of the final steps in earning your degree; therefore, it must reflect a thorough understanding of a discipline, relevant theories, and contain original research. Historically, the page length for masters theses are an average of sixty pages including the appendices. Because of increased scope, the Ph.D. dissertation tends to be longer at over one-hundred pages including the appendix.

A thesis and dissertation have the following aims and objectives:

- To formulate a research question and develop a research plan that includes a time management strategy.

- To learn relevant and theoretical insights into real problems.

- To generate new knowledge.

- To report research and results clearly and systematically.

- To assist you in your development as an academician and scholar.

- To broaden your understanding of a discipline that you can bring to your work setting.

Organization of a Thesis and Dissertation

The thesis and dissertation are organized into sections and chapters. The sections follow both style and format rules. They include:

- Cover Page
- Title Page
- Approval Page
- Dedication
- Statement of the Author
- Biographical Sketch
- Acknowledgements
- Abbreviations and Acronyms
- Table of Contents
- List of Tables
- List of Figures
- Abstract

The chapters of the thesis and dissertation include 1. Introduction, 2. Literature Review, 3. Methods, 4. Results and Discussion, 5. Summary, Conclusions, and Recommendations, 6.

References, and 7. Appendix. There may be a variation to these chapters among PAU's Institutes.

Cover Page

The cover page is the first page of the thesis or dissertation. The cover page does not include the university logo, photographs, tables, figures, or borders. The cover is printed on hard white card paper. Center the text. Include:

- Pan African University
- Thesis or dissertation title
- Academic program area
- Full name of the student with degree(s) already earned
- Month and year submitted to the university
- Location of the Institute

Title Page

The title page is the second page of the thesis and dissertation and includes:

- Pan African University
- Thesis or dissertation title
- A and dissertation submitted to Pan African University in partial fulfillment of the requirements for the degree Master of Science/Doctor of Philosophy
- Full name of the student with degree(s) already earned
- Names of advisors
- Date of submission
- Location of the Institute of Pan African University

Approval Sheet

The approval sheet is available from PAU. These sheets can change annually so make sure your sheet current. Include the final approval sheet in your and dissertation after the examiners sign it. Document signing occurs after a successful and dissertation defense and only after all of the required revisions that arise from the oral defense are incorporated and confirmed by a designated internal or external examiner.

Dedication

If included in the and dissertation, the dedication should be concise and ideally no more than one or two sentences long.

Statement of the Author

On this page, the researcher declares that the thesis or dissertation is entirely his or her work. Other's ideas and words have been properly cited. The researcher declares that the document or

research has not been submitted to another institution for the award of a degree, diploma, or certificate.

Biographical Sketch

The biographical sketch should be brief and include your birthplace, high schools, colleges, and universities attended. You may include a brief description of your professional work experience. The researcher may include a curriculum vitae (C.V.) as the last appendix. The C.V. should be current and properly edited for both content and English language. The C.V. in a thesis or a dissertation is generally abbreviated and no more than two pages in length.

Acknowledgements

An acknowledgements page in a thesis or dissertation is customary. It is never more than one-half page in length and recognizes the persons and institutions that assisted the thesis or dissertation writer. If PAU, or a governmental or non-governmental agency has funded a portion of the research, it is mentioned in this section. Funding agencies outside of PAU should be provided a copy of the completed thesis or dissertation with a note or appreciation.

PAU is a secular university. Do not acknowledge or thank religious deities. For example, praising and thanking Allah or Jesus Christ are not included. in a and dissertation at a national university.

Abbreviations and Acronyms

You should list abbreviations and acronyms in alphabetical order. Other than Standard International (SI) Units, define each acronym and abbreviation in full when it is first used in the text. Explain any terminology that may not be familiar to the reader in the narrative. Follow the definition with an acronym or abbreviation in parentheses.

Table of Contents

All headings and entries in the table of contents must correspond exactly in wording, font, and case with the headings and entries as they appear in the thesis or dissertation narrative. The headings and subheadings in the table of contents should not exceed four levels. Use the built-in style of your word processor to create the table of contents. If it exceeds one page, write Table of Contents with Continued in parentheses at the top of the page.

List of Tables

These are the tables presented in the and dissertation. Be accurate with spelling, style, and formatting.

List of Figures

These are the figures presented in the and dissertation.

List of Tables in the Appendix

These are the tables presented in the appendix.

List of Figures in the Appendix

These are the figures presented in the appendix.

Abstract

An abstract highlights major points and describes the content and scope of the thesis or dissertation. It reviews the document contents in an abbreviated format. It is ordinarily the first- and sometimes only- section read by readers and sets the tone for the thesis and dissertation. It is an important piece of scholarly writing.

Pan African University requires that the oral thesis and dissertation defense candidate distribute his or her and dissertation abstract to all attendees at the beginning of the defense. This distribution occurs immediately before the MS PowerPoint presentation and oral thesis or dissertation defense.

Abstract length varies by discipline. The typical length, however, is between 100 to 500 words. It is rarely longer than a single page with the appropriate 1.5 line spacing, expected margins, and 12-point font size. Pan African University uses a style that omits citations from the abstracts.

The best way to write an abstract is to start with a draft of the completed and dissertation and follow these steps:

- State your hypotheses and thesis and dissertation methods.
- Identify the major objectives and conclusions.
- Identify phrases and keywords in the methods chapter.
- Identify major results from the discussion and results chapters.
- Assemble the above information into a single paragraph.
- Omit detailed descriptions of methods.
- Revise the paragraph so the one-page abstract conveys only essential information.
- Study previous well-written abstracts as samples.
- Ask your colleagues to review the abstract for clarity and English language.

Center your name below the abstract title page. Then center the and dissertation title below your name.

Chapters of the Thesis and Dissertation

Divide the and dissertation into chapters that include:

- Chapter 1. Introduction
- Chapter 2. Literature Review

- Chapter 3. Methods
- Chapter 4. Results and Discussion
- Chapter 5. Summary, Conclusions, and Recommendations
- Chapter 6. References
- Chapter 7. Appendix

Introduction

Prepare a draft of the introduction at the onset of the thesis and dissertation writing. Then, carefully refine the introduction after you have completed the document. This chapter is routinely about five pages in length. An extended introduction chapter is usually the result of an inappropriate mix of both introductory material and literature review data and statistics. The first page of the introduction begins with page 1.

The thesis and dissertation introduction include:

- Sufficient background information so the reader can understand the context and significance of the problem addressed.
- An acknowledgment of previous research work that you are building on.
- A statement of the problem with the gaps in research finding.
- Significance of the study.
- Scope of the work.
- Objectives of the study.

Focus on your research questions. All cited work should relate to the goal of the thesis or dissertation. Do not summarize everything you have ever read on your subject. Do not divide the introduction into subchapters or divisions. Present the contents in a logical and well-organized manner to maintain a flow of ideas.

Literature Review

The literature review is a critical analysis of existing knowledge on the research topic. Much of this chapter is derived from your thesis or dissertation proposal. The review includes the strengths, limitations, gaps of previous studies, and justifies the need for the current research. This section must be relevant with recent citations. Ideally, most sources are from the past eight years. Use citations that are nine years and older only when necessary and for historical purposes.

Not all published material possesses the same research rigor, scholarship, or value. For this reason, you must evaluate your sources. Aside from the dates of publications, there are questions you can ask as you read and choose your references.

Who is the author? Learn the African scholars who have published in your topic and geographic region. African universities have been developing scholars in all fields for decades. Many scholars in Africa have attended prestigious universities in European countries, Australia, Canada, and the United States. They have returned to share their expertise on university campuses. Know Africa's experts and scholars. Reference them.

Who is the publisher? Not all publishers are equally academic or scholarly. A book that has been self-published does not carry the credence of an imprint of, say, Yale University Press. For journals, there are impact factor statistics to consider. Higher impact factors indicate that a journal's published findings are considered more highly influential. Learn more about this from the Internet and your thesis or dissertation advisors. Also, the manuscript acceptance rates of journals vary dramatically from the majority being accepted to just a few. This is related, in part, to scholarship and impact factors.

Are there bibliographies in the articles that you choose to cite and reference in your and dissertation? Do these bibliographies include editorials, opinion papers, news briefs, or evidence-based research studies? How extensive are the bibliographies? Are they current or do they list publications that are ten or more years old? Visit the sources. Importantly, the references you cite in your thesis or dissertation must be scholarly and current.

Experienced thesis and dissertation readers, evaluators, and oral defense examiners often first read the thesis or dissertation title, then the abstract, and then the references chapter contents. Although the references chapter may be some of the last pages of your document, the references are often first on their minds. They scrutinize the references to examine the authors, sources, types of published documents used, dates of the publications, and relevance to the thesis or dissertation topic.

Citation transparency is required- even critical- in theses and dissertations. All citations and references should be complete with the style used for the discipline approved by PAU. The References chapter indicates both academic discipline and scholarship in the thesis and dissertation researcher.

Methods

The methods chapter presents the sources of data, methods, collection, and analysis procedures. The research has been completed, so use the past tense. Provide a concise description of the conditions of the investigation, materials, procedures, experimental designs, and techniques. You may divide the chapter into subheadings depending on the nature of the study.

Include the study area and calendar period, populations (source and study), sampling methods, data collection methods, study variables, quality control methods, data processing, analysis procedures, ethical considerations, and limitations. Restrict citations to data sources and references. Do not include a description of the results.

Results and Discussion

This is Chapter 4 of the thesis or dissertation. This part of the narrative interprets the results and analyses. This information is included in a single chapter.

In the results**,** present your findings without interpretation. Give primary results in clear sentences at the beginning of paragraphs. It is better to say "X had a significant positive relationship with Y" than to start with a less informative statement such as, "There was a significant relationship

between X and Y." Describe the nature of the findings and do not merely tell the reader whether they were significant or not. Avoid data repetition in tables and figures; however, when presenting data as a figure, you may show the raw data in the appendix. Focus the narrative for each table and figure on relevant observations and findings. The results narrative should be an objective report.

You may divide the chapter with subheadings. Present your results and answer the research questions described in the introduction with sufficient detail.

Use the discussion to describe the limitations and implications of the study. Follow the descriptions of major findings with appropriate interpretations and discussion. When writing the discussion, synthesize the discussion to flow with the results.

The organization of this chapter is important, and the steps listed below will help you sort your thoughts:

- Construct the discussion from the specific to the general, i.e., the findings, to literature, to theory, to practice.
- Use the same key terms, verb tense, and perspective you used when posing the questions in the introduction.
- Begin by restating the hypotheses and answer the questions posed in the introduction.
- Support your answers with results. Explain how your results relate to expectations and relevant published literature. State why they are acceptable and how they are consistent with previously published knowledge on the topic.
- Address the results relating to the questions, regardless of whether or not the findings are significant.
- Describe the patterns, principles, and relationships of each major finding and result and put them in perspective. The sequencing of information is important. First, state the answer, then state the relevant results, and then cite the work of others. If necessary, direct the reader to a figure or table.
- Defend your answers. If necessary, explain why your answer is satisfactory and why others may not be. Your argument is convincing only when both sides are available for scrutiny.
- Discuss and evaluate conflicting results.
- Discuss any unexpected findings.
- Identify potential limitations and weaknesses and comment on the importance of these to your interpretation of the results and how they may affect the validity of the findings.
- Provide two or more recommendations for further research based on the research findings. The recommendations should correlate with the research findings.
- Explain how the results and conclusions influence the knowledge or understanding of the problem examined.

Results and discussions are conceptually different. In the discussion, you interpret the research results. A common mistake in the discussion is to present a sketchy interpretation that merely restates the results.

If the results differ from earlier published reports, explain why that may have happened. If the results agree with your expectations, then describe the reports and interpretations to support them. It is not adequate to just state whether the data agreed with earlier reports. Also, do not attempt to discuss every finding. Focus on the major findings that call for interpretation.

Summary, Conclusions, and Recommendations

This fifth chapter provides a brief account of the objectives, methods, and major findings. This chapter concludes and gives recommendations on such issues as organizational development, procedural concerns, educational matters, policy implications, and other relevant concerns. You may also list unanswered questions that require research beyond the limits of the thesis or dissertation.

This chapter is usually between five and eight pages. Avoid citations of previous studies and references to tables or figures in the narrative or the appendix. Where required, you may refer to numerical and probability levels. You may divide the chapter into three logical sections.

Avoid bulleting information in this chapter. Bulleting is considered a casual rather than scholarly writing technique. Do not just bullet and number in presenting your conclusions and recommendations. A narrative format is preferred with very some limited bulleting if approved by your advisors.

Recommendations from the research findings are an important facet of this chapter. Write your recommendations thoughtfully. What recommendations from your research findings can you make to practitioners and academicians in your field of study? How can your research findings contribute to knowledge in the discipline in your country, Africa, and globally? Any recommendations stated must be derived from the research findings conducted in the thesis or dissertation research. Theses and dissertations usually have two or more recommendations to offer the reader.

References

The references chapter includes all publications and websites cited in the thesis and dissertation. There should be a precise match between citations presented and the references. It is a common practice to check this match by and dissertation advisors, readers, and examiners. Does every citation in the thesis or dissertation narrative have a reference?

Plan to use APA, Vancouver, MLA, or another established and recognized style approved by PAU. Ensure that you present the references in the correct format. The thesis and dissertation readers and evaluators expect the proper and consistent use of journal titles, commas, semicolons, periods, and dates for each. Complete references are required in academic writing.

Some African and Western naming systems for persons differ. This can lead to confusion with references. With Western names, there is a first, middle, and last or surname (family name). Carefully present the surname with first and second name initials—i.e., Jones, T. R. Frequently, references in African theses and dissertations erroneously include surnames like Mary, Julia, John,

and Steven. Please avoid this common error. African names can sometimes be very long and complicated. Take the time to respectfully spell these names correctly.

Also, correctly state the proper titles of the national and international professional organizations, academic hard copy and online journals, and exact website addresses. You should state the access dates for website retrieval.

Appendix

Thoughtfully prepare your appendix chapter. Be sure to include all documents that are discussed in the thesis and dissertation proposal and, after that, used in conducting the research. These documents are included to support and supplement your research findings. Documents include, for example, questionnaires with translations, consent forms, photographs of plants or animals, and maps. Non-critical statistical tables and figures may be included. An appendix should be included only if it is mentioned in the thesis and dissertation.

Appendices follow margin and font rules. They are paginated. Just as in the and dissertation proposal, number each appendix with a Roman numeral. Begin each appendix on a new page. An annex is not used in PAU theses and dissertations.

Part 4. Citations and References

A scholar credits other researcher and acknowledges their ideas and writings with citations and references. These strengthen your and dissertation discussion and arguments. Also, presenting ideas and quoting words by other authors allows your readers to pursue the sources. Cite sources accurately in your and dissertation. Importantly, the use of citations and references voids the accusation of plagiarism.

It is important to check with your advisors and academic dean to determine which citation and reference style is required for your thesis or dissertation as there are multiple styles utilized across the academic disciplines.

The standard styles used are the American Psychological Association (APA), Vancouver, the Modern Language Association (MLA), Chicago/Turabian (CMS), American Medical Association (AMA), American Sociological Association (ASA), Oxford, and Harvard styles. The most commonly used citation formats for theses, other academic papers, and national journals in Africa are APA, Vancouver, MLA, and CMS.

There is no reason not to have letter-perfect citations and a flawless reference chapter. Exactness can be expected because there is a wealth of information on the Internet about each style that goes into detail on the citation formatting.

- APA – education, psychology, the sciences: http://www.apastyle.org
- Vancouver – guide.lib.monash.edu/citing-referencing/Vancouver
- MLA – humanities: http://www.mla.org
- CMS – business, history, the fine arts: http://www.chicagoguidebookofstyle.org

The following websites are from reputable American universities that offer discussions and examples of the various styles, guiding you in your citation use.

- Purdue University (USA): http://owl.english.purdue.edu
- Texas Tech University (USA): http://english.ttu.edu/kairos/1.2/inbox/mla_archive.html

Social sciences, arts, and humanities disciplines may require APA style for in-text citation and references in the writing of theses and dissertations. Public health and the hard sciences may require the Vancouver style.

You will be using dozens of citations and references in the preparation of your thesis or dissertation. Whenever possible, keep downloaded copies of all published documents and journal articles gathered for citation and reference use. These copies become a reference document for your narrative and citation and references.

APA Style In-text Citation and Reference Examples

When using the APA style format, follow the author-date method of in-text citations. This means that the author's surname (last name) and the year of publication for the source appears in the text.

An example is (Mengesha, 2017). A complete reference appears in the references chapter at the end of the and dissertation.

The references are listed in alphabetical order by the first letter of the surname. For example, Mengesha, T. would be listed in the references chapter before Sendeke, M.

Journal Article (print)
>In-text citation:
>Mengesha (2017) researched…
>or
>… (Mengesha, 2017).
>
>In the reference chapter page:
>Mengesha, T.M. (2018) Research advances in adult-onset diabetes in northern Kenya. East Afr Med J., 285, 648-650.

Full text article with digital object identifier (DOI)
>In-text citation:
>Mengesha (2017) investigated…
>or
>… (Mengesha, 2017)
>
>In the reference chapter page:
>Mengesha, T.M. Adult onset diabetes in HIV-infected patients in Kenya. PLoS One Journal. [Internet]. 2016. [cited April 2016]; n6 (1): el6049.IF 4.35. Available from: www.plos.com

Vancouver Style Examples

In applying the Vancouver style, citations are numbered in order with either round or square brackets, or superscript numbers. The numbers are consecutive in the order they appear in the text. Each citation corresponds to a numbered reference in the chapter. Once a source has been cited, the same number is used in all subsequent references. No distinction is made between print and electronic references when citing within the text.

>In-text citation:
>Mengesha (1) suggested that…
>
>In the reference chapter page:
>1. Mengesha, T. Kenyan Diabetes Prevention Program Research Group. Diabetes, insulin, and proinsulin in participants with impaired glucose tolerance. *Hypertension*. 2016;40(5):679-86.
>
>3. Mengesha, T. Effectiveness of the national diabetes prevention program in Kenya. *East Afr Med J* [Internet] 2016 [cited 2017 Jun 29]; 26(2):131-5. Available from:

http://www.kmaeamj/article.asp?issn=09709290; year=2017, volume=26; issue=2; spage=131; epage=135; aulast=Mengesha

The correct and consistent application of a citation and reference style in a thesis and dissertation can be tedious and time-consuming. It is, however, necessary for a successful document. This area is one of the most frequently mentioned criticisms in an oral thesis and dissertation defense by the evaluation committee members and others in attendance. This criticism can be avoided with careful action. Ideally, you will submit a thesis and dissertation that is letter-perfect. This is a sign of a disciplined writer.

Part 5. Ethics and Thesis and Dissertation Submission

When we hear the word ethics, we usually think of moral principles and virtues that govern our behavior. We each have a moral code and value system that we live by in our personal lives, with our families, our professional lives, and as students.

As a master's or doctoral student, please view ethics as a serious topic for consideration. Ethics is a cornerstone of conducting research and writing about your research. Two major ethical issues involve data honesty and accuracy in citations and references.

Data Integrity

Thesis and dissertation data may be collected, for example, from completing multiple questionnaires, personal interviews, focus group discussions, observations, check lists, laboratory tests, or records reviews. It can be exhausting, but all require data integrity and honesty.

A revised questionnaire for data collection requires hours of work to construct. There are always concerns about the primary source, reliability, validity, and translations. Give credit to the source of your questionnaire, even if tailored to your project. What is the origin of the questionnaire? Have you conducted any reliability testing? These questions frequently arise in oral thesis and dissertation defenses.

As an ethical researcher, you want to ensure interviews are conducted completely and by the procedures approved in your thesis or dissertation proposal. Have you followed all protocols?

If interviews are conducted, and forms are used for data collection, keep the documents even after the thesis or dissertation is approved. In instances where study subjects are asked to sign a consent form and complete a written questionnaire, we suggest you keep these documents. We suggest you keep all data collected for a period of six months after the approval of the thesis or dissertation for possible reference.

We encourage you to record your interviews and focus group discussions. You may wish to employ a listener who records observations. These are the primary source of data files for reference. Should a thesis or dissertation advisor or an oral defense committee member wish to view or listen to these files, you will have the files available. These validate your work.

Use only carefully calibrated devices for measurement. These measurements may, for example, be for chemical reactions, seedling growth, or precipitation.

Accuracy in Citations and References

Citations assure readers of the accuracy of facts presented by the thesis or dissertation researcher. By providing a source, a reader can assess fact reliability and even check the published sources if they wish.

Citations give recognition to other researchers. Keep in mind that the document readers and evaluators may know African scholars by reputation and publication. Are they included? Cite the works of prominent scholars in Africa and give credit to their research. Often, the readers will examine the bibliography to look for these scholars.

Plagiarism Avoidance

Plagiarism is unethical. It is intellectual theft and academic dishonesty. You may plagiarize intentionally or unintentionally, but regardless of intention, it is theft. Plagiarism occurs when a student submits the written work of another person as his or her work in the proposal or final document.

The verification of plagiarism is a severe ethical matter in academe. For the thesis and dissertation writer, it can lead to a complete do-over of a thesis or dissertation on a different topic or even expulsion from Pan African University. With care, plagiarism is easy to avoid.

- Do not cut and paste passages into your work from the Internet or published sources. Often, the writing style of the borrowed work varies significantly from the researcher's language, making it easily identifiable.
- Be careful with paraphrasing—retyping a sentence or passage from a published source and replacing a few words to make the passage just different enough to personally claim authorship. Always cite your sources. Detection websites can pick up as little as a phrase of several words or a sentence.
- If you use the exact words of a source, ensure you put the words in quotation marks or a block quotation.
- Do not borrow a thesis or dissertation and use the contents as your own. Your work should be original.

To guard against inadvertent plagiarism, keep careful notes and records of sources. You may wish to print the pages and highlight the words, phrases, or sentences you wish to use. Notetaking is a time-honored activity, but it is a slow and laborious process.

Detection Websites for Plagiarism

Plagiarism detection websites make it straightforward and easy to improve your ethical writing practice. These Internet-based tools examine billions of online and uploaded hard copy and online publications. Unintended Internet plagiarism is common, and these detection websites help you to avoid the practice as an ethical student.

We encourage that you use at least one of these websites to assist you with your citations and references. As of 2018, the five most highly regarded and popular plagiarism detection sites used by both university faculty members and students in the United States are:

- BibMe
- Grammarly
- PaperRater

- Plagiarisma
- Turnitin

In document study, the detection websites identify the complete source, including the verbatim words, the author(s), date of publication, and the website of the original writing. The passages identified can be as short as a few sentences or lengthy paragraphs.

Sites like BibMe and Grammarly offer both free and premium level applications and memberships. The premium levels provide additional assistance with your writing and assist with automated proofreading, and grammar and spelling error identification. They may suggest ways for improving the text. New plagiarism detection sites are developed every year, and you are encouraged to check for them.

Thesis and Dissertation Submission

Format the title pages in the same manner shown in the guidebook sample pages. There should be no borders, no mix of font types, any photos, tables or artwork on the cover or the title pages.

Follow the rules of capitalization, font size, margins, spacing, page numbering, bolding, indentation, and presentation of tables and figures. Have your advisors proofread and edit your thesis or dissertation for content, style, formatting, and English language usage. Provide your advisors a soft copy and a hard copy of your thesis or dissertation for ease in reading and reference checking. Plan ahead to allow adequate time for content and reference checking.

- Have a native English language speaker review your thesis or dissertation for language. Please give this colleague at least three days to carefully read and comment on the English language usage.
- Use Spelling and Grammar check software to ensure there are no misspellings or grammar errors in the and dissertation.
- Carefully identify the numbers and names of the chapters.
- Check all in-text citations for completeness and formatting.
- Present each reference in the references chapter in the proper format. As mentioned previously, give special care to the spelling of all names

As the due date for submission approaches, give your thesis or dissertation advisors a week or more to study your final document so they can identify last-minute problems for you to revise. Your thesis or dissertation must be delivered by PAU to the internal and external examiners in advance; these examiners need time to study the thesis or dissertation in preparation for the scheduled oral thesis or dissertation defense.

Submit the thesis or dissertation early or on time. Respect your advisors and their time. Please recognize that a thesis or dissertation submitted after the formal due date, regardless of the many compelling reasons for the delay, may lead to delays in advisor approval. There may then be a delay in distribution to the external examiners and with the oral thesis and dissertation defense.

Historically, theses and dissertations submitted by students after a university's official due date are often seriously flawed. This is perhaps due to inadequate planning, last-minute scambled writing, and a rushed completion.

Flaws in late theses and dissertations are identified in document organization, chapter contents, writing, style, and formatting. Sadly, evaluators often issue marginal grades at the oral defenses for these documents. Significant re-writing is not uncommon after the oral defense. Refer to your personal calendar and plan ahead for timely submission.

Part 6. Oral And dissertation Defense

If you are like students before you, memories of your oral defense will stay with you for decades. Make them happy memories through serious preparation before and on the day of your oral defense.

The oral defense is the climax of your writing and advanced degree studies. It is a rite of passage, and your performance reflects on you, your advisors, the program, and PAU.

Students who carefully prepare have successful oral defenses. The thesis or dissertation is ready for evaluation. The abstract is letter-perfect for distribution to all seated in the defense. The MS PowerPoint presentation is organized and the slides readable. The laptop computer is functioning. The student demonstrates a knowledge of the contents and does not read cluttered hard-to-read slides. The student had already observed defenses and understands the ritual and is ready.

Before the Oral Defense

Learn the defense ritual at PAU. What are the procedures and expectations? The most effective way to learn the ritual is to attend defenses of your colleagues. It is not premature to observe defenses by the students finishing before you. Learn from their successes and mistakes.

Confirm the day, time, and location of your defense in advance. Oral defense schedules are usually posted a week or more before the event. Confirm with the program director.

Learn the time allocated to your oral defense. Generally, PAU oral thesis defense presentations are thirty minutes followed by fifteen minutes of questions by the evaluation committee members and those in attendance.

The time allocation for a Ph.D. oral dissertation defense is longer. Check with PAU on length. Do not go under or over the time allotment. Practice your presentation, so you adhere to the time constraint.

For both the thesis and dissertation defence, prepare a well-written abstract for the committee and all in attendance. You may need as many as twenty-five copies. While the evaluation committee members have a copy of your thesis or dissertation, the attendees will not. The abstract helps all in attendance know something of the content and research findings of your thesis or dissertation.

In the days before the defense, prepare an effective and attractive MS PowerPoint presentation of approximately fifteen slides for major presentation points. Limit your introductory slides. The slides should encapsulate the study and focus on methods, most salient findings, and recommendations.

In preparing the presentation, ask yourself: "What do I want colleagues to know about my thesis or dissertation?" "What is the most important information that I can present?" Navigate the committee and attendees through a logical, point-by-point sequence of information that builds to the conclusion in a clear and focused direction.

Too often, the MS PowerPoint slide presentations for oral defenses are poorly prepared. Avoid this problem.

- Make slides readable to those the back of the room. Use large, dark-colored font.
- Make PowerPoint tables and charts readable to all.
- Use bullets with words and phrases. Avoid complete sentences. You are not reading your oral thesis or dissertation defense.
- Include at least two recommendations.
- Anticipate comments and questions. Questions will include, for example, statistical test choice, sampling methods, data interpretation, confidentiality issues, and English language problems.

On the Oral Thesis and Dissertation Defense Day

The day of the oral thesis or dissertation defense can be nerve-wracking. However, if you have prepared, you can present with confidence. Anticipate a successful defense by following the following suggestions:

- Dress professionally as this is an important and memorable day.
- Arrive early to your defense classroom or auditorium.
- Speak clearly.
- Use a microphone for all to hear you.
- Speak with authority as you are the expert on your topic.
- Have a hard copy of your thesis or dissertation in your hands for questions about the contents and language in the thesis or dissertation. The defense examiners will ask for clarifications in the document. They may ask about sentences, citations, or computations.
- Be sure that your laptop computer and MS PowerPoint presentation are functional. Test the laptop and the file before the actual defense.
- Have an adequate number of abstracts to distribute to all persons attending your oral defense.

Thesis and Dissertation Approval

After you have completed the presentation and answered questions, you will be asked to leave the room with all attendees. The oral defense evaluation committee meets for approximately 30 minutes to evaluate both the thesis or dissertation scholarship and your performance in the oral defense. PAU grades range from outstanding, excellent, good, weak, to failing.

Rarely is a thesis or dissertation approved in its entirety at the oral defense. Some rewriting and language corrections are always required by the oral defense evaluation committee. This committee may require limited, moderate, or even major rewriting for acceptance. The requirements are noted by the committee and provided to you. The changes must be completed before approval and signatures.

The thesis or dissertation is signed only when all of the required rewriting has been completed and confirmed. An evaluator will be asked to confirm that the changes are made before submission.

Please do not ask for signatures of approval to thesis or dissertation that has not been carefully studied and approved by the defense examiners.

Follow-through

Check with the program academic office for the necessary number and type of bound copies required for submission. Bindings must conform to the guidelines. One of the copies will be placed in the PAU's library. You may wish to have two or more personal copies for future reference. It is not premature to begin work on manuscripts for publication of your research in the high impact peer-reviewed journals.

Part 7. Sample Pages

Use these sample pages as guides for appropriate content, font, and spacing:

- Abbreviations and Acronyms
- Table of Contents
- Statement of the Author
- List of Tables
- Thesis and dissertation Proposal Page
- Thesis and Dissertation Cover Page
- Thesis and Dissertation Title Page
- Thesis and Dissertation Approval Page

Abbreviations and Acronyms

ABBREVIATIONS AND ACRONYMS

ARH	Adolescent reproductive health
ART	Antiretroviral therapy
BCG	Bacillus Calmette-Guerin
BCC	Behavioral Change Communication
EPHA	Pan African University Public Health Association
EPI	Expanded Program on Immunization
EBF	Exclusive breast feeding
FP	Family planning
HAI	Hospital acquired infection
LBW	Low birth weight
OI	Opportunistic infection
RH	Reproductive health

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Statement of the Author

PAN AFRICA UNIVERSITY

STATEMENT OF THE AUTHOR

By my signature below, I declare that this thesis/dissertation is my work. I have followed all ethical principles of scholarship in the preparation, data collection, data analysis, and completion of this and dissertation. I have given all scholarly matter recognition through accurate citations and references. I affirm that I have cited and referenced all sources used in this document. I have made every effort to avoid plagiarism.

I submit this document in partial fulfillment of the requirement for a degree from Pan African University. This document is available from the PAU Library to borrowers under the rules of the library. I declare that I have not submitted this document to any other institution for the award of an academic degree, diploma, or certificate.

Scholars may use brief quotations from this and dissertation without special permission if they make an accurate and complete acknowledgment of the source. The dean of the academic unit may grant permission for extended quotations or reproduction of this document. In all other instances, however, the author must grant permission.

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LIST OF TABLES

Thesis and Dissertation Proposal Page

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PAN AFRICAN UNIVERSITY

Title of Thesis or Dissertation

M.Sc. PROPOSAL

Full Name (degree)

JULY 2018

PAN AFRICAN UNIVERSITY

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Thesis and Dissertation Cover Page

PAN AFRICAN UNIVERSITY

Title of Thesis or Dissertation

Master of Science Degree

Full Name (degree.)

May 2017

Pan African University

Thesis and Dissertation Title Page

Title of Thesis or Dissertation.

A Thesis or dissertation submitted to the Institute………..

In Partial Fulfillment of the Requirements for the Doctor of Philosophy (Ph.D.) Degree

Full Name (degree)

Advisor: _____
Co-advisor: _____
Date: _____

May 2017

Pan African University

Thesis and Dissertation Approval Page

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THESIS AND DISSERTATION APPROVAL PAGE

……Title. All caps. Centered……

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Submitted by

_____   _____   _____
Name of Student   Signature   Date

Approved by Examining Board

_____   _____   _____
Name of Examiner   Signature   Date

Thesis/ Dissertation Advisors

_____   _____   _____
Name of Advisor   Signature   Date

_____   _____   _____
Name of Co-Advisor   Signature   Date

Institute Dean

_____   _____   _____
Name of Dean   Signature   Date

Pan African University

_____   _____   _____
Name of Rector   Signature   Date