



Achieving Originality and Conviction in a Doctoral Thesis: A Synoptic Theory of the Five-Chapter Model

Professor Augustine Nwoye

Professor Emeritus of Psychology and Fulbright Scholar
Discipline of Psychology
School of Social Sciences
University of KwaZulu-Natal
SOUTH AFRICA

Email: Nwoyea@ukzn.ac.za; nnakwe.morah@gmail.com

ORCID: <https://orcid.org/0000-0003-2880-832x>

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Abstract

After several years of serving as external examiner for many universities in Africa and the wider world, I came to realize that many doctoral students and their supervisors are not often aware of the five-chapter thesis structure articulated by the American Psychological Association (APA) in its 2019 guidelines for academic thesis writing. Those who are aware of and follow such a structure clearly abide by the APA's formulation that a full academic thesis report, whether at a master's or doctoral level, should be constituted of no more than five chapters. Unfortunately, my many years of experience as external examiner for doctoral thesis in several universities in the South and other regions of Africa has shown that in universities where this norm is unknown and not followed, there is no order for guiding the doctoral students on what to do regarding how to structure their doctoral thesis chapters and how many chapters in all they should be. In that case, with the absence of such a guiding principle some students and their supervisors have at times been tempted to go overboard and submit a doctoral thesis that range from eight to more chapters in all. The principal inspiration for this article is to demonstrate for doctoral students and their emerging new supervisors how the five-chapter thesis structure model for academic thesis writing could be implemented in practice.

Keywords: APA; American Psychological Association; Academic Thesis Writing Guidelines; Five-Chapter Thesis Writing Model; PhD Thesis Chapterization; Guidelines for Doctoral Thesis Writing

Introduction

Following several years of serving as external examiner for many universities in Africa and the wider world, I have come to realize that many doctoral students and their supervisors are not often aware

of the five-chapter thesis writing structure articulated by the American Psychological Association (APA) in its (2019) guidelines for academic thesis writing. Those who are aware of and follow such a norm clearly abide by the APA's guideline that a full doctoral thesis should be presented in no more than five chapters. Unfortunately, my practical experience as external examiner for higher degree thesis in many universities in the South and other regions of Africa has shown that in those universities where this specific guideline is unknown and not followed, there is no reference for giving doctoral students a standard on what to do regarding how to structure their PhD thesis chapters and how many chapters in all they need to be. In that case, with the absence of such a guiding principle some students and their supervisors have at times been tempted to go overboard and submit a doctoral thesis that is up to eight or more chapters in all. It is against this background that the need for the present article arose aimed at demonstrating for doctoral students and their emerging new supervisors how the five-chapter model for PhD thesis writing could be implemented in practice.

In pursuit of this objective I deem it important to first of all begin by clarifying the meaning and scope of the five-chapter model in academic thesis writing. To engage in such a task, it is considered necessary to raise and answer the question about what is expected of a doctoral student in crafting a PhD thesis that is in line with the five-chapter model. In responding adequately to such a question, I would like to draw attention of the reader to the current Guidelines on academic thesis writing proposed in the American Psychological Association's (APA) thesis writing style, 7th Edition (2019), which is followed in Psychology, Education, and the Social Science Disciplines. Taking a careful look at those APA Guidelines for thesis writing the conclusion that emerges is that a doctoral thesis written in line with the five-chapter model begins with a first chapter called **Introduction** (Chapter 1) and ends with the last chapter, referred to as **Conclusion** (Chapter 5). The same APA guidelines for thesis writing (2019) imply within its scope and guiding formulations the following several assumptions characteristic of a coherent and well written doctoral thesis, namely:

That a coherent doctoral thesis written in line with the APA's five-chapter structure is distinguishable from the internal consistency and originality of its various chapters, where each chapter is able to do what it is expected to do with a minimum of words; and where each chapter ends with a summary that reminds the reader of the key issues discussed and the immediate concerns and themes to be taken up in the next chapter; with this approach creating the quality of coherence and smooth transition and the phenomenon of logical progression from one chapter to the next. This same technique of creating a logical cohesion between chapters, promotes the quality of belief or conviction in the reader that the candidate knows what s/he is doing and why s/he is doing it;

That a doctoral thesis written in consonance with the APA's a five-chapter model starts with a comprehensive Introductory chapter, followed by a well-documented literature review; the type that demonstrates with precision, the candidate's mastery of the primary and secondary sources in the field understudy, and a mature critical reflection on the state of previous investigations and writings in the subject area of attention;

That a commendable doctoral thesis presented within a five-chapter structure is grounded on a well thought out research design and paradigm, encompassing a well-crafted materials and methods chapter necessary for successfully conducting the research such that the data collected is able to generate dependable answers to the research questions investigated;

That in a well-researched and crafted PhD thesis following the five-chapter model, the chapter dedicated to presenting the results of the study (Chapter 4) is not confused with the chapter (Chapter 5) dedicated to conducting the discussion and interpretation of the research findings. In such a thesis, rather the doctoral student firmly recognizes that the discussion and interpretation chapter, that is, Chapter 5,

entitled as Conclusion, is designed to explain the research findings to the reader, and to relate the findings in a critical way to the works of previous investigators in the researcher subject area;

That a well-written doctoral thesis following the five-chapter model, presents within its last chapter, namely, the Conclusion Chapter, not only the discussion and interpretations of the study's findings as noted above, but also a number of pertinent conclusions and relevant implications, and significant contributions and recommendations for improved policy planning and practice in the practical world; with this process, generating some clear evidence that the thesis has led to the advancement of knowledge in the researcher's subject area;

That in a successful doctoral thesis, presented within a five-chapter format, the author is humble to include a section in the final (CONCLUSION) chapter of the thesis some indications acknowledging his or her recognition of the limitations of his or her research findings, and consequently makes some recommendations for further research;

That a well accomplished PhD thesis, submitted within a five-chapter structure is a *fully referenced document*; with the list of its references being current and thorough, in addition to being consistent in its referencing style; and, finally, that in such a thesis report, the candidate, all through the five chapters of the thesis, sticks to the use of one academic referencing style or tradition, adopted in the Department or School in which the degree is to be awarded. As mentioned earlier in this article, in the Discipline of Psychology, as is equally the case in many other Disciplines of the Social Sciences as well as Education, the adopted academic referencing style is the APA (American Psychological Association's) style.

Having highlighted these fundamental assumptions, that are fully implied within the APA Guidelines for thesis writing, the rest of this article will now be devoted to highlighting the basic constituents of each of the five chapters that make up a well written and coherent doctoral thesis presented within the five-chapter model. However, before embarking on this, let us start with identifying the key characteristics of a quality doctoral thesis **Title** as well as an excellent doctoral thesis **Abstract**.

Characteristics of a Quality Doctoral Thesis Title

Under this heading the key point to note is that a quality doctoral thesis title is one that is as concise as possible, designed to give an accurate and unambiguous name to the dissertation. In this regard, such a quality thesis title is said to be invested with the qualities of *clarity*, *brevity*, and *contextualization*; in addition to embracing the key variables of interest to the research. The above observations mean that as far as academic thesis captioning is concerned, the summary principle to take home with is that whatever happens, the title of the study should not be too long. Thus, to avoid such a title seeming almost like a paragraph in length, it should as much as possible be reduced to between 9–18 words. To achieve this aim the governing idea always to be remembered is that the shorter the thesis title, the better its effect, as long as the key elements of a standard thesis title statement are embedded in it: *the subject area under study*, *the study variables*, *the target population*, and *the geography of the study*. Thus, in a topic like "Occupational Preferences and Perceptions in Mate Selection: A Study of Nigerian University Students" (word count: 13) the above mentioned characteristics can be seen to stand out: Subject area (*mate selection*), study variables (*occupational preferences and perceptions*), target population (*university students*) and geography of the study (*Nigeria*).

In carefully studying the above example the reader may have noticed that one key element that promotes its brevity is the fact that the title focuses on *naming the study* rather than on *describing its intention*. Titles that err in describing the intention rather than naming the core elements of the thesis

starts with such unnecessary phrases like “An Investigation into the...”, “A comparative analysis of the relationship between ...” “A study of the relationship between. ...” none of which adds value to naming the key elements of the study’s title.

Of course, in addition to emphasis on the brevity and precision criteria in thesis title writing, another important consideration that the thesis supervisor may take into account in helping his/her student to think about is the extent to which the proposed topic is able to meet the *originality criterion* expected to be met by a doctoral thesis. This is because according to Phillips and Pugh (1994, 2015) *a topic of research particularly at a doctoral level should be classified as original only if it will enable the researcher to accomplish the following:*

Do empirically based work that has not been done before;
Bring new evidence to bear on an old issue or problem;
Create a new synthesis that has not been done before;
Apply something done in another country successfully in one’s own country;
Look at areas that people in the discipline have not looked at before; and
Add to knowledge in a way that has not previously been done before.

These indications mean that in an original and coherent doctoral thesis following the five-chapter model, “originality rarely means starting from scratch, but looking to expand that which is already known” (Ruth-Sahd & King, 2006, p.119).

Elements of a quality Doctoral thesis Abstract

Here, the crucial point to note is that a well-crafted doctoral thesis abstract embraces five main elements in its content: (1) the purpose of the study, often including the key question investigated, (2) the design and methods, including the study sample; (3) about two principal results of the study, (4) the implications of the findings and (5) recommendations for improved policy planning and practice. The last sentence of the abstract is often expected to include an indication that recommendations have also been made on the need for further research.

With these preliminaries fully attended, an attempt will now be made to address the major objective of this article, namely, to highlight the basic constituents or components of each of the chapters in a doctoral thesis following the five-chapter structural model. And to this task we now turn.

Elements and Constituents of the First Chapter of a Thesis: INTRODUCTION

After the title of the thesis has been firmly established, it becomes the task of the doctoral student to try to develop that topic, by introducing the problem it is concerned with to the reader.

The Study Background as the Compelling Hinge of the Opening Chapter

A compelling introduction to a doctoral thesis does not begin with stating the problem immediately. It first creates the hinge, or an account that links the reader to the worrisome perplexities that help to illuminate the origin of the problem which the research intends to address. To illustrate what is meant in this regard, I have taken the liberty to present below the flow and the acceptable structure and the sitting position of the various components of Chapter 1 of an academic thesis, including the way these components are named under the APA thesis writing style:

CHAPTER ONE: INTRODUCTION	...	...	...	...	...	...	...	...
1.1.0 Background of the Study	...	...	...	...	...	...	...	...
1.2.0 Statement of the Problem	...	...	...	...	...	...	...	...
1.3.0 Purpose of the Study	...	...	...	...	...	...	...	...
1.4.0 Objectives of the Study	...	...	...	...	...	...	...	...
1.5.0 Research Questions	...	...	...	...	...	...	...	...
1.6.0 Significance of the Study	...	...	...	...	...	...	...	...
1.7.0 Assumptions/Prospective Hypotheses of the Study	...	...	...	...	...	...	...	...
1.8.0 Scope and Delimitations of the Study	...	...	...	...	...	...	...	...
1.9.0 Operational Definition of Terms	...	...	...	...	...	...	...	...
1.10.0 Summary, and Overview of the Study	...	...	...	...	...	...	...	...

A quick review of the above structural placement of the constituents of the first of a five-chapter doctoral thesis structure, following the guide of the APA thesis writing style, draws attention to one important point, namely, *the name of Chapter 1 of a thesis (INTRODUCTION) should not be confused with the name of the first section of that Chapter, namely Background of the study*. Doctoral students, who do not remember this point, often err in having two ‘introductions’ in the same Chapter 1 of their thesis. But this error would be quite unnecessary if it is remembered that the entire components of Chapter 1 of a five-chapter thesis as given above are meant to work together to give a comprehensive and compelling Introduction to the thesis. None of them operating alone could suffice to do that job; but each has something vital to add in the successful crafting of a PhD Thesis INTRODUCTION Chapter (Booth, Colombo, & Williams, Bizup, & FitzGerald, 2024).

Now, the fundamental objective of the ‘Background of the Study’ section in Chapter 1 of a five-chapter thesis structure is to establish the inspirational impulse (the hinge) driving the thesis; that impulse or hinge arises from a noted discrepancy or gap or contradiction that appears to exist between theory and practice or between practice and theory in a given area of study. It is the urge to close such a gap that motivates the researcher to undertake the study in the first place.

But the *Background of the study* section of a thesis does more than that. It also works to document and contextualize the study by giving recognition to the attempts and perspectives of previous investigators to address the noted anomaly or perplexity or the research gap under attention. This means that the *Background of the Study* section of a study’s Chapter 1, must contain some relevant references to the literature that helps the researcher to establish from the word go, where the present study stands in relation to previous efforts on the same or similar topic; and why despite the existence of any one or two or more notable studies on same or similar theme, there is still space and justification for one’s intention to contribute to addressing the problem. To achieve this effect, an important section of one’s study background must aim to draw attention to the possible one-dimensional structures of thought, or the problem of theory-to-practice gaps or what some authorities refer to as ‘phenomenological practice gaps’, that have escaped for so long, the attention of previous researchers on the subject of the investigation.

Statement of the Problem

The above observations mean that the task of the ‘Background of the Study’ section in a coherent and original doctoral thesis, organized along the lines of a five-chapter model, is to prepare the mood and the context for effective statement of the problem of the study, which in practical terms does entail *the act of recognizing and establishing an omission* or a gap in the area of one’s study interest, which one’s research is designed to address. However, whatever happens, the main point to remember is that a doctoral thesis is not worth its salt if the problem it is designed to address is not clearly stated; or even if it is well stated, it is not convincingly presented, because it was rushed or not backed-up with eloquent

supportive citations from the literature that show that an anomaly indeed exists which requires a research action to resolve it.

This observation may of course attract the question of when do we know that a research problem exists? In response, I would like to say that a convincing research problem exists if the researcher is able to demonstrate that there is a conflict or gap in the literature between what is desired and what is observed; between what a theory or policy recommends to be done and what is happening in practice; or in fact, that there is a contradiction between principles and practice, etc; and the task of the study is to investigate the basis for this inconsistency.

Now, a related point to make which I have done elsewhere is that every academic research or thesis has both a *vision* and a *telos*. And this is what is addressed under the ‘purpose of the study’ section of the ‘Introduction to’ a thesis. In this regard, the *vision of the study* refers to the recognition of an omission or gap in the literature that needs to be addressed, while the word *telos* is taken from the Greek word for purpose, which points attention to what to be achieved after the study has been completed and the situation generating the problem has been resolved. On the other hand, the *Study objectives* in their various stated dimensions are meant to highlight the practical actions or the steps which the researcher needs to take to ensure that the purpose of the study is achieved. In this way, ‘the purpose of the study’ is the aspect of the research process that drives the entire study but it derives its importance from the existence of the research problem in search of a resolution. This again means that essentially the *Purpose of the Study* is different from the *Study Objectives*; the purpose is determined by the problem under attention and the objectives operate in the service of the purpose of the study.

Having said all this, a related point to make is that usually the number of Research Questions should tally with the number of Research Objectives. This is because it is through the data generated by the research questions that the objectives of the study are achieved. It is also crucial to mention that to be viable, one’s research questions should be stated clearly or unambiguously. It should also be: (1) specific (connected to data indicators); (2) answerable and easy to see what data are required to answer them and how the data will be generated; (3) interconnected (that is, are related to each other in some meaningful way; and (4) substantively relevant (meaning that such questions are typically interesting and worthwhile for the investment of research effort). In addition, because of their importance in the overall economy of the research process there should be a close fit between one’s research questions and one’s research methods; e.g., the instruments proposed for data collection must be relevant for enabling the gathering of the data for answering the research questions formulated.

Similarly, the key assumptions/prospective hypotheses of the study should also be clearly stated. Also, the ‘Significance of the study’ which highlights the need for and the expected contributions of the study must be clearly delineated. Yet, at the research proposal stage, the entire argument for the significance or the value of the study should not be rendered as if the study has already been completed. Finally, as far as the first chapter of the study in a five-chapter doctoral thesis is concerned, it needs to be remembered that the ‘Definition of terms’ section in that Chapter is not concerned with giving of dictionary definition of terms. But rather the *operational definition* of terms, which should draw attention to the way a particular word or concept is taken to mean in one’s study. It also stands for the specific meaning which the researcher has decided to give to a seemingly common term or terms in the context of the said study.

Elements and Key Features of the Second Chapter in a Five-Chapter Thesis: REVIEW OF RELATED LITERATURE

In a doctoral thesis written in line with the five-chapter model, a good literature review, as emphasized in all great research methods books, is one that is *comprehensive*, *critical*, and *contextualized*. Such a review provides the reader with a theory base or the big picture of the issue under investigation; as well as a critical survey of published works that pertain to one's investigation; including an analysis and synthesis of those works. Hence according to Boote & Beile (2005) a literature review is an evaluative report of studies found in the literature related to one's study area. To be successful such a review should describe, summarize, evaluate and clarify the extant related literature in one's subject area. Additionally, such a review should give a theoretical basis for the research and helps the researcher to specify the grounds for one's own research (Machi & McEvoy, 2016).

Purpose of the Literature Review

In the light of the above, the major purposes of the literature review are to: Provide a context for the research; justify the research in the light of the gaps noted in previous researches; ensure the research hasn't been done before; show where one's planned research fits into the existing body of knowledge; enable the researcher to learn from previous theory and writings on the subject; illustrate how the subject has been studied previously; highlight the flaws in previous related researches and how they can be rectified in one's study; outline gaps in previous research that one's research aims to address; show how one's work will add to the understanding and knowledge of the field (Machi & McEvoy, 2016).

To further these purposes, according to Steward (2004), a good literature review should be:

Comprehensive: meaning that attention should be directed to all relevant sources (books, articles and documents bearing on the topic of the study);

Fully referenced: to allow others to follow the path of the researcher to the study's conclusion;

Selective: through use of appropriate search strategies to find the key evidence or information.

Relevant: focusing only on pertinent literature and themes of interest to the study; a synthesis of key themes and ideas in relation to the subject area understudy;

Balanced: should present different views and opinions in the debates in the field under attention;

Critical: in its appraisal of the literature;

Analytical: should develop new ideas and understandings from the existing ideas and debates on the topic of the study.

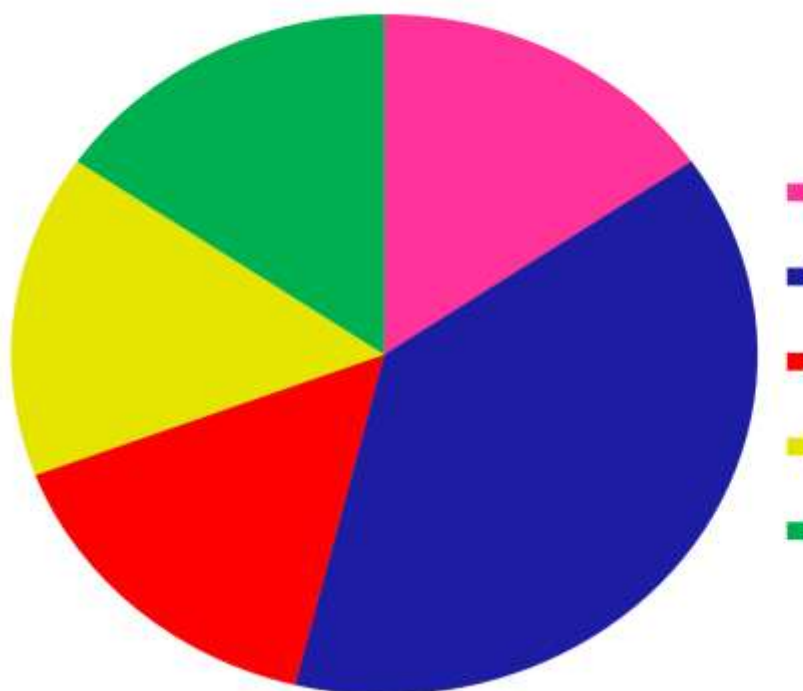
The above indices suggest that when effectively executed one's literature review should be able to demonstrate that one is well read in one's field; that is, that one has read broadly in the subject area understudy, and that one understands the available related important works in depth. No wonder why it is often said that in a doctoral work one is first a scholar before becoming a researcher. Indeed, according to Shulman (1999, p.162-163), a researcher with a solid literature review has acquired the virtue of generativity or the ability to build on the scholarship and research of those who have come before him or her. Hence, according to Boote & Beile (2004), to be useful and meaningful, one's research must be cumulative; it must build on and learn from prior researches and scholarship on the topic.

Standards and Criteria of a Good Literature Review

Having said this, I consider it important to mention straight away that according to Boote & Beile (2004), when the attention of examiners are focused on assessing the literature of a doctoral thesis, the focus is directed at ascertaining the extent to which the review meets the standards and criteria of a good

literature review as highlighted in the pie chart given below: where the **pink** colour stands for the extent it fares on the *coverage criterion* ; the **blue** colour, the extent of its ability to synthesize what was reviewed; the **red** colour, the extent to which the researcher have *successfully mastered the existing relevant methodology* to be adopted for the study where they are found relevant; the **yellow** colour, the extent the review has fared on the *significance criterion* as clarified below, and the **green** colour, the *quality of its rhetoric*, or the level of eloquence of the entire review.

PIE CHART 1: CRITERIA FOR ASSESSING A LITERATURE REVIEW



An attempt will now be to clarify the message contained in the above Pie Chart, starting with commenting on the section on the Coverage Criterion:

Coverage criterion

Under the coverage criterion, highlighted under the pink colour, Bruce (2001) proposes that one's literature review fares well only if it scores high on the factors of *topicality, comprehensiveness, breadth, exclusion, relevance, currency, availability, and authority* (e.g., whether or not, it was able to explore the contributions of the key researchers and writers in the field understudy).

Synthesis Criterion

With the synthesis criterion, *represented by the blue colour*, the emphasis is on *how well the researcher summarized, analysed and synthesized the selected literature on a topic, and distinguishes what has been done from what needs to be done; placed the topic or problem in the broader scholarly literature, placed the research in the historical context of the field, acquired and enhanced the subject vocabulary and synthesized and gained a new perspective on the problem.*

Recognition of the Relevant Methodology Criterion

The methodology criterion *measures the extent to which the researcher is aware of and identified the main methodologies and research techniques that have been used in the field of one's research interest and is able to properly analyse their advantages. It also evaluates how well one's literature review has been to relate ideas and theories to research methodologies.* It is expected that one should be able to recognize how previous researchers' methodological choices affected their research findings. It is equally expected that any sophisticated review of literature should also consider the research methods used in that literature and consider the strengths and weaknesses of those research methods in relation to the state of the field. Similarly, very good literature reviews usually recognize the methodological weaknesses of a field of study and propose new methodologies to compensate for those weaknesses.

Significance Criterion

Here what is assessed is how well one's review has rationalized the practical and scholarly significance of the research problem. It is represented in the yellow colour of the above pie chart. It is expected that an original doctoral thesis should have discussed both the scholarly and the practical implications of the existing research on one's topic and critically note any shortcomings and ambiguities in the literature.

Rhetoric Criterion

The rhetoric criterion (reflected in the green colour of the chart) is interested in determining whether the literature review was written with a coherent, clear structure that supported the review. According to Cooper (1985) the quality of rhetorical structure and organization were key determinants in how influential and persuasive readers will believe the review to be.

According to Boote & Beile (2004) a literature review that meets high standards on the above mentioned criteria indicates that the candidate in question has a thorough, sophisticated understanding of the field of study – this being understood as a precondition for substantial, useful research.

The illustrative format below is a tentative sample of how to organize one's Literature Review chapter under the five-chapter model, to achieve most of these criteria.

CHAPTER TWO: REVIEW OF RELATED LITERATURE										
2.1.0	Introduction	...	...	...	...	...	...	...	...	...
2.2.0	Theoretical Review of the Literature (Foreign & Local)	...	...	...	...	...	...	...	...	...
2.3.0	Review of Foreign Empirical Studies	...	...	...	...	...	...	...	...	...
2.4.0	Review of Local Empirical Studies	...	...	...	...	...	...	...	...	...
2.5.0	Summary and Synthesis of the Review	...	...	...	...	...	...	...	...	...
2.6.0	Research/Operational Hypotheses	...	...	...	...	...	...	...	...	...
2.7.0	Conceptual Framework	...	...	...	...	...	...	...	...	...
2.8.0	Summary	...	...	...	...	...	...	...	...	...

Further Comments on the Literature Review

Now, one more comment to make on the importance of writing a coherent and seasoned literature review in a doctoral thesis; and that is that the conclusion of the review should, at all times, aim at answering the 'so what question' – namely what the reader should take away from this review? In anticipation of this question, key issues from the review should be synthesized and reflected on before

ending the review. Also, it is important to remember that the theoretical review of the literature section is the area of the review in which an attempt is made to give due recognition to efforts which scholars have made to conceptualize and explain and develop important constructs and variables of interest to one's study. In this regard, where one's study involves a theory testing or theory verification study, the usual habit of researchers is to start early to introduce the relevant theory, some of whose claims are planned to be subjected to test in one's study. In that case, the appropriate placement of the theoretical framework in such a study will be in Chapter 1 of the study. On the other hand, where one's research involves a theory generation study, or what is now referred to as grounded theory research, the seating of the theoretical framework of the study is as indicated in the sample structure given above, namely Chapter 2 of the study, as part of the Literature Review.

Finally, a careful reader could see that unlike in Chapter I, Chapter 2 is started off with a short introduction that gives the menu of what to expect in the entire chapter.

Originality and Key Features of One's Doctoral Thesis Chapter 3: METHODOLOGY

Under this heading, the key point to make is that a rigorous study like is expected at doctoral thesis level requires a well-designed and rationalized methodology (Hjelm, 2024). To arrive at such a methodology, the doctoral researcher must make effective decisions as regards the following:

CHAPTER THREE: METHODOLOGY										
3.1.0	Introduction	...	...	...	...	...	...	...	...	
3.2.0	Design of the Study	...	...	...	...	...	...	...	...	
3.3.0	Location of the Study	...	...	...	...	...	...	...	...	
3.4.0	Study Population	...	...	...	...	...	...	...	...	
3.4.1	Inclusion and Exclusion Criteria	...	...	...	...	...	...	...	...	
3.5.0	Sampling Techniques and Sample Size	...	...	...	...	...	...	...	...	
3.6.0	Research Instrument	...	...	...	...	...	...	...	...	
3.6.1	Validity and Reliability	...	...	...	...	...	...	...	...	
3.6.2	Pilot Study	...	...	...	...	...	...	...	...	
3.7.0	Data Analysis	...	...	...	...	...	...	...	...	3.8.0
	Ethical Considerations	...	...	...	...	...	...	...	...	3.9.0
	Summary	...	...	...	...	...	...	...	...	

Now, as can be seen from the structure given above, Chapter 3 of a thesis under the five-chapter model is the aspect of the thesis that is concerned with effecting a number of decisions that deal with such issues as the nature of the materials and strategies to be employed in conducting the research in such a way that appropriate answers to the questions of interest to the study could be generated. In this regard the first challenge to face is determining which design to use in implementing one's study (Leavy, 2023): A quantitative cross-sectional survey?; A correlational methodology? A case study? A controlled experimental research design?; or rather a mix-model research design? Or even a Qualitative phenomenological approach (Schwartz-Shea & Yanow, 2012; Copple, DeMarrais, & Roulston, 2024), etc. Whichever way this question is resolved, a related challenge would arise as to whether to use just a single design for the study, or to adopt a triangulation methodology involving the use of several kinds of methods or data to study one's topic. The most common type of triangulation is data triangulation, where the study uses a variety of data sources (e.g. questionnaire and focus group) in gaining answers to the questions of the study (Stephen, 2013; Creswell & Poth, 2024).

Apart from design issues, other important concerns in the Methodology chapter of a doctoral thesis within the five-chapter model is the related question of how to constitute an appropriate sample size

for the study (the rule often being the higher the population the smaller the sample and vice versa); and at the end of the study, determining how many participants really took part in the study?; representing a total of what percentage of the target population? In addition, some inclusion and exclusion criteria need to be followed in deciding why one particular segment of the target population is selected and not the other. The same process is followed in explaining why a given study location is targeted for study instead of another.

Reassessing the notions of Validity and Reliability in Qualitative Doctoral Studies

Now, although validity and reliability must be addressed in all studies since the accuracy, dependability, and credibility of the findings depend on them. In quantitative research, reliability refers to the ability to replicate the results of a study; while in qualitative research there is no expectation of replication. In particular, in qualitative research what is emphasized is *dependability* instead of the factor of reliability. Similarly in qualitative research the terms *quality*, *rigour*, and *trustworthiness* are emphasized instead of the notion of validity as in quantitative studies.

Approaches to address validity (quality/rigour/trustworthiness) and reliability (dependability) in qualitative studies, are by now very clear. The most popular approaches include: (1) triangulation of information among different sources of data, (2) receiving feedback from informants (member checking), and (3) expert review. Here, member checking refers to the process of verifying results of the study with the sampled group. It allows the stakeholder or participant the chance to correct errors of fact or errors of interpretation before the report is consolidated. With this, member checking adds to the validity of the participant's interpretation of qualitative observations.

This means that when discussing the credibility of the data obtained in one's qualitative-based study one must make certain that one describes in detail how the results of the member check may have altered (or not) the data. *Expert review* is one of the primary evaluation strategies used in both formative (how can this instrument be improved?) and summative (how the data helped answer the research questions?). It is a good idea to provide experts (e.g. supervisors) with some sort of instrument or guide to ensure that they critique all of the important aspects of the study to be reviewed) such as the interview questions.

Also, although, in qualitative studies the use of relatively small samples are condoned, it is important that the number of participants in a qualitative study reach a point of sufficiency and cover a representative number of participants that are typical of demographics such as age, race, experience, and gender, or who have experienced a phenomenon or treatment. It is also important to know that in qualitative studies, there is ongoing process of searching for the themes, during the process of data analysis, in the data collected until theoretical saturation is achieved, that is, when no new themes or issues arise and when the categories are well established and validated.

Finally, like in Chapter 2, Chapter 3 begins with a short, often one paragraph introduction, intended to give the reader a statement of the menu of issues to be addressed in the entire Chapter. And like in Chapter 2 also, Chapter 3 ends with a summary section that highlights what has been discussed, decisions reached, and what to be addressed in the next chapter.

Key Features and Components of a Doctoral Thesis Chapter 4: RESULTS/ FINDINGS OF THE STUDY

Under this heading, the crucial point to note is that the purpose of Chapter 4 of a thesis following the current APA Guidelines in line with its five-chapter thesis model is *to just present and not to interpret*

the results or findings of the study. When this is done, the structure of Chapter 4 could be organized as given below:

CHAPTER FOUR: RESULTS OF THE STUDY	...	...	...	...	...	...
4.1.0 Introduction	...	...	...	...	...	...
4.2.0 Descriptive Analysis of Distribution of Respondents	...	...	...	...	...	...
4.3.0 Presentation of Results	...	...	...	...	...	...
4.4.0 Inferential Analysis of Results, Hypothesis by Hypothesis	...	...	...	...	...	...
4.5.0 Summary of Findings	...	...	...	...	...	...
4.6.0 Summary	...	...	...	...	...	...

Following the structure of Chapter 4 as highlighted above it is expected that the candidate's research results or findings be first clearly presented to the reader as they are, in the form of tables and graphs; without any attempt to discuss or interpret them at this stage. To organize such a presentation in an orderly manner, the research questions investigated or the hypotheses tested or the major themes emerging from the analysis of the data generated from the study are used to organize the presentation of the results bearing on them. Such a strategy is recommended as it helps to improve the sequence and coherence of the presentation. The error to avoid is the tendency to engage in full-scale bottom table discussion and interpretation of results within the same chapter. This habit, which is permitted in preparing manuscripts for journal publication, is discouraged in the formal presentation of results or findings of a PhD work under the five-chapter model.

This is because incorporating the discussion and interpretation of results in that same chapter acts to congest or crowd the chapter and to interrupt the flow of results' presentation, leading to confusion. It also makes redundant the role of the next Chapter, entitled **Conclusion**, which in line with the APA thesis writing guidelines is dedicated to the discussion and interpretation of the results or findings of the study. Similarly, to prevent the results' or findings' presentation from being too wordy and to allow equitable data flow in that chapter, what is recommended is just the bottom Table Summary of the results and trends indicated in the Table of data under attention. In the light of these considerations, in the Summary of the Results section of the thesis' Chapter 4, the researcher must restrain his or her urge to go overboard in taking much time to speak to the data. Summary of general trends of the results is what is expected, followed by indications of what to expect in the next chapter. The final statement of the chapter should contain the information that the full discussion and interpretation of the results of the study will be undertaken in Chapter 5 next to follow.

Reporting of Results of a Qualitative Study

One further point to make in relation to this chapter is as regards the peculiar strategies to take into account when reporting results of a qualitative (e.g., phenomenological) study where one can present findings as themes that reflect the descriptions of the participants' experience. Another strategy is to cite examples of narratives from the field, in the form of multi-voice that illustrates the themes emanating from the study.

Key Features and Components of the Chapter 5 of the thesis: CONCLUSION

In line with the current APA thesis writing style (7th Edition), the name of the last chapter of a thesis, whether Masters or Doctoral, is **Conclusion**. And it is the subject of Chapter 5 of a thesis structured in accordance with the APA's Five-Chapter Model. Presented below are the key components of that Chapter:

CHAPTER FIVE: CONCLUSION	...	...	...	...	...	...	...	...
5.1.0 Introduction	...	...	...	...	...	...	...	...
5.2.0 Discussion and Interpretation of Results	...	...	...	...	...	...	...	...
5.3.0 Summary of the Study	...	...	...	...	...	...	...	...
5.4.0 Conclusions/Implications of the study	...	...	...	...	...	...	...	...
5.5.0 Recommendations for Policy and Practice	...	...	...	...	...	...	...	...
5.6.0 Limitations of the Study	...	...	...	...	...	...	...	...
5.7.0 Recommendations for further Research	...	...	...	...	...	...	...	...

As can be seen from the above structure, in discussing the Results of the study in this chapter, the chapter starts with an introductory menu as mentioned earlier, containing such statements as the following: “In this chapter, the results of the present study will be discussed and interpreted. The discussion will be organized according to the research questions investigated (or in qualitative studies, the major themes emerging from analysis of the findings); and the interpretation will be conducted with attention to linking the present findings to related trends in the literature reviewed. The summary of the study, conclusions and implications as well as recommendations for policy and practice and for further research will also be undertaken.”

The tone of this introductory menu shows that in the course of the discussion and interpretation of one’s doctoral findings effort will be made to link one’s findings to the existing literature. In doing this the questions that come to mind include: Who did one’s study corroborate, and who did they differ from? Where there is a disparity, the researcher must engage with the task of responding to the hidden question as to why the reader should pay attention to the researcher’s own results rather than to those of others whose results are contrary to one’s? Or how does one explain variation when the literature information comes against one’s findings? These are the key issues to attend to in the discussion and interpretation of results’ section of one’s thesis’ Chapter 5. Thus, it is in one’s chapter 5 that the results or findings of one’s study are interpreted and made clear to the reader.

Summary and Conclusions of the Study

Some graduate students, not following the APA style, often tend to reserve a separate chapter for the *Summary and Conclusions of the Study*. However, following the current (7th Edition) APA Guidelines on thesis writing style, engaging in this task is part of Chapter 5 of the study; in order to discourage the fragmentation of research conclusions from the substantive discussion and interpretation of the study undertaken in Chapter 5. Thus this is where the candidate is given the opportunity to demonstrate that s/he is fully aware of the trends of the data arising from one’s study; and that s/he is the one who did the study and should be able to give meaning to the results from it. And the task of that section of the study’s chapter is to reiterate the aim of the study, and the materials and methods used in conducting the study, the study’s key participants, and key conclusions, implications, and contributions to knowledge.

List of References

The important point to make under the theme of ‘Study References’ within a thesis structured in line with the five-chapter model is that according to the current APA style, there should be commendable effort to ensure that all works cited in the body of the thesis are entered into or listed in the References section of the thesis. Similarly, as earlier mentioned, the referencing style adopted must fully conform to the current referencing style followed by one’s discipline and adopted by one’s department.

Concluding Remarks

What I have tried to do in this article is to show that it is possible to represent on paper the basic constituents of the five chapters that make up a PhD thesis report under the Five-Chapter Model as formulated by the APA. It is important, however, to mention that it is not every detail found in a well-written PhD thesis under the Five-Chapter Model are duly highlighted in this article. For example, the Appendices section that normally comes after the thesis report's References has been omitted due to space limitations. At the same time, I am pleased to note that the indirect objective of this article has been achieved, which is to project the economy and relevance of the Five-Chapter Model that is in harmony with the thesis writing Guidelines of the American Psychological Association (2019).

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