

**Lecture 01: *Basic Structure of a Dissertation*****1. Reasons for Writing a Dissertation**

A dissertation is an attempt to communicate. Science begins with curiosity, follows on with experiment and analysis. It leads to findings which are then shared with the larger community of scientists and even the public. The dissertation is therefore not merely a record of technical work, but is also an attempt to communicate it to a larger audience.

**2. Definition of a Dissertation**

A dissertation is a written record of the work that has been undertaken by a candidate. It constitutes objective evidence of the candidate's knowledge and capacities in the field of interest. Although dissertation writing may be viewed as an unpleasant obligation on the road to a degree, the discipline it induces may have lifelong benefits.

**3. Structure of a Dissertation**A Title page

The title page gives the title of the thesis in full. The title of your research paper should be short but descriptive enough to capture the essence of what your study is about. It should be phrased in a way that captures the attention of the reader. A statement of presentation in the form "dissertation presented for the degree of doctor of philosophy of the University of ....." the candidate's name, the department and the year of submission.

B Abstract

Write this last after you have completed analyzing and interpreting your data and written up your results and discussion sections. The abstract or summary should summarize the appropriate headings, aims, scope and conclusion of the thesis.

C List of

- Abbreviations
- Tables
- Figures

D table of contentsE chapter one: introduction

- Background of the study
- Statement of the problem
- Aims of the study
- Research questions
- Hypothesis

- Methodology
- Structure of the study

## F Chapter two: Literature Review

The purpose of Chapter 2 is to provide the reader with a comprehensive review of the literature related to the problem under investigation. This chapter may contain theories and models relevant to the problem, a historical overview of the problem, current trends related to the problem, and significant research data published about the problem. The first section of Chapter 2 generally indicates how the chapter is organized and explains the subsections that comprise the chapter. For example, Chapter 2 provides an extensive review of the literature and research related to principal selection. The chapter will be divided into sections that include (a) history of the principal ship, (b) importance of the principal, (c) current selection practices, and (d) recommended selection practices. As Chapter 2 may be lengthy, it is essential to divide the chapter into as many sections and subsections as needed to logically organize the information presented. As Chapter 2 presents information and conclusions drawn by other researchers, citations should be used extensively throughout the chapter. Although you are presenting information from other researchers and writers, avoid overuse of direct quotations. Including many direct quotations produces a literature review that usually lacks transitions and flow, and is difficult to read. Chapter 2 ends with a short summary of the information presented in the chapter. Several paragraphs that highlight the most pertinent information from the review of literature are usually sufficient.

## G Chapter three: Research Methodology

### Population and Sample

This section describes the population used in the study and the process utilized in selecting a sample. The sample should be small enough to provide a manageable volume of data, but the sample must accurately represent the population if any valid inferences are to be drawn from the sample results. In general, the sample will accurately represent the population from which it is drawn if (a) sample selection carefully follows an appropriate sampling design, (b) the sample is randomly selected from the population, (c) a large enough sample is selected in relation to the total population, and (d) the sample size is adequate for the data-collecting instrument being used.

In order to provide human subjects protection, specific names and organizational identifiers should be avoided except in broad terms. Such statements as "several small private Midwest colleges" or "teachers from selected elementary schools within a large urban district" are preferable. Specific identifiers may be used when there is little or no chance of specific identification of individuals or groups (e.g., "teachers from several selected elementary schools in Sioux Falls, South Dakota"). Your description of the population and sample should be thorough enough, however, to permit another person replicating the study to define a similar sample from a similar population.

### Instrumentation

This section describes the procedures used for developing an instrument to gather data from your selected population/sample. This generally includes sources of items for the instrument as well as a description of the instrument itself (e.g., number of items on the instrument, response format of the items, etc.). Sources of items for an instrument might include information gleaned from the literature review or may be an adaptation of a previous study or commercially available instrument. Instrument reliability and validity data should be described in this section whenever possible.

Instruments developed by the researcher should always be pilot tested (or field tested) to ensure instrument validity and clarity of instructions and items. In general, subjects similar to those who will be in the study sample (but not included in the actual sample) may serve as subjects for pilot testing. Results of pilot testing and accompanying comments should be used, if necessary, to revise the instrument before distributing it to the actual sample. The instrument may also be juried or critiqued by having several "experts" examine it and make recommendations prior to, or in lieu of pilot testing. While critiquing involves only several experts examining the instrument and making recommendations, pilot testing implies actually following all of the steps of data collection with a smaller pilot sample and analyzing the results from the collected pilot data. While somewhat more time consuming, pilot testing obviously affords the researcher much greater information that leads to a more reliable and valid instrument. The decision regarding pilot testing versus critiquing the instrument should be made following discussion with the researcher's advisor. The advisor and/or dissertation committee, as well as the Human Subjects Committee should always approve the final form of the instrument, as well as material to be pilot tested, before it is distributed.

### Data Collection

This section describes in detail how the data will be/were obtained and the timelines involved in collecting the data. Information commonly provided in this section includes what materials will be/were distributed (e.g. survey instrument, cover letter, instruction sheets, self addressed stamped envelope, etc.), how they will be/were distributed (e.g. mailed to each participant, mailed to someone who distributed them to each participant, etc.), and when they will be/were distributed (e.g. all surveys were mailed on July 12, 1994, with a follow-up survey sent to all non respondents three weeks later). Beginning and ending dates for data collection are often included in this section.

### Data Analysis

This section of Chapter 3 describes in detail treatment and analysis of the collected data. Methods of data analysis are primarily determined by the hypotheses to be tested or research questions to be answered (which also determine the format of the instrument and how the data are gathered) and the level of data being gathered (nominal, ordinal, and/or interval). When several hypotheses/research questions are being addressed, it is helpful to describe the data analysis that will be used for each hypothesis/research question. For example:

1. A response to research question one, regarding teachers' perceptions of instructional materials, will be generated by computing means and standard deviations for each survey item.

2. A one-way analysis of variance will be used to determine if significant differences in perceptions exist between elementary and secondary principals comprising the study sample (research question two).

3. Null hypothesis three, that no significant correlation exists between student gender and intelligence, will be tested by computing a Pearson Product-Moment correlation. When inferential statistics are employed, it is helpful to identify the independent/dependent variables for each analysis. In addition, any complex statistical procedures being used should be briefly described and its source referenced. Tests of significance should be accompanied by a statement of the level of significance that will be used (e.g. all statistical analyses will use the .05 level of significance). The statistical software package being used, as well as reference to any individuals assisting the researcher with data analysis, should also be stated at the end of Chapter 3. The most commonly used descriptive statistics include means, standard deviations, frequency counts, and percentages. Among the most commonly used inferential statistics are chi-square, t test, analysis of variance (ANOVA), and various correlation coefficients. More complex statistical procedures include analysis of covariance (ANCOVA), multivariate analysis of variance (MANOVA), factor analysis, canonical correlation, multiple regression analysis, and discriminant analysis. Summary (Optional)

This final section contains a brief summary of the methodology described in Chapter 3. In general, summary sections for Chapter 3 are included only when the methodology section is very long or complex. The summary section should provide a smooth transition to Chapter 4.

#### H Chapter four: Results and Discussion

This chapter begins with an introduction (as do all chapters), which delineates the major sections to be included in the chapter, and may include a restatement of the research problem. While there is no one "correct" format for dividing Chapter 4, information regarding response rate and respondent demographics is usually reported first, followed by reporting of results of data analysis for each hypothesis/research question.

##### Response Rate

Before reporting findings from data analyses – especially when dealing with survey research – the response rate is often described. This allows readers to gauge how many instruments were distributed, how many were returned, and what the overall rate of response to the survey was. This section may be included as part of the introduction without a specific section heading.

##### Demographic Data

Following the introduction (and response rate data), the next section frequently provides demographic information regarding the study population and sample. As most surveys include at least several demographic items, this section provides readers with a picture of the demographic composition of the respondents/participants. Information such as gender, age, position, years of experience, etc. are usually reported in this section. This section may also be included without a specific section heading, although a heading is helpful to the readers.

## Findings

The remainder of Chapter 4 reports finding related to the hypotheses being tested or research questions being answered. A specific section heading should be used for each section in Chapter 4 that reports findings resulting from data analysis.

In general, data are reported in tabular (tables) or graphic (figures) form accompanied by text describing the salient information contained in each table or figure.

Note that a table is generally limited to columns of numbers with appropriate column headings. Figures usually contain graphics such as graphs, diagrams, or photographs. It is recommended that extremely long tables/figures or very detailed information not be included within Chapter 4. Due to space requirements (and questionable interest to most readers), it is better to place this information in an Appendix and note in Chapter 4 where the detailed information is located in the appendix.

Another section presents conclusions drawn from the findings and results of the data analysis. Findings from the present study should provide the primary information for drawing conclusions. Frequently, conclusions provide answers to research questions posed in Chapter 1. While conclusions may be written in narrative form or listed one at a time, listing them one at a time is generally easier for readers to follow and helps maintain clarity of focus for each conclusion. An important observation regarding conclusions is in order:

Conclusions are not the same as findings and should not simply be restatements of findings from Chapter 4. A conclusion should be broader and more encompassing than a specific finding, and several findings may be incorporated into one conclusion. While several findings may be used to support one conclusion, it is also possible that one finding might give rise to several conclusions (although this is somewhat less common). Generally, while specific findings are stated in the past tense (e.g., students expressed greatest satisfaction with university instructors), conclusions are stated in the present tense (e.g., students are most satisfied with university instructors). The following illustrates the relationship between findings and conclusions.

A study of public school superintendents across the United States in 1991 yielded the following findings:

1. Only 5% were non-White
2. Only 8% were female

From these findings the following conclusion was drawn: Women and minorities continue to remain underrepresented in the ranks of public school superintendents. (Note: This conclusion combined both findings into a single broad statement that appears well supported by the study findings.)

## Discussion

The discussion section provides a forum within which the researcher explores and attempts to explain findings and conclusions that emerged from the study. Within this section, the researcher attempts to interpret findings and conclusions, and relate these to both the purpose of the study and to published results from other studies examined in the literature review. This section may be used to forward theories and/or

models, or raise questions regarding previously developed theories. the discussion section may be opened and take the form that researcher desires. Some researchers choose to discuss each conclusion or finding separately, while others prefer to address several or all of them at once in a general discussion.

The final section of Chapter 4 contains recommendations that emerge from the study. Generally, recommendations are of two distinct types; recommendations for action or practice (based on the study's findings and conclusions, and sometimes headed Recommendations from the Study or Recommendations for Practice), and Recommendations for Further Study. Frequently a separate section is included for each set of recommendations –each with an appropriate section heading. Recommendations for practice are generally prescriptive in nature and address what could or should be done by practitioners or members of the intended audience in terms of professional practice and policy. These recommendations are based upon results of the study. For example,

1. Since male and female teachers rated elements of the professional development program much differently, the administration should provide gender-appropriate training to the teachers that highlights gender differences. Recommendations for further study contain suggestions regarding followup studies or replication studies. These recommendations usually acknowledge limitations or delimitations that the study included and which further studies could help explain or clarify. These might include different methodologies, expanded populations or samples, or changes in the instrument itself. For example, 1. Since the current study was completed using a cross-sectional survey design, a similar study should be planned within the same school that uses a longitudinal design to determine if changes over time become perceptible.

#### I List of References

The list of references following Chapter 4 should include all references that were cited throughout the body of the dissertation. Conversely, there should be no references listed that did not appear as citations within the paper. (Bibliographies, on the other hand, may include works consulted from which no specific citations were used and should be subdivided into sections distinguishing works actually cited in the text from works consulted but not cited. Please note, however, the APA style dictates a reference list rather than a bibliography.) the same style should be used for references as has been used throughout the dissertation for citations. Careful attention should be paid to the reference section in terms of omissions, extra inclusions, or differences in dates or the spelling of authors' names between the citation and the reference listing. The following examples illustrate the basic reference formats for a periodical and a book.

Coyote, C. (1998). How to survive dissertation research at The University of South Dakota. *USD Journal of Education*, 16(4), 24-36.

Coyote, C. (1998). How to survive dissertation research at The University of South Dakota: A guidebook. Vermillion, SD: USD Press.

#### J Appendices

The Appendixes contain pertinent (and often supplementary) materials that are not important enough, do not fit appropriately in any specific section of the body, or are too long to include in the body of the paper, but which may be of interest to some readers. Common elements found in the Appendixes include a copy of the

data-gathering instrument, a copy of the cover letter, copies of any letters of permission required for the study, and tables that are very long or of only minor importance to the study. A copy of the Human Subjects Committee approval sheet may also be included in an appendix.