MBA/MPM
DISSERTATION WRITING WORKSHOP: CHAPTERS 3 & 4

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AGENDA

1. WRITING CHAPTER 3 OF YOUR DISSERTATION
2. WRITING CHAPTER 4 OF YOUR DISSERTATION
3. INTERACTIVE DISCUSSIONS

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CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction
3.2 Research paradigm and orientation
3.3 Research approach
3.3.1 Research approach to data collection
3.3.2 Research approach in data analysis
3.4 The quantitative or qualitative strand in research approach
  3.4.1 Coverage of the study
  3.4.2 Target population
  3.4.3 Sample size calculation
  3.4.4 Research design
  3.4.5 Sampling methods
  3.4.6 Data collection methods
  3.4.7 Instrument for data collection
  3.4.8 Pilot study
  3.4.9 Validity and reliability
  3.4.10 Administration of research instruments
  3.4.11 Ethical considerations
  3.4.12 Procedure for hypotheses testing
  3.4.13 Measurements
3.5 Summary of the chapter

GENERAL ELEMENTS INCLUDED IN YOUR CHAPTER 3

YOUR RESEARCH PHILOSOPHY AND APPROACH

- Saunders et al. (2015) explain that the way in which a **researcher views the world** will, together with his/her personal disposition, influence his/her choice of research topic, and influence the assumptions he/she makes about knowledge and the nature of reality.

- For an example of how ***assumptions*** about causation can affect explanations, "**the construction project is failing**".
  - Explanation A: "There aren't enough workers."
  - Explanation B: "The workers are unhappy and demotivated."
  - Explanation A comes from a technical, quantitative perspective; explanation B from a psychological perspective. Which is correct? We don't know. Either may be correct, or both may be partially correct. For example, if there aren't enough workers, members of the existing workforce may be overworked and demotivated.

Research paradigm:

- The methodological aspects of the research project to determine **which research methods** will be appropriate for collection and analysis of the data.
- The paradigm can be described in terms of the **philosophy** of the research in relation to four elements: epistemology, ontology, methodology, and axiology, which comprise the basic assumptions, beliefs, norms, and values each paradigm holds.

Articles to read:

- Patel, S. (2015) The research paradigm – methodology, epistemology and ontology – explained in simple language https://salmapatel.co.uk/wp-content/uploads/2015/07/research-Paradigm-page0001.jpg
- Rehman, A. A., & Alharthi, K. (2016). An introduction to research paradigms. *International Journal of Educational Investigations*, *3*(8), 51-59. https://scholar.google.com/scholar?q=related:qAhv16XHM8AJ:scholar.google.com/&scioq=An+introduction+to+research+paradigms+Article+%C2%B7+October+2016&hl=en&as_sdt=0,5
- Bonache, J., & Festing, M. (2020). Research paradigms in international human resource management: An epistemological systematisation of the field. *German Journal of Human Resource Management*, *34*(2), 99-123. https://journals.sagepub.com/doi/pdf/10.1177/2397002220909780
- Kekeya, J. (2019). The commonalities and differences between research paradigms. *Contemporary PNG Studies*, *31*, 26-36. https://search.informit.org/doi/abs/10.3316/informit.904599192994019
- Antwi, S. K., & Hamza, K. (2015). Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European journal of business and management*, *7*(3), 217-225. https://www.academia.edu/download/37731458/Research_Paradigms.pdf
- Tubey, R. J., Rotich, J. K., & Bengat, J. K. (2015). Research Paradigms. https://scholar.google.com/scholar?cites=12579875919941043437&as_sdt=2005&sciodt=0,5&hl=en
- Krauss, S.E., 2005. Research paradigms and meaning making: A primer. *The qualitative report*, *10*(4), pp.758-770. https://www.academia.edu/download/61095445/Research_Paradigms_and_Meaning_Making_A_20191101-28994-dek4jn.pdf
- Hussain, M. A., Elyas, T., & Nasseef, O. A. (2013). Research paradigms: A slippery slope for fresh researchers. *Life Science Journal*, *10*(4), 2374-2381. https://www.lifesciencesite.com/lsj/life1004/317_B02518life1004_2374_2381.pdf
- Dammak, A. (2015). Research paradigms: Methodologies and compatible methods. *Veritas*, *6*(2), 1-5. https://www.academia.edu/download/79067174/Research-Paradigms-Full-Article.pdf

Research approach

- Methods of investigation to be used (quantitative, qualitative, mixed, multi methods).

Articles to read:

- Muzari, T., Shava, G. N., & Shonhiwa, S. (2022). Qualitative research paradigm, a key research design for educational researchers, processes and procedures: A theoretical overview. *Indiana Journal of Humanities and Social Sciences*, *3*(1), 14-20. https://indianapublications.com/articles/IJHSS_3(1)_14-20_61f38990115064.95135470.pdf
- Stockemer, D. (2019). *Quantitative methods for the social sciences a practical introduction with examples in SPSS and Stata*. by the registered company Springer Nature Switzerland AG. https://link.springer.com/content/pdf/10.1007/978-3-319-99118-4.pdf
- Schutt, R. K. (2019). Quantitative methods. *The Wiley Blackwell Companion to Sociology*, 39-56. https://onlinelibrary.wiley.com/doi/abs/10.1002/9781119429333.ch3
- Lobe, B., Morgan, D., & Hoffman, K. A. (2020). Qualitative data collection in an era of social distancing. *International journal of qualitative methods*, *19*, 1609406920937875. https://journals.sagepub.com/doi/pdf/10.1177/1609406920937875

- In **qualitative research**, data collected and analyzed are non-numerical data (e.g., text, video, or audio)
- It can be used to gather in-depth insights into a problem or generate new ideas for research.

- **Quantitative research** involves use and analysis of numerical data arising from frequencies or measurements.
- It can be used to find patterns and averages, make predictions, test causal relationships, and generalize results to wider populations.
- Once the quantitative data have been collected, they can be analyzed using descriptive or inferential statistics.

Quantitative Versus Qualitative Research Approach

TABLE 8: QUALITATIVE VS QUANTITATIVE RESEARCH

Qualitative Research	Quantitative Research
Scope can be less defined and processes are not so formalised	Formalised approach with carefully defined scope
Generally associated with descriptive enquiry that draws on interviews, documents, narratives and observations (observable patterns)	Associated with statistical and experimental studies that rely on various numerical manipulations to research a problem
Studies social phenomena from the perspective of the participants	Uses objective measurements and statistical measurements to explain a phenomenon
Used to study social phenomena and the emphasis is on human beings as research subjects	Used in natural sciences and to study cause and effect relationships
The design evolves during the study	The design develops before the study
Usually generates new theory (inductive)	Aims to test a theory (deductive)
Natural setting	Laboratory setting
Uses small samples	Uses big samples of large populations in wide geographical areas
Uses face-to-face interaction, and the researcher interacts with individual respondents	Uses standardised instruments. Researcher seldom interacts with respondents
Narrative description and researcher's observations, which may be based on experience, knowledge or judgment	Statistical analysis of numeric data
Research phenomena are social in nature and cannot be quantified	Accurate measurements
Uses open, unstructured questionnaires and interviews	Uses surveys and structured questionnaires

(Adapted from Leedy, 2013; University of Texas Arlington, 2023)

Research design

- Research design is a framework of research methods and techniques you can employ in a study. While the research problem dictates the chosen design, the design you select determines the methods suitable for the study.
- The design of research can be qualitative, quantitative, or mixed, for which you can choose any of the following research methods: experimental studies, surveys (cross-sectional, case study, descriptive), or correlational studies.

Articles to read:

- Hancock, D. R., Algozzine, B., & Lim, J. H. (2021). Doing case study research: A practical guide for beginning researchers. https://books.google.com/books?hl=en&lr=&id=e7lLEAAAQBAJ&oi=fnd&pg=PP1&dq=case+study+research+design&ots=5_x9OHUM7m&sig=F7-gcSrA2FCSehJRznLF_4gHUtM

- Thomas, O. O., & Lawal, O. R. (2020). Exploratory Research Design in Management Sciences: An X-Ray of Literature. *Annals of the University Dunarea de Jos of Galati: Fascicle: I, Economics & Applied Informatics*, *26*(2). https://search.ebscohost.com/login.aspx?direct=true&profile=ehost&scope=site&authtype=crawler&jrnl=15840409&AN=145741888&h=Hd8tW8kTDrBJctXRqSdb9XTm8NfPn%2BlcoFca6U4TsyKkE6CRcKWnkCR%2FETDmMp6fsJ%2F0KYFO6v31vYz8i9j2Vg%3D%3D&crl=c

- Chun Tie, Y., Birks, M., & Francis, K. (2019). Grounded theory research: A design framework for novice researchers. *SAGE open medicine*, *7*, 2050312118822927. https://journals.sagepub.com/doi/pdf/10.1177/2050312118822927

SAMPLING DESIGN

A **sample** is a ***representative subset*** of the ***known*** and ***defined population***, which is identified for the relevant research study.

Researchers will use a **sample** of the population for practical reasons, including:

- The full extent of the population may be unknown, or the entire population might be inaccessible
- Time constraints
- Financial constraints.

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Sampling

- Leedy (2013, p.206) views ***sampling*** as being the act, process, or technique of selecting a suitable sample, or a representative part of a population for the purpose of determining parameters or characteristics of the whole population.
- The main purpose of sampling is to be able to ***draw conclusions*** about ***populations*** from samples

Sampling Procedure

Non- probability vs probability sampling methods

Types of Nonprobability Samples	Types of Probability or Random Samples
The convenience sample	A simple random sample
The judgement sample	A systematic random sample
The snowball sample	A stratified sample
The random sample	A cluster sample

Target population

- The entire set of units, individuals, items or objects you intend to conduct research on and draw conclusions or inferences from. Thus, the target population defines the units for which the findings of the survey are intended to generalise.

Sample size

- The sample is a subset or part of the target population. The sample size represents the number of units, individuals, items, and objects selected from the target population for a study.
- At doctoral level, for quantitative studies, effort should be made to **calculate the sample size**. The Cochran method of calculating sample size can be used.
- Note that sample sizes for qualitative studies are usually small, and this calculation does not apply.
- **MASTERS (INTERNATIONAL STANDARD)= ± 100 surveys OR ± 12-15 interviews (Or until data saturation reached)**

Sampling methods

- Probability and nonprobability sampling methods.
- **Probability sampling methods** include simple random sampling, stratified (random) sampling, systematic sampling, and cluster sampling.
- **Nonprobability sampling methods** include purposive sampling, convenience sampling, quota sampling, snowball sampling, and response-driven sampling.
- It is important that you **justify** the suitability of your selected sampling method.

Data collection and Instrument for data collection

Study type	Methods of data collection	Tools to be used
Quantitative	Surveys	Questionnaires (structured)
	Experiments	Field or laboratory observations
	Interviews: face-to-face, through post, telephone, email, WhatsApp, zoom, etc.	Questionnaires (structured)
	Direct observations	Recording number events as they take place
	Documents and records,	Consulting existing records and literature (UN documents, statistical abstracts, census data etc)
Qualitative	Focus groups	Semistructured questionnaire
	In-depth interviews	Unstructured interview guide or questionnaire
	Individual participants	Questionnaire with open-ended questions; semistructured questionnaire; or, interview guide
	Participant observations	Unstructured interview guide
	Documents and records	Extracting required information
	Thematic analysis	Semistructured or unstructured interview guide
	Phenomenology	Semistructured or unstructured interview guide
	Ethnography	Semistructured or unstructured interview guide
	Grounded theory	Semistructured or unstructured interview guide

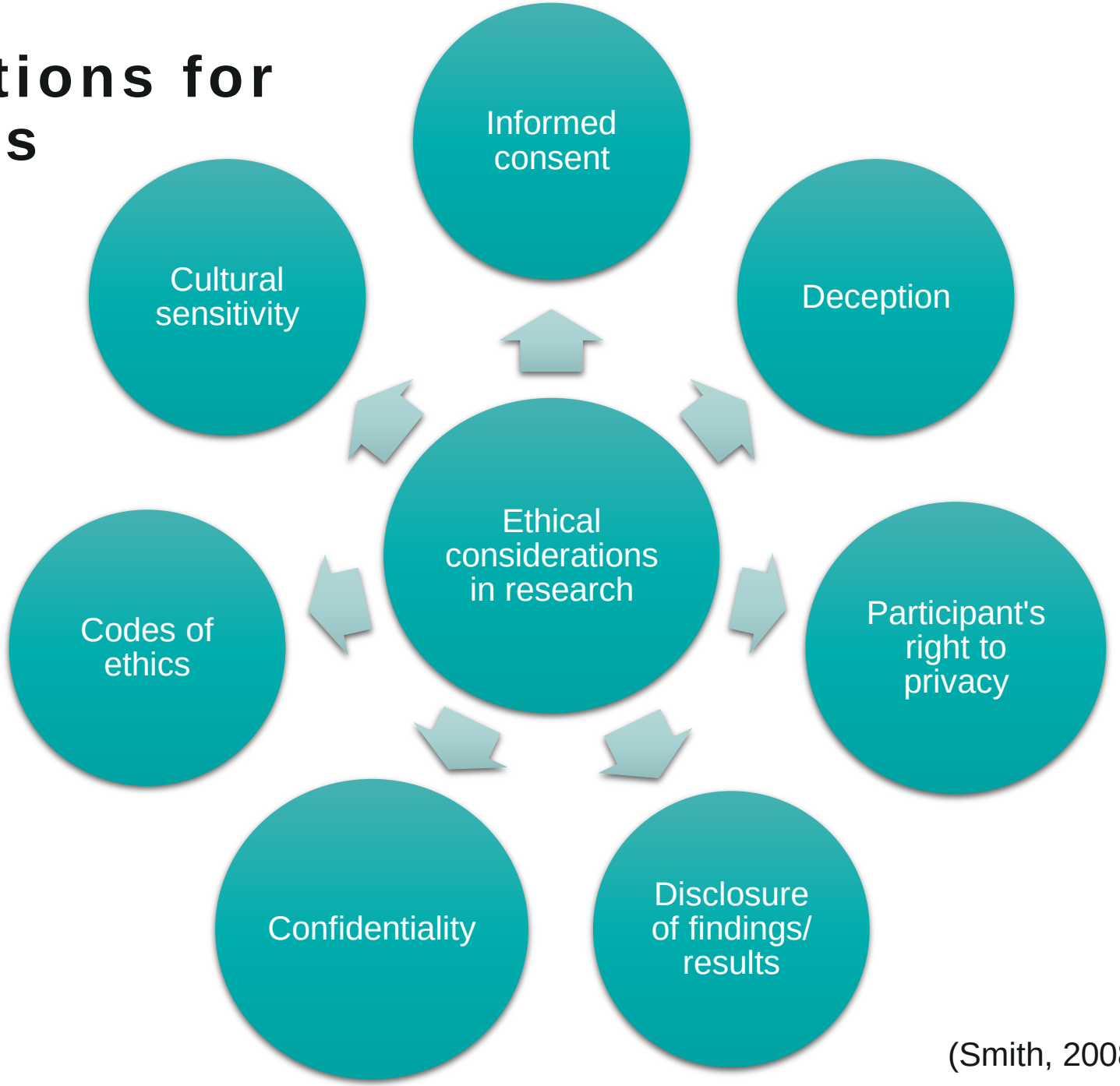
RESEARCH ETHICS

Introduction

- Ethics forms an ***integral part*** of any research.
- It is essential that, as a researcher, you act ethically when dealing with both individuals and organisations.
- According to Gorman and Clayton (2005, p.43), ethical considerations are essential, ***regardless of the research approach adopted***.

Ethical Considerations for Researchers

FIGURE 1: ETHICAL CONSIDERATIONS IN RESEARCH



(Smith, 2008)

Validity and reliability

- Discuss how you ensure that your instruments are:
  - Valid and reliable- **quantitative study**
  - Trustworthy (credibility, transferability, dependability or confirmability)- **qualitative study**.

Ethical considerations

- Discuss in this section how you will ensure that participation is voluntary, obtain informed consent, ensure anonymity and confidentiality in the data collection process, and that there is no harm done to the participants.
- Specify the **ethical boards** that have approved your study.

Procedure for hypotheses testing

- If your study involves hypothesis testing (**quantitative research**), specify the hypothesis or hypotheses you wish to test, and identify the dependent and independent variables and the inferential statistics that you will use to test them.

Measurements

- Scales used in the study (eg Likert, Thurstone)
- Availability of previously validated scales
- Sample scales or measurements to be used (if available or optional for the proposal)

CHAPTER 4: DATA ANALYSIS

- This chapter is the foundation on which the researcher draws the conclusion, identifies patterns, and gives recommendations.
- The entire utility of the research work depends on how well the analysis is done.
- The writing of the chapter must be such that it is self-explanatory and interesting to the reader.
- Once you have collected your data, select an appropriate statistical analytical method (quantitative research) or a coding and thematic analysis (qualitative research), to analyse your data.
- **For quantitative data**, use descriptive or inferential statistics to analyse and interpret your data:
    - **Descriptive statistics** include mean, median, mode, kurtosis, skewness, percentages, correlation coefficient, standard deviation, and variance.
    - **Inferential statistics** include the t-test, Z-test (normal distribution), chi-square, F-test (used in the analysis of variance tests).
- **For qualitative data**, you can use thematic analysis, coding, phenomenological and ethnographical analysis using coding, grounded theory analysis, identification of patterns; identification of outliers, triangulation, etc.

Descriptive Statistical Analysis

- **Mean**
  - The mean, or more precisely the arithmetic mean, is calculated as being the arithmetic average of a group of numbers (or data set) and is shown using bar symbol. So the mean of the variable is , pronounced ‘x-bar’. It is calculated by adding up all of the values in a data set and dividing by the number of values in that data set
- **Median**
  - This is the “middle value” in a set of data. This is also known as an array of data. The essential thing you need to remember when calculating this is that you need to sort the data from the lowest to highest value. This implies that, the median is the number in the centre of a data set that has been ordered sequentially.
- **Mode**
  - The mode is the single number or score which will occur the most times in the data range. The mode is the most common or ‘most frequent’ value in a data set. Example: The mode of the following data set (1, 2, 5, 5, 6, 3) is 5 since it appears twice.
- **Range**
  - The range of a sample (set of data) is simply the maximum possible difference in the data, ie the difference between the maximum and the minimum values. A more exact term for it is “range width” and is usually denoted by the letter R or W.
- **Variance and standard deviation**
  - When describing data, it is helpful (and in some cases necessary) to determine the spread of a data around the mean.

Examining relationships using statistics

- According to Saunders and Lewis (2012, p.179), when you examine relationships between two or more variables you are looking at ***one of five things***:

1. The **association** between two variables;
2. The **correlation** between two variables;
3. The **difference** between two or more variables;
4. The **explanation** of one (dependent) variable by one or more other (independent) variables; and
5. The **prediction** of one (dependent) variable by one or more other (independent) variables.

DATA ANALYSIS: QUALITATIVE DATA

The process of qualitative data analysis is less structured due to the nature of the data. Saunders et al. (2015, p.264) recommend the following general analytical procedure:

1. Convert your rough **field/ interview notes into a written record** adding your own thoughts and reflections as soon as possible – this will be the start of your tentative analysis. Use columns to distinguish between factual notes and your interpretations and speculations.
2. Make sure that data sets collected from interviews, observations, or **original documents are properly referenced** (e.g. who was involved, the date and time, the context, the circumstances leading to the data collection, and any implications in terms of the research which might include issues around validity and reliability).
3. **Start coding** the data as early as possible. This means allocating specific codes to each variable, concept, and/ or theme that you have identified. Consider **allocating codes** to words and phrases and explain the significance in terms of your research (refer to your research questions and objectives to maintain focus and the logical development of your analysis). Start with as many codes as you see fit – you can always collapse them into groups at a later stage.
4. If you are not using a strong theoretical framework do not attempt to impose **coded categories** but allow them to emerge from the data. As you collect further data, compare this to your existing coded data (and groups) and modify the codes as required. Do not treat this as a mechanical task – take time to think about the data that is emerging.
5. At regular intervals, **write summaries of your findings**. This will help you to synthesise your analysis and point to any deficiencies in the data collection (e.g. the data is or is not sufficient in terms of a particular research question).
6. Use your summaries to **construct generalisations** with which you can confront existing theories or use to construct a new theory.
7. **Continue this process until you are satisfied** that the generalisations arising from the data and your summaries are sufficiently robust to stand the analysis of existing theories or the construction of a new theory.

DISCUSSIONS

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THANK YOU

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