Foreword

I am delighted to write a few words as a way of introducing you to your research guide, which has been developed at a very important time of your study. There is an obvious need to understand what is expected of you when undertaking research and the importance of research in the teaching and learning process. It is for this reason that the School of Education (SOE), through the Department of Educational Management and Leadership (DEML), found it necessary to develop this research guide to help you with your research process. Researchers have a particular way of asking questions to problems that they may experience or hear about. These questions may not have clear cut answers all the time. As a result, research or an investigation has to be carried out, in order to get a better understanding of a situation, or to get answers to certain questions. The world we live in is increasingly seeking to understand whatever goes around and whatever happens in the different spheres of life. Institutions may undertake research with the intention to find ways to improve practice. Therefore, research will be carried out to inform opinions and facilitate evidence based decision making.

There are many challenges which research students continue to encounter as they carry out their research projects. This guide will be of great assistance to you as you embark in your research journey. The authors provide you with the basic steps you need to follow when conducting research, to investigate educational and organisational issues. The guide helps you to carry out quality research that is conducted in an ethically sound manner. It exposes you to key principles of respect, fairness, and integrity in your quest for the truth and new knowledge. You need to exercise the highest level of honesty in your process of investigation and your exercise of academic freedom. As a researcher you are expected to adhere by the research principles of voluntary informed consent, confidentiality, impartiality and integrity. Furthermore, you need to take cognisance of the fact that as a researcher, you have a social responsibility to ensure that your research will benefit all people equally, irrespective of gender, creed or religion. Over and above, this guide is intended to help you come up with a rigorous and well planned research methodology. This will enable you to generate robust and unambiguous results and findings.

The School of Education and the Department of Educational Management and Leadership remain hopeful that you fully utilise this very resourceful guide.

We wish you all the best with your studies and research projects.

Dr. B. Nage-Sibande
Dean – School of Education
Guide Overview

Introduction
Conducting educational research requires knowledge of the scientific process and a variety of research tools and techniques. Whatever research you do, how you do it, and what happens to the results will all depend to a large extent, upon the social situation and educational environment you find yourself in. There will be many direct influences that relate to your own position as a researcher in the decision-making structure. As you progress through this guide, you will learn to consider your own personal values, and how to examine the education, economic, labour and other variables that impact your research process and findings.

Goals for the Guide
Upon completion of this guide you, as an educational researcher, will be able to:

(i) Select an appropriate methodology to research educational and organisational issues.

(ii) Apply the basic steps in the research process to investigate educational and organisational issues.

(iii) Explore qualitative and quantitative methods and their potential application in investigating educational and organisational problems.

(iv) Collect and analyse data to address specific educational research question(s).

(v) Carry out a research study on an identified educational or organisational problem.

Description
This guide will provide you with the fundamental knowledge and skills required to carry out applied research in education. Specifically, the guide will foster an understanding of the basic concepts of educational and organisational research, and the types of research that could be carried out to assess and evaluate the quality of the teaching and learning environment in an organisation. The guide will further explore steps involved in carrying out research, as well as a discussion about how the findings of research could be applied to help improve system wide educational practices. The guide will also address how educational data can be collected, analysed and used extensively to guide the formulation and implementation of policies and practice that support educational improvement.

The guide will briefly re-cap all the research designs you were introduced to in your Research Methodology course. This is to remind you of what is involved in the different designs, and to help you decide on the one to use when you start your research project.
This guide has **five units** as follows:

**Unit 1:** Qualitative Research  
**Unit 2:** Quantitative Research  
**Unit 3:** Mixed Methods Research  
**Unit 4:** The Research Proposal  
**Unit 5:** Your Dissertation Journey
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UNIT 1: Qualitative Research

1.1 What is qualitative research methodology?
Qualitative research is a “type of research that collects and works with non-numerical data and that seeks to interpret meaning from these data that help us understand social life through the study of targeted populations or places” (Crossman, 2019). According to Sullin and Seargant (2011) qualitative approaches focus on how and why something works, to build
understanding. It is concerned with investigating a phenomenon in its natural settings. It aims at providing rich descriptive accounts of the phenomenon under investigation. In qualitative research, data is usually collected in naturalistic settings (at home, school, hospital). Both participants’ and researchers’ interpretations of phenomena is taken into account in the process of analysis, (Willig, 2008).

Qualitative research has the following properties (Gerrish and Lacey, 2010):

- It is inductive, the researcher collects data relating to the phenomenon under investigation and develops a theory
- It is descriptive, it allows for a detailed description of a phenomenon
- It is interpretive; the researcher offers one interpretation of the meaning of the data.

1.2 Why choose qualitative research methodology?

The choice of a research approach or strategy that you decide to follow depends on the following:

(i) The field of study you are pursuing.
(ii) Your background.
(iii) The readings that you are most comfortable with.
(iv) The research objective(s) and question(s) that you are attempting to address.
(v) BUT most importantly the nature of the problem you are investigating.

These factors should guide you in the choice of research methods you will employ. In choosing qualitative research methodology, you are making a deliberate decision to describe in detail what you are investigating in your own words and from your own standpoint. This means that you are ready to defend your position through a detailed and systematic description of what you have done. To do this in a satisfactory manner you need to have a good background in the language of instruction or communication, in this case English. This is in contrast to quantitative methodology, which often report research findings in terms of numbers, and figures which can be statistically analysed. The quantitative researcher has to take a fixed decision on what s/he is going to measure, compare or analyse.
1.3 Qualitative versus quantitative research questions

The way qualitative research questions are crafted differs a lot from the way quantitative research questions are crafted. Table 1.1 indicates examples of both qualitative and quantitative research questions:

**Figure 1**: Examples of Qualitative and Quantitative Research questions

<table>
<thead>
<tr>
<th>Qualitative research questions</th>
<th>Quantitative research questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>What is the opinion of the people about a given phenomenon?</td>
<td>What is going on?</td>
</tr>
<tr>
<td>How do people experience a given phenomenon?</td>
<td>What is the scope of the problem?</td>
</tr>
<tr>
<td>What is your opinion?</td>
<td>How is the problem changing over time?</td>
</tr>
<tr>
<td>Explain?</td>
<td>Are there similarities, differences or associations?</td>
</tr>
</tbody>
</table>

Qualitative research is humanistic, holistic, interpretive and reflexive. Qualitative research methods are generally open-ended and **naturalistic** (studying things, people and events in their natural settings). They are flexible in that you can use different methods to investigate the same question or area. They are also **iterative**. This means the repetition of a process in order to generate a sequence of outcomes. All methods are based on some form of observation or interview. The methods answer “how” and “why” questions rather than “what” and “how much”. The responses are in the form of texts, pictures, drawings, maps, audio or video recordings. You may have ideas on anticipated responses, but the responses should emerge from the respondents or the participants. Data may include documents, historical accounts, press cuttings or other artifacts.

The choice of the method of data collection depends on a number of factors such as:

(a) The amount of literature available, and the more the better.

(b) The theories that have been developed to explain the phenomenon being studied, the one(s) most suitable for your study.

(c) The dimension(s) of the phenomenon is to be assessed, recorded or ignored.
In addition, you need to decide on how to collect the data, are you going to be an outsider (etic) or an insider (emic).

1.4 Framing qualitative research
You start by making broad assumptions central to qualitative inquiry, a worldview consistent with it, and in many cases, a theoretical lens that shapes the study. In addition, the researcher arrives at the doorstep of qualitative research with a topic or substantive area of investigation, and perhaps has reviewed the literature about the topic and knows that a problem or issue exists that needs to be studied, (Creswell, 2017).

1.5 Research methods that constitute qualitative research
There are several methods in which qualitative research is conducted. The choice is dependent on the problem(s) being investigated and the setting(s) in which the problem is located. The following are highlighted in this guide namely; narrative research, phenomenological research, grounded theory research, case study research and ethnographic research.

However, before deciding on which method(s) to employ, you need to consider the following ethical issues:

- Acknowledge participants’ time and efforts in your projects
- Explain how participants will benefit from your studies
- Indicate how you will convey your findings
- Be sensitive to the potential of your research to disturb the site and potentially (and often unintentionally) exploit the vulnerable populations you study, such as young children or under-represented or marginalised groups
- Be sensitive to any power imbalances your presence may establish at a site that could further marginalise the people under study
- You may need to anticipate how to address potential illegal activities that you may see or hear, and, in some cases, report them to authorities
- You need to honour participants and leaders at the research sites
- When working with individual participants, you need to respect them individually, such as by not stereotyping them, using non-discriminatory language etc.
- You need to respect the privacy and right of participants to withdraw from the study, and do not place them at risk
- Consciously consider ethical issues, i.e., seeking consent, avoiding deception, maintaining confidentiality, and protecting the anonymity of individuals with whom you speak
- Consider your role as insider/outsider to the participants by establishing supportive, respectful relationships without stereotyping and using labels that participants do not embrace; whose voice will be represented in your final study
- Consider how you will write yourself into the study and reflect on you as well as the people you study
- Show sensitivity to vulnerable populations, imbalanced power relations, and placing participants at risk, (Creswell, 2017).

1.5.1 Narrative Research

As a research method, narrative research investigates experiences as expressed in lived and told stories of individuals. It is a spoken or written text giving an account of an event/action, or series of events/actions, that are chronologically connected, (Czarniawska, 2004, in Creswell 2017). This may be by "analysis of narratives" to create descriptions of themes that hold across stories or taxonomies of types of stories, or "narrative analysis," in which a researcher collects descriptions of events or happenings and then configures them into a story using a plot line. Narrative research can also be in the form of an autobiography, life history or oral history record.

1.5.1.1 Steps involved in narrative research

Steps involved in narrative research include the following:

(a) The research problem or question should focus on an individual or a few individuals.

(b) Spend some time with participants to collect data using a variety of data collection tools like diaries, journals, field notes, letters to the subject, interviews of relatives, colleagues, and other personal artifacts.

(c) Collect information about the context of these stories.

(d) Organise and analyse the collected stories into a coherent frame (e.g. in chronological order), a process sometimes called re-storying.

(e) Corroborate the findings with participants so that you and the researched are on the same page. According to Creswell (2017), the narrative study tells the story of individuals unfolding in a chronology of their experiences, set within their
personal, social, and historical context, and including the important themes in those lived experiences.

1.5.2 Phenomenological Research
According to Creswell (2017) phenomenological study describes the meaning for several individuals of their lived experiences of a concept or a phenomenon.

1.5.2.1 Steps involved in phenomenological research include
(a) Select a phenomenon which is a product of human experience (e.g. bullying, sexual abuse, corporal punishment etc.).
(b) Collect data from persons who have experienced the phenomenon, usually through in-depth open-ended interviews, journals, taped conversations etc. Ask participants what they have experienced and how the experience has affected them.
(c) Develop a composite description of the essence of the all who have experienced the phenomenon [what they experienced (textural description) and how they experienced it (structural description)].
(d) Analyse of the data by highlighting significant statements, sentences, or quotes that explain how participants experienced the phenomena. Then develop clusters of meaning from these statements into themes.
(e) Use themes to describe and write textual descriptions as well as structural descriptions.
(f) From the structural and textural descriptions, you then write composite descriptions that presents he "essence" of the phenomenon, called the essential, invariant structure (or essence), (Creswell, 2017).

1.5.3 Grounded Theory Research
The intent of a grounded theory study is to generate or discover a theory. A theory is an abstract analytical representation of a process (or action or interaction). It is developed to explain, predict, and understand a concept or to challenge or extend existing knowledge. Participants in the study would all have experienced the process, and the development of the theory is to help explain practice or provide a framework for further research. The purpose of the research is, therefore, to develop a theory "grounded" in data from participants who have experienced the process or phenomenon. Thus, grounded theory is a qualitative research design in which the inquirer generates a general explanation (a theory) of a process, action, or
interaction shaped by the views of a large number of participants, (Strauss & Corbin, 1998, as cited by Creswell, 2017).

1.5.3.1 Steps involved in grounded theory research

(a) Determine whether there is a need to develop a theory to explain a chosen phenomenon.

(b) Conduct interviews for 20 to 30 theoretically chosen participants.

(c) Record and analyse interviews to identify to develop the initial frame of reference.

(d) Conduct several other interviews with the same participants to address gaps identified in previous interviews until you are satisfied that all information relating to what is being investigated (a category) is exhausted or saturated.

(e) Conduct further analysis and draw conclusions.

(f) Illustrate your findings in form of a model or a set of statements that constitute a theory.

(g) Test the theory through a hypothesis, (Creswell, 2017).

1.5.4 Ethnographic Research

Ethnography is a qualitative design in which the researcher describes and interprets the shared and learned patterns of values, behaviours, beliefs, and language of a culture-sharing group, (Harris, 1968, in Creswell, 2017). The group could be members of a club or association, teachers in a school, headmasters in a region or children or parents in a given community. Ethnography involves extended observations of the group, most often through participant observation, in which the researcher is immersed in the day-to-day lives of the people and observes and interviews the group participants.

There are two major types of ethnographic studies; the realistic ethnography where the researcher remains aloof and neutral and does not express opinions but reports things as they are, and critical ethnography where the researcher is a participant observer with opinions and positions on what is being researched. Critical ethnographers often have a political agenda like emancipating marginalised groups, fighting against stigma, mismanagement, discrimination etc.
1.5.4.1 Steps involved in conducting ethnographic research include to

(i) Identify the group you are to study indicating the reasons for your choice. The identified group should have unique common characteristics that set them apart.

(ii) Select one or more persons within the group who will let you in and act as your gate-keeper(s) or key informant(s).

(iii) Select themes or issues to study that are shared or common to the group.

(iv) Investigate in the group’s natural settings.

(v) Gather information about the group by being at the research site, respecting the daily lives of the participants, collecting materials appropriate for your selected theme(s) etc.

(vi) Attend to ethical issues such as how to gain access, sharing feedback, confidentiality etc.

(vii) Collection of data through observations, interviews, tests and measures, content analysis, audio-visual recordings etc.

(viii) Analyse data to determine new themes and confirm or dispute those you have previously determined.

(ix) The final goal of an ethnographic study is to present a holistic (cultural) portrait of the group under investigation based on the group as well as your perception(s) as a researcher.

1.5.5 Case Study Research

Case study research is one of the most common research approaches in education. It involves the study of an issue explored through one or more cases within a bounded system, (Creswell, 2007). In this guide, case study is taken as a methodology, a type of design in qualitative research, or an object of study, as well as a product of the inquiry.

According to Creswell (2017), case study research is a qualitative approach in which the investigator explores a bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information (e.g., observations, interviews, audiovisual material, documents and reports), and reports a case description and case-based themes. For example, several schools, programs, classes, subjects (a multi-case study) or a single school, program, class or subject may be selected for the study.
1.5.5.1 Steps involved in conducting case study research

(i) Determine whether the case study approach is the best to investigate the chosen research problem.

(ii) Identify the case with clear boundaries. In most instances, cases are **purposefully selected (or sampled)**.

(iii) Collect data by means of interviews, direct observation, document analysis, participant observation, visual-audio materials or from artifacts.

(iv) Holistically analyse the entire case or conduct an embedded analysis of a specific aspect of the case. You may need to go back and analyse the themes individually in order to gain an in-depth understanding of the case.

(v) Report on the lessons learned from the case, conclude and make recommendations.

Creswell (2017) cautions that selecting a case requires you to establish a rationale for the purposeful sampling strategy for selecting the case and for gathering information about the case. You need to have enough information to present an in-depth picture of the case limits, and the value of the case study. In planning a case study, you may need to develop a data collection matrix in which you specify the amount of information you are likely to collect about the case. You should also decide the "boundaries" of the case and the constraints of time, events, finance, other resources and processes that may be challenging.

1.6 How do you collect data in qualitative research?

There are several ways of collecting data in qualitative research. The most common ones are the interview, observation, document analysis (sometimes called a desk study) and the use of artifacts, audio and visual recordings as well as collecting physical artifacts. In this guide, an explanation of the steps to go through is provided.

1.6.1 The interview

Before embarking on conducting an interview as a form of collecting qualitative data, the following must be considered:

1.6.1.1 Sampling and sample size

Determine whether sampling will be convenience, purposive or theoretical. In **convenience sampling**, selection is based on who is most accessible. Although this type of sampling is the
least credible, you can use it during the piloting stage of the instruments that you will use to collect data.

1.6.1.2 Purposive sampling (or judgment sampling)
When you select the most productive participants with regard to the research questions. You should, however, develop a rubric to guide you in determining the variables that you will use to select the participants (by answering the question: what characteristics should the participants possess?)

1.6.1.3 Theoretical sampling
The process of collecting, coding and analysing data in a simultaneous manner in order to generate a theory. This sampling method is closely associated with grounded theory methodology. The selection of a new sample is based on the results from the previous sample.

1.6.1.4 How do you determine that a sample is adequate?
The size of sample is determined by answering the following questions as suggested by Kielmann, Cataldo and Seeley (2012).

(i) Is the sample appropriate and adequate? Does the choice of informants and method of selection fit the purpose of the study [e.g., do they fit the research question(s), the stage of the research?] Will the number sampled be enough to provide information to address the purpose of the study and answer the research question(s)?

(ii) Are the informants’ characteristics clearly defined? Is it clear who would be included/excluded from the sample? If someone else used the same selection criteria would you expect him/her to choose a similar sample?

(iii) Is the design appropriate for the type of information needed? Will those sampled be able to provide the information needed? Has anyone or group been left out that would have provided useful information on the topic?

(iv) Is the sample adequate? Will the sample provide you with sufficient and high quality data? Are you confident that the data gathered will be as complete as possible (taking account of time constraints, which may restrict the amount of time available for data collection)?

(v) Is the sample valid and the study design appropriate? This is linked to the points above. If someone else reviews your work will they consider the way you have selected your sample to have been likely to have produced valid data? Validity refers
to the relationship between an account and something external to it. Is that external assessment likely to conclude that the selection was as objective as it could be, or might it have been biased in some way (perhaps because of convenience?)

1.6.1.5 The interview process

Interview is one of the most common methods of data collection in qualitative research. It differs from a mere conversation because it has an agenda or purpose. While interviewing, consider the type of interview to use. This depends on the social context of the research, location and whether the respondent prefers to sit, stand or work while being interviewed.

Choose between using a **semi-structured** or completely **unstructured interview** schedule (or interview protocol). An unstructured interview is like a conversation. The researcher asks questions that allow the respondent to freely express himself or herself fully. You start with a broad question to provide direction and develop other questions from themes emerging from the original question as the interview proceeds. On the other hand, a semi-structured interview schedule contains a mixture of close-ended and open-ended questions. As an interviewer you prepare a checklist of themes with a mixture of structured and non-structured questions you wish to ask. The questions need not be asked in a specific order. You may probe and prompt the interviewee during the course of the interview.

If you are interviewing a number of respondents, you should ask the same questions. Table 1.2 illustrates examples of unstructured and semi structured questions.

**Figure 2:** Examples of unstructured and Semi-structured Questions

<table>
<thead>
<tr>
<th>Unstructured Question</th>
<th>Semi-Structured Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>When did you start being bullied? How did you know you’re being bullied?</td>
<td>What were the signs that you are being bullied?</td>
</tr>
<tr>
<td>What did you do first?</td>
<td>Who did you talk to first about being bullied?</td>
</tr>
<tr>
<td>Then what happened?</td>
<td>What prompted you to report to the school authorities?</td>
</tr>
<tr>
<td>And then…</td>
<td>Describe how you approached the school authorities. Who did you approach first?</td>
</tr>
</tbody>
</table>
1.6.1.6 Steps in preparing an interview guide for semi-structured interview

The following are some of the steps for preparing an interview guide for semi-structured interviews:

(i) Draft a short list of topics and areas that follow a logical order, starting with general questions and moving to more details. The flow should be logical as you move down the guide. This helps you ensure that the interview flows well and builds from one topic to the next.

(ii) Be prepared to change the order if the respondent mentions something earlier in the interview than you had expected! Be careful not to leave topics out if this happens. Use simple language and avoid technical, scientific or abbreviations that the respondent may not understand.

(iii) At the start, include biographic data like identification number, age, sex, class etc. A few questions about personal circumstances (family, background, occupation, etc.) are often a nice introduction to an interview, and allow the respondent to relax in the first few minutes of the process.

(iv) As much as possible let the questions follow a natural flowing order (moving from general to specific, simple to complex, concrete to abstract, non-controversial to controversial).

(v) Ask an open question at the end so that the respondent can add or comment on any aspect of the interview s/he may want.

1.6.1.7 Examples of interview questions

Remember that the way a question is asked influences the answer. In the same way, the person who asks the questions may also influence the answers (for example, a teacher to a student, the supervisor to a supervisee, teacher to parent).

**Introductory questions:** “Can you tell me about …?”

**Follow-up questions:** “What happened then?”

**Probing questions:** “Could you tell me a bit more about that?”

“Can you give me an example?”

“Can you say more about…?”

**Examples of questions which elicit content:** (without suggesting an answer)

“**Grand**” and **“little tour” questions:** “Tell me about a busy workday.”

“Can you describe what is normally done?”
“How would you get from x to y?”

**Typology/classification questions:** “What are the different types of x?”

“Can you give me other examples of that type of x?”

“What else do you do (Is done?) as part of that activity?”

**Ranking questions:** “Which do you think is more important?”

“Which one comes first?”

“In which order does that happen?”

**Specifying questions:** “What did you actually do when that happened?”

**Direct questions:** “Do you know where xxx is?”, which can be followed with a probing question.

**Indirect questions:** “Do women in this area go to xxx?”, which can be followed with a direct or probing question about the respondent’s own behavior.

**Structuring or leads questions:** “Can we move on to another topic?”

“Now I would like us to talk about…”

**Interpreting questions:** “So you mean that xxx?”

“Have I understood correctly that x means…?”

In addition, you should consider non-verbal communication signs like posture, eye and body movement, nodding, yawning, wait-time etc. You should also avoid:

- Questions with obvious answers
- Leading questions
- Sensitive questions (e.g. social economic status, behavior, performance of a student).

### 1.6.1.8 Conducting a group interview

Group interviews may be conducted by a natural group (e.g. teachers in a school) or a focus group (a group organised by the researcher, e.g. mathematics teachers). They are conducted when the researcher is seeking the opinions of those with a common characteristics or experiences on the issue under investigation, in order to seek a common understanding as a group.

### 1.6.1.9 Focus groups have the following characteristics

(a) The group is organised by the researcher.

(b) It is composed of individuals who share a number of characteristics (e.g., age, sex, occupation, experience of a particular condition).
(c) Data is collected using a semi-structured guide that uses a set of probes to elicit information about a specific topic.
(d) Group interactions are used to elicit information from group members in relation to a clearly defined topic.
(e) The researcher plays the role of a facilitator rather than an interviewer, (Kielmann et al. 2012). Care should be taken for the researcher not to turn into an interviewer of individual members of the group.

(i) What to consider when setting up focus group discussions
(a) Focus groups are often homogeneous, with shared characteristics related to the study.
(b) Participants can be selected using any of the sampling approaches discussed earlier.
(c) Kielmann et al. (2013) recommend that the group should not exceed 12 participants.
(d) Use a semi-structured tool with clearly laid out themes with an introduction, ice breakers and prompts and transitions to collect data.
(e) Decide where the focus group discussion will be conducted with minimum disruptions.
(f) It is ideal to have two researchers; one facilitating the discussion while other takes notes, audio or video recordings.

(ii) During the discussion
(a) Set the scene by allowing individual introductions using an ice breaker.
(b) Assure confidentiality and maneuver a way of reaching consensus.
(c) Be an active listener, reiterate the key points, and stimulate further discussion while keeping participants on track.
(d) Make notes of what is said and observed.

(iii) After the discussion
Expand your notes as soon as possible afterwards. Note down your observations in terms of the process, the group dynamics, power structures, gender imbalance, and any other things you noticed that have a bearing on the themes in which you are interested, (Kielmann et al., 2012)
1.6.2 Observation

Observation involves situating what we see in relation to what we know about a particular setting. The ways in which we ‘observe’ depend on a variety of factors, including our background experiences, training, familiarity with a setting and interests.

As a research method, observation has the following ingredients:

(a) It should serve a specific purpose.

(b) What is observed and recorded should relate to a specific idea drawn from literature or theoretical frame of the study?

(c) The observation is systematically planned, carried out and recorded.

Quite often observation complements other methods of data collection like interviews or desk study. It may help you as the researcher to gain insight into how, for example, the environment influences learning. It can also help you as a researcher, appreciate how things work in unfamiliar settings. Observation can also provide in-depth understanding of an event, social interactions, compare reported and actual behaviors, and gain information on topics that are sensitive or difficult to talk about; for example, talking about alcohol and substance abuse among young people.

1.6.2.1 Types of observation

As a researcher, you can directly observe events, discussions and meetings first hand. You can also infer indirectly the subject of your study through clues, traces or artifacts; for example, examining students’ attendance registers to determine students’ absenteeism.

Observations can be structured or unstructured. Highly structured observations require a checklist which is a close ended list of items to look out for during observations. You may inform your participants that they are being observed (Overtly) or without their knowledge (Covertly).

1.6.2.2 How to carry out observations

(a) Identify and negotiate with gate keepers

(b) Decide on who and what is to be observed.

(c) Develop ways of accessing those to be observed.

(d) Record your observation(s) by writing notes, audio or video recording, and taking photographs. The notes could be identifying notes, descriptive notes, process notes, analytical notes, and reflexive notes.
1.6.3 Document analysis

According to Wharton (2006), as cited in Kasozi (2015), document analysis is a detailed examination of documents produced across a wide range of social practices, taking a variety of forms from the written word to the visual image. These documents are usually produced in the past.

1.6.3.1 Benefits of document analysis as a data collection method

Benefits of document analysis as a data collection method include:

- Providing insight into the reasons why a document was produced
- Helping to examine trends, patterns and consistency in documents
- Analyzing documents that may serve as a preliminary study for an interview, a survey, or observation, interview questions, survey questions, an observation checklist or the development of questionnaires and interview schedules
- Using document analysis to evaluate other forms of inquiry.

Additionally, Creswell (2014) indicates that documents may enable the researcher to obtain the language and words of participants, are unobtrusive and can be accessed at a time convenient to the researcher. Official documents are for example, usually well written and structured with a clear purpose. As evidence, documents save the researcher the time and effort that would have otherwise been taken up by transcription.

1.6.3.2 Limitations of Document Analysis

The main limitations of this research design include:

(a) Unavailability of documents, or the materials may be incomplete or missing.
(b) Data is restricted to what already exists.
(c) It analyses events that have already happened and therefore, does not evaluate current opinions, needs, or situations.

1.6.3.3 Document analysis form

In order to carry out document analysis, you need to develop a form that summarizes the contents in the main documents from which data for the study is to be collected. In the form, take note of the name, date of production, versions the author/s of the document as well as the
purpose for which the document was produced. The form should have space for summarizing what the document indicates with reference to the subject under investigation. Table 1 shows a sample of a document analysis format (Kasozi, 2015).

Figure 3: Sample Document Analysis Format

<table>
<thead>
<tr>
<th>Document name:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Date produced</td>
<td></td>
</tr>
<tr>
<td>Authors</td>
<td></td>
</tr>
<tr>
<td>Purpose of the document</td>
<td></td>
</tr>
<tr>
<td>Main features of the document that relate to the subject under investigation</td>
<td></td>
</tr>
</tbody>
</table>

1.6.4 Summary of the Qualitative Research Design

In summary the qualitative research design deals with the collection of non-numerical data in order make meaning from such data and enable the researcher to study targeted populations or places. To achieve this the researcher has several research methods to rely on. These include using the narrative, phenomenological, grounded theory as well as the case study. The researcher can use three data collecting methods at his or disposal. These methods include conducting interviews, observing and analyzing documents. Overall, qualitative research aims at answering the what, why and how questions formulated to resolve an identified research problem.
Unit 2: Quantitative Research

2.1 Introduction
In quantitative studies, one uses theory deductively and places it toward the beginning of the plan for a study. The objective is to test or verify theory. One thus begins the study advancing a theory, collects data to test it, and reflects on whether the theory was confirmed or disconfirmed by the results of the study. The theory becomes a framework for the entire study, an organizing model for the research questions or hypotheses for the data collection procedure (Creswell, 1994 as cited by Pajares, 2007).

2.2 What is Quantitative Research?
According to Creswell (2003), a quantitative approach is one in which the investigator primarily uses post-positivist claims for developing knowledge (i.e., cause and effect thinking, reduction to specific variables and hypotheses and questions, use of measurement and observation, and the test of theories), employs strategies of inquiry such as experiments and surveys, and collects data on predetermined instruments that yield statistical data. This is in contrast to the qualitative one in which the inquirer often makes knowledge claims based primarily on constructivist perspectives (p.18).

2.3 Questions and Hypotheses in Quantitative design
Hypotheses are relevant to theoretical research and are typically used only in quantitative inquiry. When a writer states hypotheses, the reader is entitled to have an explanation of the theory that led to them (and of the assumptions underlying the theory). Just as conclusions must be based on the data, hypotheses must be grounded in the theoretical framework on the other hand; a research question poses a relationship between two or more variables but phrases the relationship as a question while a hypothesis represents a declarative statement of the relations between two or more variables, (Kerlinger, 1979; Krathwohl, 1988 in Pajares, 2007).

2.4 The Design, Methods and Procedure in Quantitative design
The paradigm underpinning your research dictates the research approach or orientation which in turn dictates the research design for a study. Clearly describe the design of the study and
defend your choice of design. **Quantitative** projects involve large sample sizes, concentrating on the quantity of responses, as opposed to gaining the more focused or emotional insight that is the aim of **qualitative research**. The main differences between quantitative and qualitative research designs is illustrated in figure 4.

**Figure 4**: Differences between quantitative and qualitative research designs

<table>
<thead>
<tr>
<th>Quantitative Designs</th>
<th>Qualitative Designs</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Design</strong></td>
<td><strong>Focus</strong></td>
</tr>
<tr>
<td>Correlational</td>
<td>Explore the relationship between two or more variables through a correlational analysis. The intent is to determine if and to what degree the variables are related. It does not imply one causes the other.</td>
</tr>
<tr>
<td>Causal Comparative</td>
<td>Compare two groups with the intent of understanding the reasons or causes for the two groups being different.</td>
</tr>
<tr>
<td>Experimental</td>
<td>Test an idea, treatment, program to see if it makes a difference. There is a control group and a test group. Individuals are randomly assigned to the two groups. One group gets the treatment (test group) and the other group (control group) does not get the treatment. There is a pre and post-test for both groups in a traditional experimental design.</td>
</tr>
<tr>
<td>Quasi-experimental</td>
<td>It is the same as experiment in that there is a control and test group. However, current groups are used</td>
</tr>
</tbody>
</table>
| | | Phenomenology | Studies a human experience at an experiential level such as understanding what it means for a
Mixed Research Designs

A mixed research design involves having both a quantitative design and qualitative design. Mixed designs is the best approach if the study requires both quantitative and qualitative designs to address the problem statement. Mixed design studies take significantly more time, more resources, and require the researcher to develop expertise in qualitative analysis techniques and quantitative analysis techniques. Qualitative studies can use numbers, counts and even descriptive statistics. Using numbers does not mean the study has to be quantitative or mixed methods.

2.5 Types of Research Designs

Deciding whether to use questions or hypotheses or both depends on factors such as the purpose of the study, the nature of the design and methodology, and the audience of the research. The practice of using hypotheses was derived from using the scientific method in social science inquiry. They have philosophical advantages in statistical testing, as researchers should be and tend to be conservative and cautious in their statements of conclusions.

Hypotheses can be constructed in different ways as statements:

(i) **Null** - a “no difference” form in terms of theoretical constructs. For example, “There is no significant relationship between support services and academic persistence of non-traditional aged college women.” Or, “There is no significant difference in school achievement for high and low self-regulated students.”

(ii) **Alternative** - a form that states the hypothesis you will accept if the null hypothesis is rejected, stated in terms of theoretical constructs. In other words, this is usually what you hope the results will show. For example, “The more that non-traditional aged college women use the student union, the more significantly they will persist at the college after their freshman year.” Or, “Students in the upper quartile of the self-regulated inventory distribution achieve significantly higher grade point averages than do students in the lower quartile.”
In general, the null hypothesis is used if theory/literature does not suggest a hypothesized relationship between the variables under investigation; the alternative is generally reserved for situations in which theory/research suggests a relationship or directional interplay, (Pajares, 2007).

Be prepared to interpret any possible outcomes with respect to the questions or hypotheses. It will be helpful if you visualize in your mind’s eye the tables (or other summary devices) that you expect to result from your research, (Guba, 1961 as cited by De Souza, 2017). Questions and hypotheses are testable propositions deduced and directly derived from theory, except in grounded theory studies and similar types of qualitative inquiry. Make a clear and careful distinction between the dependent and independent variables and be certain they are clear to the reader. Be consistent in your use of terms. If appropriate, use the same pattern of wording and word order in all hypotheses.

It is important for you as a researcher to indicate the methodological steps you will take to answer every question or to test every hypothesis illustrated in the Questions/Hypotheses section.

All research is plagued by the presence of confounding variables (the noise that covers up the information you would like to have). Confounding variables should be minimized by various kinds of controls or be estimated and taken into account by randomization processes, (Guba, 1961 as cited by De Souza, 2017). In the design section, indicate:

(a) The variables you propose to control and how you propose to control them, experimentally or statistically, and

(b) The variables you propose to randomise, and the nature of the randomizing unit (students, grades, schools, etc.).

Be aware of possible sources of error to which your design exposes you. You will not produce a perfect, error free design (no one can). However, you should anticipate possible sources of error and attempt to overcome them or take them into account in your analysis. Moreover, you should disclose to the reader the sources you have identified and what efforts you have made to account for them, (Pajares, 2007).
2.6 Sampling in Quantitative research

The key reason for being concerned with sampling is that of validity. Validity is the extent to which interpretations of the results of the study follow from the study itself and the extent to which results may be generalized to other situations with other researchers (Shavelson, 1988 in Pajares, 2007).

Sampling is critical to external validity, which is the extent to which findings of a study can be generalized to people or situations other than those observed in the study. In order to generalize validly the findings from a sample to some defined population requires that the sample be drawn from that population according to one of several probability sampling plans. A probability sample means that the probability of inclusion in the sample of any element in the population must be given a priori (i.e. beforehand). All probability samples involve the idea of random sampling at some stage, (Shavelson, 1988 in Pajares, 2007). In experimentation, two distinct steps are involved:

(a) Random selection – when participants to be included in the sample have been chosen at random from the same population. The researcher defines the population and indicates the sampling plan in detail.

(b) Random assignment – when participants for the sample have been assigned at random to one of the experimental conditions.

Another reason for being concerned with sampling is that of internal validity. This is the extent to which the outcomes of a study result from the variables that were manipulated, measured, or selected rather than from other variables not systematically treated. Without probability sampling, error estimates cannot be constructed, (Shavelson, 1988 in Pajares, 2007). Perhaps the key word in sampling is representative. One must ask oneself, “How representative is the sample of the survey population (the group from which the sample is selected), and how representative is the survey population of the target population (the larger group to which we wish to generalise)?”

When a sample is drawn out of convenience (a non-probability sample), rationale and limitations must be clearly provided. If available, outline the characteristics of the sample (by
gender, race/ethnicity, socioeconomic status, or other relevant group membership). Detail the procedures to follow to obtain informed consent and ensure anonymity and/or confidentiality.

2.7 Instrumentation

At this point it is very important to outline the instruments you propose to use (surveys, scales, interview protocols, observation guide, etc.). If instruments have previously been used, identify previous studies and findings related to reliability and validity. If instruments have not previously been used, outline procedures you will follow to develop and test their reliability and validity. In the latter case, a pilot study is nearly essential, (Pajares, 2007). Because selection of instruments in most cases provides the operational definition of constructs (an indicator variable that measures a characteristics, or trait), this is a crucial step in the proposal. For example, it is at this step that a literary conception such as “self-efficacy is related to school achievement” becomes “scores on the Mathematics Self-Efficacy Scale are related to Grade Point Average.” Strictly speaking, results of your study will be directly relevant only to the instrumental or operational statements, (Guba, 1961 as cited by De Souza, 2017).

It is critical to include an appendix with a copy of the instruments to be used or the interview protocol to be followed. Also include sample items in the description of the instrument. For a mailed survey, the researcher needs to identify steps to be taken in administering and following up the survey to obtain a high response rate.

2.8 Data Collection

For data collection you need to outline the general plan for the whole process. This may include survey administration procedures and interview or observation procedures. You also need to include an explicit statement covering the field controls (delimitations) to be employed.

2.9 Data Analysis

At this point it is critical for you as a researcher to specify the procedures you will use, and label them accurately (e.g., ANOVA, MANCOVA, HLM, ethnography, case study, grounded theory). If coding procedures are to be used, describe them in detail. If you triangulated,
carefully explain how you went about it. Communicate your precise intentions and reasons for these intentions to the reader. This helps both you and the reader to evaluate the choices you made and procedures you followed, (Pajares, 2007).

Also indicate briefly any analytic tools you used (e.g., SAS, SPSS, SYSTAT). Finally, you need to provide a well thought-out rationale for your decision to use the design, methodology, and analyses you have selected.

2.10 Summary

This module covered aspects involved in the conduct of quantitative research. The quantitative researcher begins by exploring the relationship between two or more variables through a correlational analysis so as to determine if and to what degree the variables are related. It does not imply one causes the other. The researcher may also compare two groups with the intent of understanding the reasons or causes for the two groups being different or test an idea, treatment, program to see if it makes a difference. There is a control group and a test group and individuals are randomly assigned to the two groups. Often the researcher uses statistical tools to analyze and interpret data collected during the research.
UNIT3: Mixed Methods Research Design

3.1 What is mixed research design?
A mixed methods design is where both quantitative and qualitative data is collected, analyzed and discussed in a single study or series of studies. The main reason is to provide a clearer picture of the research problem under study.
Creswell (2014) defines mixed methods research design as an approach to inquiry that combines qualitative and quantitative forms of research starting with a mix (pragmatically) of philosophical assumptions all the way through to data collection, interpretation, analysis and reporting of findings. The mixed methods approach to research, therefore, involves gathering of both numeric information as well as text information. This may occur when one phase of the research uses quantitative methods while another phase uses qualitative methods. Alternatively, within this approach, the elements of mixed methods research are employed in that both quantitative and qualitative research approaches in one stage or across several stages of the research are envisaged. The approach has also been referred to as integrating, synthesis, quantitative and qualitative, multi-method or mixed methodology, (Creswell, 2014; Tashakkori & Tiddlie, 2003).

3.2 Why choose mixed methods research design?
Mixed methods research design can be used in a number of instances, such as when:

(i) Only qualitative or quantitative data does not provide sufficient premise to answer the research question(s).
(ii) Initial results require further investigation.
(iii) The primary approach needs to be supported by secondary data.
(iv) The research project has several phases.

3.3 The difference between positivist, interpretive and pragmatic approaches to research
According to Cohen, Mannion, & Morrison (2003) and later Creswell (2014), positivists conduct research deductively and use research methods such as tests, experiments and surveys to collect data. The positivist research design starts with identification of a topic, reviewing previous literature, formulating a hypothesis, preparing a research design, collecting and analysing data and, finally, reporting the findings, (Kasozi, 2015).
The interpretivists, on the other hand, are associated with subjectivity and multiple realities. They tend to research issues from a personal experience perspective. Their findings are often not generalizable to entire populations but are rather specific to particular situations and circumstances. Interpretivists are often associated with the collection of qualitative data that leads to multiple interpretations, (Cohen et al., 2011; Creswell, 2003, 2014). Just like positivists, the researcher first identifies a topic, reviews literature, designs the research, collects qualitative data, analyses the data and further elaborates on the underlying concepts and theories and, finally, reports the findings. Interpretivists collect data through observations, analysis of documents and narratives, interviews, case studies and audio-visual materials. They use thick descriptions to detail their findings, (Cohen et al., 2011; Creswell, 2003, 2014).

The pragmatic (mixed methods) research paradigm combines the features of the two paradigms and therefore, allows the researcher to mix and match as s/he finds appropriate, (Kasozi, 2015). Figure 5 is an example of the relationship between research philosophy, approach, design and data collection methods (based on Creswell, 2014).

![Figure 5: The relationship between research philosophy, approach, design and data collection methods (based on Creswell, 2014)](image)

An explanation of the relationship between research philosophy, approach, design; and data collection methods is illustrated in Figure 5 Positivism is the paradigm...
from which the **quantitative approach** is drawn. In positivistic research the **research design** (often referred as **method**) is often a **survey** using a **questionnaire** to collect data. **Interpretivism** is the **paradigm** from which the **qualitative approach** is drawn. In interpretivist research there are several research designs at the disposal of the researcher. These include but restricted to **Case study**, **interviews**, observations, and **document analysis** or **desk study**. Related to these is a menu of data collection tools including **interview protocols** (or schedules), **observation instruments**, **checklists** or **document analysis forms**.

### 3.4 What is a research approach?

A **research approach** is an indication of how the research is to be conducted. It outlines the broad procedures emanating from a selected paradigm and informs the design of the study. Creswell (2003) distinguishes three research approaches, namely quantitative, qualitative and mixed methods research approaches. Babbie and Mouton (2001), however, consider these as paradigms. You should therefore, as a researcher, decide on how to treat them at the onset (either as research approaches or as research paradigms) to avoid terminological confusion. Your decision should be informed by your choice of authors being quoted and the field of study in which the research is being conducted.

### 3.5 The difference between quantitative, qualitative and mixed methods research designs

According to Crotty (in Creswell, 2003), any research proposal is premised on:

(i) What theory of knowledge is embedded in the research: Is it objectivist or subjectivist?

(ii) What philosophical stance is embedded in the methods used to collect data: Is it positivistic, interpretive or pragmatic?

(iii) What methodological plan of action will link methods to outcomes: Is it experimental research, survey research or ethnographic research?

(iv) What design and data collection tools are used: Is it surveys using questionnaires; case studies, or using interviews or document analysis (Creswell, 2003, 2014). As indicated in **Figure 5**; these relationships are interlinked by the underlying philosophy embedded in the larger box to the left.

### 3.6 Why use mixed methods research?

The decision to use a mixed method research approach is guided by the following:
3.6.1 Type of research questions

The research question guides the researcher on whether to use quantitative (QUAN) and qualitative (QUAL) data collection methods concurrently or sequentially. If sequentially, you have to decide on which one should come first. Is it QUAL or QUAN? What is the level of interaction between the QUAN and QUAL? Is it independent or interactive? Do they have equal or unequal priority? At what point is the mixing done? Is it at data collection, analysis or interpretation phase? Figure 6 is an example showing the point of integration for a study involving a sequential study starting with the QUAN followed by the QUAL phases.

**Figure 6:** Example showing the point of integration for a study involving a sequential study starting with the QUAN followed by the QUAL phases (Based on Kasozi, 2015).
In the example illustrated in Figure 6 the researcher decided to situate his study in the pragmatic research paradigm which he would mix both quantitative and qualitative research approaches. The researcher then went to a survey that informed the choice of cases (institutions and participants). Findings from QUAN phase was integrated during analysis and discussion.

3.6.2 Which one has priority?

Creswell et al. (2007) contend that determining which phase of a mixed methods research study has priority depends on several factors. These include a consideration of the practical constraints of collecting data, the need to understand one form of data before moving on to the other, and the preference of the target audience for the research, (Creswell et al., 2007, p. 172). In Figure 6 the qualitative (QUAL) phase had priority over the quantitative (QUAN) phase since the information collected from the quantitative phase was mainly used to provide a “skeleton” for the data to be collected in the qual phase which put “flesh on the bones” by providing an in-depth understanding (through the use of open interview questions and analysis of key documents) of issue(s) under investigation. This meant that in this case a survey using a questionnaire was used to collect data from respondents in 1st phase.

3.6.3 Integration

There are several types of mixed methods research design proposed by Creswell and Plano-Clark (2011). The first is mixing through triangulation where qualitative data and quantitative data are collected at the same time with both methods being given equal weighting.

The second is the embedded design which involves having one method playing a dominant role while the other is used to support the dominant one as illustrated in Figure 7.

**Figure 7: Embedded Design**
Exploratory sequential design

The third is the **exploratory design** which is sequential. Collection of quantitative data is preceded by the qualitative phase. The purpose of collecting qualitative data is to assist in the development and testing of quantitative data collection instruments. It is also known as the **instrument development** or the **taxonomy development model**, (Creswell and Plano Clark, 2011).

**Figure 8:** Exploratory sequence design

The fourth is the **sequential explanatory design** where quantitative data is initially collected and then followed by qualitative data collection. This is the design that is illustrated in Figure 8 Quantitative data is initially collected as a form of **situational analysis** in order to select participants for the qualitative phase. In this way, the **qualitative phase has priority** over the quantitative phase, (Creswell and Plano in Doyle, 2009.) as illustrated in Figure 8. In the example illustrated in Figure 8 integration was done at the analysis, interpretation and discussion stages.

### 3.7 Advantages of mixed methods approach

Advantages of the mixed methods approach include, but are not limited to the fact that the mix (triangulation) of qualitative and quantitative data results in **greater validity**. This is in addition to the fact that there is an **element of completeness** in the picture created of the phenomenon under investigation. Another advantage is that the use of qualitative and quantitative **approaches offsets weaknesses of either approach resulting in stronger inferences**. The combination of approaches may also help in answering different questions arising from the research. As an illustration, collection of quantitative data can be followed by qualitative explanation in what Plano (in Doyle, Brady and Bryne, 2009) called “putting meat on the bones”. In a similar vein, a hypothesis developed from a qualitative investigation can be tested...
using quantitative methods. In some cases, a qualitative study may help generate items for a quantitative study.

3.8 Limitations of the mixed methods approach

Mixed methods research approach has a number of limitations that include the following:

(i) When using the mixed methods approach the researcher needs to be conversant with both quantitative and qualitative research.

(ii) The mixed methods approach is multi-disciplinary in nature and is often “associated with researchers with different skills working collaboratively rather than individually,” (Creswell et al., 2013, p. 542). In spite of all these, the final decision to use the mixed methods approach is informed by the nature of the study, the research questions, plus the circumstances and conditions under which the study is carried out.

(iii) As observed by Creswell (2003), mixed methods research is a relatively new approach that has not been widely accepted as an authentic form of inquiry by some academics and researchers. Jayanti (2011) further noted that even the criteria for its evaluation is an evolving one when compared to other forms of inquiry. She suggests that since the approach often involves quantitative and qualitative forms of evidence, its evaluation relies on these established approaches.

(iv) Another limitation of the mixed methods approach is the belief among many scholars that quantitative and qualitative approaches cannot be mixed in one study since they have different ontological and epistemological origins, (Doyle, 2011). Other researchers such as (Johnson and Onwuegbuzie, 2003, 2007; Creswell and Plano, 2007; Jayanti, 2011; Creswell, 2014), however, have suggested ways of countering this belief by suggesting that the philosophical underpinnings of the mixed methods approach are rooted in pragmatism which has its own unique (albeit combined) ontology and epistemology. They argue that positivism and anti-positivism lie at opposite ends of an ontological/epistemological continuum with pragmatism being at the center.

3.9 Summary

To wrap it all up, mixed methods approach uses both qualitative and quantitative approaches to help answer a research question. Depending on the research problem the mixed methods researcher has a variety of designs and data collection tools at hand. The main interest is to arrive at the resolution of the research problem using all
means possible. The mixed methods research pays no allegiance to a single paradigm or approach.
UNIT 4: The Research Proposal

4.1 Introduction

In year 1 semester 1 you were introduced to research methodology through your Research Methods course. The first three units of this guide were meant to recap and remind you what you learned in your Research Methods course. Now this guide is meant to help you as you start you research project, which is basically an extension of the Research Methods course. In year 1 semester 2 you will do your research proposal, where you will be expected to develop a (research) proposal to study a specific issue within your institution or community. At this point you will be allocated a research supervisor. Your supervisor will guide you through this proposal writing exercise and will also assign additional activities as necessary. Please note that you will be expected to continue with your proposal into your Year 2, when you will be expected to now develop it further and later submit it as a completed Masters’ Dissertation. This is a requirement for your qualification. Remember that in your proposal you are simply “telling a story” of what you will do in your research work. You take us through what you plan to do in your research. As such you use the future tense, especially for Chapters 1 and 3. You will not continue with the dissertation until your proposal has been cleared by your supervisor.

4.2 Planning and conducting a research proposal

Every research study needs a proposal as its foundation. This has to be a good foundation and is influenced by a number of processes which as a research, you need to conform to without fail. As a researcher you are expected to identify and pick a topic that is worthy of research and that will give you access to the target population during your study.

In this part of your study you are expected to:

(i) Define a research topic based on an identified problem in your institution or community. Here you need to do the following:

- Choose a title that captures the essence of your proposed project
- The title should accurately describe the exact nature of the main element of the study
- The title must be informative and relevant and should capture the attention of the reader
• The title should not be too long (normally not more than 15 words) but should provide as much information about the study as possible

• The title should preferably not be in a question form; it must define the research clearly and must be clear and precise.

(ii) Develop research questions and their associated components.

(iii) Develop a hypothesis or conceptual/theoretical frame-work, whichever is applicable.

(iv) Identify a target audience and research environment/site.

(v) Produce a research proposal based on one of the research paradigms/designs you learnt and read about in your Research Methods course.

(vi) Based on the research paradigms, identify the instruments you will use for both data collection and analysis, and justify your choice for both.

(vii) Identify your possible research findings and recommendations based on your hypotheses.

(viii) Submit your proposal for marking and grading. Once your proposal has been marked, graded and your research instruments approved by your supervisor, you need to submit to the University for ethical clearance. This means that once you get your clearance letter you can submit to the ministry for your permit. Note that you cannot start your data collection before you get your clearance, and ultimately your permit.

(ix) Keep your proposal safe and use it to develop your dissertation which you will start in Year 2, Semester 2.

Your research proposal should be intended to the reader that you have a worthwhile research project, the competence and the work-plan to complete it. Your research proposal must therefore address the following questions:

• What do you plan to accomplish?
• Why do you want to do it?
• How are you going to do it?
A research proposal normally consists of three chapters: The Introduction or Overview of the Study (Chapter 1), Review of related literature (Chapter 2), and Research Design and Methodology (Chapter 3). Following due approval of the proposal by your supervisor in accordance with the university standards, the completed thesis begins with the same three chapters and concludes with two additional chapters, Analysis, Interpretation, Presentation and Discussions of Research Findings (Chapter 4) and Conclusions and Recommendations (Chapter 5). Please note again!!!! While the majority of the research proposals are written in the present and future tenses, the methodology and findings in the final report or dissertation are written mostly in the past tense. On average, the proposals should be between 30 and 40 pages long, excluding the front and back matters. Remember this is just to get you started and grounded before doing your dissertation. The dissertation itself is a form of extended essay of 16 000 words minimum, excluding front and back matter content.

As already stated, your proposal will normally constitute the first three Chapters of your dissertation as follows:

4.3 Chapter 1: Introduction/Overview of the Study

This part of your proposal covers the topic, background of the problem, statement of the problem, purpose of study, significance of the study, among others. In Chapter 1 of your proposal you need to have your (working) title. You also need to provide background to the problem and state what the problem is. Chapter 1 should cover between 5 and 8 pages.

4.4 Chapter 2: Review of the Related Literature

In Chapter 2 you need to explain extensively what authorities in your field of study have written about your topic. This is one of your most important chapters as it explains what exists and if there is any gap regarding your topic. You also need to state here the theory or model that will guide or inform your study. Chapter 2 is normally 10 - 15 pages.

4.5 Chapter 3: Research Design and Methodology

Chapter 3 normally ends your research proposal. Here you have to tell your reader what you will do for your data collection and analysis. You need to state the methods
that you are going to use for data collection and analysis. At the end, when you submit your proposal, you should also submit draft instruments and research protocols such as consent letter for participants that you will later use (with modifications as necessary), for your data collection. The chapter will normally cover about 10 pages, excluding instruments.

The research proposal must be submitted to the University to facilitate grading and feedback. Once this has been done, assessment and grading will be done based on a rubric that will normally be shared with you after starting your proposal.

4.6 Summary
This was a brief introduction of the research proposal and how it has to be developed.
Unit 5: Your Dissertation Journey

5.1 Start of the dissertation journey
Once you have your proposal assessed and graded by your supervisor, and having being cleared by the institution and granted the permit by the Ministry, you can now embark on your dissertation. Remember by now you already have the first 3 chapters of your dissertation which is your proposal. So, you have to start with data collection, which will form your chapter 4.

5.2 Finalising your dissertation
After you have all your chapters in place, submit them to your supervisor for first review. After this first review you can now submit to the Centre for Graduate Studies for plag scanning. This is a quality assurance process that involves exposing your work to a software to establish the originality of your work. The allowed similarity level for Masters’ qualifications is 25%. This therefore, calls for you to acknowledge other peoples’ works you may have used to avoid plagiarism. Plagiarism is when you use other peoples’ ideas as if they are your original views or ideas. This, in academia, is not allowed and considered academic theft. Once your dissertation has been plag scanned for similarity level, you have to give it that scholarly appearance. You need to have the front and the back matter.

5.3 Layout
The main body of the dissertation is preceded by several pages containing your preliminary material. This is known as the front matter. The font matter includes all the information that forms part of your report that comes before Chapter 1. It is normally numbered using roman figures to differentiate it from the main dissertation report.

Front matter content includes the following:

5.3.1 The Cover Page
Your dissertation cover page should include the following:

- The full title of the proposal
- The name of the university
- The department to which the thesis is being submitted
- Your name and surname
- The degree the thesis is submitted for
• The academic title and the full name of your supervisor
• Date of submission, normally after the senate has approved your final results.

Please observe this format as the requirement of the cover page layout:
• The title of the dissertation must be printed in bold type, font size 16, single-spaced, and centered
• The name of the university and the department as well as your name must be printed in bold type, font size 14, single spaced, centered
• The sub-title of the thesis (Submitted in partial fulfilment of the requirements for the Master’s Degree ……) must be printed in bold type, font size 14, and centered
• The academic title, the scientific degree and the name of your supervisor must be printed in bold type, font size 14 and centred
• The date of submission of the dissertation must be printed in bold type, font size 14, title case, centered.

Documentation of sources as per these guidelines shall follow the latest APA style. A citation is a formal reference to a published or unpublished source that you consulted and obtained information from while writing your research paper.

Attach all your appendices (tools, letters etc) at the end of your document.

5.3.2 Dedication Page
You explain here, very briefly, who you dedicate your study to. In most cases this is dedicated to your family members.

5.3.3 Acknowledgement page
Here you acknowledge people who helped and supported you during the course of your studies. This normally includes your supervisor(s), your programme facilitators, your sponsors, your research participants etc.

5.3.4 Dedication of authorship
Here you provide a declaration to confirm that the dissertation is your own work, and original.

5.3.5 The Table of Content Page
The requirements of the contents page layout are as follows:
• The caption CONTENTS must be printed in bold type, font size 14, and centered.
• The names of the preliminary material of the dissertation and the names of the chapters must either be printed in upper case or bolded; the names of the sub-chapters must be printed in sentence case.

Page numbers for preliminary material or front matter are written in small Roman numerals (e.g., i, ii, iii, iv, v, etc.) that are centered at the bottom margin of the page. The Dedication page counts as page i. The Abstract is the last of the front matter pages. All the pages between the dedication and the abstract pages are written consecutively.

5.3.6 Structure of the Dissertation

Though part of the front matter, it is important to discuss the abstract at this point since it is the last component of the front matter before going into the actual dissertation.

5.3.7 The abstract

The abstract is usually written as one paragraph and contains between one hundred and two five hundred words. It allows your reader to get an idea of what was accomplished without having to read through the whole dissertation. The abstract conveys the gist of the dissertation by presenting the aim(s), the objectives, methods, results and conclusions of the research. Background information, the literature review and the detailed description of methods are not included in the abstract. The style of the abstract must be concise, clear and non-repetitive.

When writing your dissertation make sure all your chapters start with the introduction, and end with either a summary or conclusion. Further, note that you cannot use summary and conclusion together or interchangeably. You need to decide on which one you are going to use and stick to it through-out your writing.

5.4 Chapter 1: Overview and Background to the Study

Chapter 1 will normally provide a brief introduction and gives the background to the study. In essence, this is where you justify why you think your study is important, and why you think your problem is indeed a problem and as such worth being researched on. This chapter is as such, made up of sub-heading that may include the following:

5.4.1 Introduction: The introductory paragraph is brief, between 15 and 20 lines. In this section there is succinct definition of the main problem or research question. There is no place for review of empirical studies or theories at this point, but current materials that bear on the problem.
5.4.2 Background: Given the population under study, what has been the trend in the development of the problem under study? The background begins with a broader perspective and becomes narrower as it progresses. The paragraphs must be a summary of unresolved issues, conflicting findings, social concerns, or educational, national, or international issues, and lead to the next section, the statement of the problem.

5.4.3 Statement of the Problem/Research problem: A problem statement is the description of an issue currently existing which needs to be addressed. It provides the context for the research and generates the questions which the research aims to answer. Specify the nature of the problem and, if necessary limit the scope of the investigation.

5.4.4 Theoretical context of the research: The theoretical framework is the presentation of a theory that explains the problem. What theories and ideas exist in relation to your chosen subject? At this point you need to fit and analyse the problem, given existing related knowledge or theory.

5.4.5 Conceptual framework: Informed by the theoretical analysis, conceptual framework relates or maps the concepts implied in the analysed theories onto empirical variables based on which research questions and/or hypotheses are raised/derived.

5.4.6 Research aim(s)/ Purpose: The aim of the research must reflect the topic of the research. What are the general goals of the study?

5.4.7 Research objective(s): When the research is done, what are the questions to which reasonable answers can be expected? Research objectives describe what the researcher aims to achieve by the topic under research. The golden rule about the aims and the objectives is that when stating them, clarity is paramount.

5.4.8 Research question(s): There may be one, or there may be several. It is the fundamental core of a research and review of literature. It focuses the study, determines the methodology, and guides all stages of inquiry, analysis and reporting.

5.4.9 Hypothesis: What are your scientific hypotheses through which you hope to find solutions to your problem? For quantitative studies, the hypothesis is your prediction or expectation of what the results will be. They are derived from theory. As you review the literature on your chosen topic, you must look for the theory-derived hypotheses. The hypothesis is usually stated in positive form.
5.4.10 Significance of the study: What contributions will your study make to the advancement of knowledge and/or to the solution of some practical or theoretical problem(s)? This is a statement of the reason why the study adds to the scholarly research and literature in the field. The statement needs to provide indication of who will benefit from the study, and in what ways.

5.4.11 Limitations and delimitations: Limitations are factors, usually beyond the researcher's control, that may affect the results of the study or how the results are interpreted. Stating limitations of the study may be very useful for readers because they provide a method to acknowledge possible errors or difficulties in interpreting results of the study. Limitations that are not readily apparent at the start of the research, but they may develop or become apparent as the research progresses. Delimitations are factors that affect the study over which the research generally does have some degree of control. Delimitations describe the scope of the study or establish parameters or limits for the study. Delimitations on the research design are as such, imposed deliberately by the researcher.

5.4.1.2 Definition of terms: Define all unusual terms and synonyms to avoid misinterpretations particularly where they have different meanings to different people. The terms should be explained to suit the context of your study.

5.4.1.3 Abbreviations/acronyms: Can be separated or be combined with definition of terms. But here you explain and provide full meanings to all the abbreviations and acronyms used in your study.

5.4.1.4 Structure of the study: This provides a brief flow of the chapters and synopsis of what will be covered in each chapter.

5.4.1.5 Chapter summary/conclusion: The final section in Chapter 1 summarises or concludes the contents of the chapter, and also provides a logical transition into the next chapter. Remember, you need to decide whether you use summary or conclusion for this part of your dissertation since you cannot use both words, nor use them interchangeably.

5.5 Chapter 2: Literature Review/Review of the Related Literature

5.5.1 Introduction
The Literature Review (theoretical part of your thesis) presents the reader with knowledge upon which your study is built. 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. It is written from empirical literature published within the previous 5 years or less.

The object is to acquaint the reader with existing studies relative to the gap in the knowledge and describe who has done the work, when and where the research was completed, and what approaches were used for the methodology, instrumentation, statistical analyses, or all of these subjects. To make it as current as possible, you must check current issues of journals, books and search the internet for computerised databases.

5.5.2 Referencing and quoting
Generally, it is important to follow APA referencing style in the whole paper. In the Literature Review section you will refer to a number of ideas that will serve as a foundation for your study. There are certain rules of referencing and quoting which you must follow:

- Direct quotation must be verbatim
- Do not cite sources you have not read
- Wherever possible, cite primary, not secondary, sources
- Do not distort the source; do not twist the evidence just to support your own ideas.
- Do not overuse quotations
- Use direct quotation(s) only when it is important to preserve the exact words of the origin. In most cases, paraphrase. While paraphrasing, do not forget to refer to the original source of the idea
- Square brackets are used to mark anything that is added [like this], three spaced dots (…) are used to indicate an omission.

When the quotation is short, just a phrase or sentence, quotation marks must be used; when the quotations are more than four lines, they must be indented as a separate paragraph with no quotation marks. The lines must be single-spaced.

What are the contents of the chapter, and how are you going to arrange the materials in it? There is a need to plan and state how your literature review chapter is going to be arranged; ie, whether you will arrange it according to concepts or themes. At the
end of the chapter you need to provide a comprehensive summary of the reviewed material according to themes or concepts as follows:

- Concept or theme 1.
- Concept or theme 2.
- Concept or theme 3
- Concept or theme 4
- Concept or theme 5.

5.6 Chapter 3: Research Design and Methodology

5.6.1 Introduction (Provide introduction to the chapter)

5.6.2 Research philosophy/paradigms: When we say that it defines the researcher’s worldview, we mean that a paradigm constitutes the abstract beliefs and principles that shape how a researcher sees the world, and how s/he interprets and acts within that world. No one paradigmatic or theoretical framework is correct, and it is your choice to determine your own paradigmatic view and how that informs your research design to best answer the question under study. How you view what is real, what you know and how you know it, along with the theoretical perspective(s) you have about the topic under study, the literature that exists on the subject, and your own value system work together to help you select the paradigm most appropriate for you to use. It is the lens through which a researcher looks at the world.

5.6.3 Research approaches: a positivistic paradigm typically assumes a quantitative methodology, while a constructivist or interpretative paradigm typically utilises a qualitative methodology. Research approaches are plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation. The selection of a research approach is also based on the nature of the research problem or issue being addressed, the researchers’ personal experiences, and the audiences for the study. Three common research designs are:

(i) Quantitative research design
(ii) Qualitative research design
(iii) Mixed methods research design

5.6.4 Research design: The research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby ensuring you will effectively address the research problem; it constitutes
the blueprint for the collection, measurement, and analysis of data. Note that **your research problem determines the type of design you should use, not the other way around.** Social researchers ask two fundamental types of research questions:

(i) What is going on (descriptive research)?

(ii) Why is it going on (explanatory research)?

5.6.5 Population and sampling: Here we can talk of the target population, study population and the study sample. The study population is the subset of the target population available for study. The study sample is the sample chosen from the study population.

5.6.6 Data collection tools: Interviews can be done either face-to-face or over the phone. Surveys/questionnaires can be paper or web based. Observations and experiments can be conducted to collect either quantitative, qualitative or a mixture of the two methods. Records can also be used to study previous information by other researchers.

5.6.7 Ethical considerations: Ethical standards protect the confidentiality and anonymity of the subjects in research including use of human subjects, consent, plagiarism, guiding principles and so forth.

Again, remember to conclude your chapter with either a summary or conclusion of what has been discovered.

5.8 Chapter 4: Data Presentation, Analysis and Discussion of findings (different terms may be used, and findings may be discussed in Chapter 5 if chapter 4 becomes too lengthy!!).

5.8.1 Introduction: As in the previous chapters this chapter begins with a paragraph describing what will be covered or accomplished. The task is to simply describe and define the data without assigning significance, value, or meaning. You need to know that this is the main part of your study where you will now share what your study found out, YOUR FINDINGS! In this chapter you will also speak “to you data” and explain what your findings mean!

5.8.2 Participants: Discuss those who actually participated if you have human interaction, whether this is general descriptions of the sample if you did not collect demographic information, or more specific descriptions if you have more specific demographic information. Descriptive presentation of research data is a common phenomenon to all research orientations.
5.8.3 Data Analysis and Coding: A suitable sub-heading qualitatively present your findings according to themes and/or codes. If there was triangulation, you may have a separate sub-heading on presentation of findings. Quantitatively, you do a hypothesis-by-hypothesis analysis, presentation of data, and the interpretation of results.

5.8.4 Discussions: Here you will use the competencies of synthesis and evaluation to develop connections between what is known and what emerges from the research project to create new understandings or new knowledge. You will show that you have a mastery of the topic; a command of the data collected through the project, and have resolved, answered or addressed the research question(s). Discussions of findings should be analytic, logical and comprehensive and should bring together your professional knowledge, the findings of your study and the findings of related studies reviewed earlier.

5.8.5 Summary: As always summarize the chapter to remind your readers of what was covered and to reinforce it on their memory.

5.9 Chapter 5: Conclusions and Recommendations (Summary and conclusions, recommendations. Discussion of findings can fit here if chapter 4 is too lengthy. They can start chapter 5).

5.9.1 Introduction: Introduce the chapter. What is going to be the content of this chapter, and what is its thrust?

5.9.2 Summary: (Some include it after recommendations). Think of the final summary as an extension of your abstract, but with more detail and in a much more narrative style unlike in other chapters.

5.9.3 Conclusions: Now that you have thoroughly discussed the significance of your data or findings, reflect on what is most important that has emerged from this empirical study, and what you can infer from it.

5.9.4 Recommendations and Implications: When you compare these to what you have discovered through your data collection, data analysis, and discussions - you will very likely see that your study reveals recommendations you might make regarding the theory guiding this study, future research, or the field of practice.

5.9.5 References
Please note that references are presented in alphabetical order of the first authors and are not numbered. The referencing should follow the American Psychological Association (APA) style guide.

5.9.6 Appendices

Appendices are supporting documents that have been referred to in the text, and they form part of your back matter.

Please take note of the 16,000 minimum word limit. This does not include words within tables, the abstract, the reference list, and the appendices. In short, it excludes both the front and the back matters.
REFERENCES


Center for Innovation in Research and Teaching (2012), Basic research designs, Grand Canyon University, Arizona.


