Introduction to Research
INRS7321/p/w
INRS7311
MODULE OUTLINE 2024
(First Edition: 2019)

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Introduction

Research is a journey that is viewed by some with apprehension and uncertainty because they are confronted with unfamiliar terms and notions in their first research endeavour. The aim of this module is to demystify the process by unpacking all the components and aspects of research in a systematic and comprehensive, yet user-friendly manner. The most important notion underlying the approach used in this module is that research is indispensable in a modern society for several reasons.

We live in an era in which we are frequently exposed to new information based on new research findings, particularly in the fields of technology, the medical and nuclear sciences and other specialised fields. Consequently, most of our daily activities and experiences are subjected to and informed by informal or formal research findings. Additionally, because research is gaining more importance in the workplace, it is a valuable and transferable skill that often provides a competitive edge in the highly competitive industrial and commercial work environments.

Research exemplifies a balanced blend between theory and practice. Theories are the building blocks of research. Despite the apprehension that clouds the learning of the theoretical aspects of research, it is often the practical implementation that presents the most difficult challenges. Consequently, this module approaches the conversion of a theoretical understanding of research paradigms, concepts, constructs and methodologies to the practical application thereof using a step-by-step approach.

This module will provide a broad outline of the research process and present an analysis of various research paradigms and philosophical assumptions which form the foundation in which the process is grounded. The module thus follows a broad approach, which concludes with the application of various essential steps, such as the identification of a research topic and the formulation of a problem statement and question or hypothesis or both. This approach is taken to ensure that you will be able to construct a research proposal and measurement instrument independently in future research endeavours.

Using this Module Outline

This module outline has been developed to **support your learning**. Please note that the content of this module is on Learn as well as in the prescribed material. You will not succeed in this module if you focus on this document alone.

- This document does not reflect all the content on Learn, the links to different resources, nor the specific instructions for the group and individual activities.
- Your lecturer will decide when activities are available/open for submission and when these submissions or contributions are due. Ensure that you take note of announcements made during lectures and/or posted within Learn in this regard.

This Module on Learn

Learn is an online space, designed to support and maximise your learning in an active manner. Its main purpose is to guide and pace you through the module. In addition to the information provided in this document, you will find the following when you access Learn:

- A list of prescribed material;
- A variety of additional online resources (articles, videos, audio, interactive graphics, etc.) in each learning unit that will further help to explain theoretical concepts;
- Critical questions to guide you through the module's objectives;
- Collaborative and individual activities (all of which are gradable) with time-on-task estimates to assist you in managing your time around these;
- Revision questions, or references to revision questions, after each learning unit.

Kindly note:

- Unless you are completing this as a distance module, Learn does not replace your contact time with your lecturers and/or tutors.
- This is a Learn module, and as such, you are required to engage extensively with the content on the Learn platform. Effective use of this tool will provide you with opportunities to discuss, debate, and consolidate your understanding of the content presented in this module.
- You are expected to work through the learning units on Learn in your own time – especially before class. Any contact sessions will therefore be used to raise and address any questions or interesting points with your lecturer, and not to cover every aspect of this module.
- Your lecturer will communicate submission dates for specific activities in class and/or on Learn.

Icons Used on Learn

The following icons are used in all your modules on Learn:

Icon	Description
	A list of what you should be able to do after working through the learning unit.
	Specific references to sections in the prescribed work.
	Questions to help you recognise or think about theoretical concepts to be covered.
	Sections where you get to grapple with the content/ theory. This is mainly presented in the form of questions which focus your attention and are aimed at helping you to understand the content better. You will be presented with online resources to work through (in addition to the textbook or manual references) and find some of the answers to the questions posed.
	Opportunities to make connections between different chunks of theory in the module or to real life.
	Real life or world of work information or examples of application of theory, using online resources for self-exploration.

REMEMBER:

You need to log onto Learn to:

- Access the learning material and online resources such as articles, interactive graphics, explanations, video clips, etc. which will assist you in mastering the content;
- View instructions and submit or post your contributions to individual or group activities which are managed and tracked on Learn; and
- Submit assessment documents.

Module Resources	
Prescribed Material (PM) for this Module	Du Plooy-Cilliers, F., Davis, C. and Bezuidenhout, R. 2021. *Research Matters.* Claremont: Juta and Company Ltd ISBN: 978 48513 210 3
Recommended Readings, Digital, and Web Resources	Please note that a number of additional resources and links to resources are provided throughout this module on the Learn platform. You are encouraged to engage with these as they will assist you in mastering the various objectives of this module. They may also be useful resources for completing any assignments. You will not, however, be assessed under examination conditions on any additional or recommended reading material. Babbie, E. 2011. *Introduction to social research*. 5th edition. Belmont: Wadsworth. Creswell, J.W. 2003. *Research design: Qualitative, quantitative and mixed methods approaches*. 2nd ed. Thousand Oaks, CA: Sage. De Vos, A., Strydom, H., Fouché, C.B. and Delport, C.S.L. 2011. *Research at Grass Roots*. 4th ed. Pretoria: Van Schaik. Kumar, R. 2011. *Research methodology: A step-by-step guide for beginners*. London: Sage. Neuman, W.L. 2011. *Social Research Methods: Qualitative and Quantitative Approaches*.7th ed. Boston: Allyn & Bacon. Some useful web links: Blakstad, O. 2023. *Research basics*. *Explorable*, 6 May 2008. [Online]. Available at: http://explorable.com/research-basics. [Accessed 27 October 2023]. University of Botson Research guides. [*s.a.*]. *Research basics tutorial*. [Online]. Available at: http://umb.libguides.com/index.php?gid=1219. [Accessed 26 October 2023].

Module Overview	You will find an overview of this module on Learn under the *Module Information* link in the Course Menu.
Assessments	Find more information on this module's assessments in this document and on the Student Portal.

Module Purpose

The purpose of this module is to introduce students to the process of research and to develop in them an ability to assess the validity of research findings by defining a research question and to develop an understanding of the processes and techniques of gathering, analysing, interpreting and evaluating data. Emphasis is placed on theoretical principles and procedures as well as ethical considerations. Skills are developed through controlled application of techniques as well as in interpretation and critical analysis of research in a relevant field of study.

Module Outcomes

MO1	Demonstrate knowledge and understanding of the research process and the techniques of gathering, analysing, interpreting and evaluating data.
MO2	Demonstrate the ability to assess the validity of research findings.
MO3	Apply academic literacy skills to analyse, synthesise, organise and present a basic literature study.
MO4	Evaluate ethical considerations applicable to conducting research within a given framework.

Assessments

Integrated Curriculum Engagement (ICE)	
Minimum number of ICE activities to complete	4
Weighting towards the final module mark	10%

Assignment	Assignment 1
Weighting	45%
Duration	10 hours
Submit after	LU3
Learning Units covered	LU1, 2 and 3
Resources required	Prescribed Text

Summative Project	Summative Project
Weighting	45%
Duration	20 hours
Submit after	At the end of the semester
Learning Units covered	All
Resources required	Prescribed Text and Additional Readings

Assessment Preparation Guidelines		
	Format of the Assessment	Preparation Hints
Assignment	Learning Units (LUs) 1 and 3 are covered in this assignment. This assignment will challenge you to do some independent reading and research on the material covered in Chapter 10 of the prescribed textbook. This chapter is not covered in lectures and you are required to do self-study to determine how to structure your argument/s in your literature review.	You will need to study the prescribed text and Learning Units 1-3 on Learn. Various activities on Learn have been created to guide you through the assignment. You also need to refer to several examples of literature reviews, so make sure that you start looking out for research studies or websites well in advance.
Summative Project	All Learning Units are assessed in this Summative Project. Various aspects of each Learning Unit will be assessed through an analysis of three pre-selected research articles chosen because of their sometimes different (and sometimes similar) approaches to research. You will be required to determine where these similarities and differences lie, and what their consequences are for the various stages in the research process. It is expected that you analyse the research articles by deconstructing the research decisions made using the theory covered throughout the module. Your understanding of the various elements of the research process will be assessed through your ability to provide an academically sound critique of the research articles, substantiated by a range of academic sources.	Various activities on Learn have been created to guide you through the analysis of the three pre-selected research articles. Any answers provided will need to be well argued using more than one source. It is therefore expected that you undertake additional reading in order to appropriately justify any arguments and/or critiques made.

Module Pacer			
Code	Programme	Contact Sessions	Credits
INRS7321	ADA1; ADH1; BAD3; BAL3; BAS3; BAW3; BBR3; BCA3; BCC3; BCE3; BCI3; BCIL3; BCIS3; BCN3; BCO3; BCOD3; BCW3; BDK3; BET3; BHP3; BIB3; BIL3; BIN3; BLG3; BMA3; BML3; BOA3; BPU3; BSO3; BSS3; BXD3	48	15
INRS7321p	BAD3p; BAS3p; BIB3p; BLG3p; BPU3p	36	
INRS7321w	ADA1w; ADH1w; BAD3w; BAS3w; BBR3w; BCO3w; BET3w; BHP3w; BLG3w; BOA3w; BPU3w	12	
INRS7311	BAI3; BASB3; BCB3; BCBC3; BDD3; BDG3	40	10

Learning Unit 1	Research Paradigms and Theories

Overview:

This first learning unit of this module will be your introduction to research. You will cover the basics of what research is, its purpose and the building blocks that form the foundation of a good research project. You will also begin to think of a topic that interests you and aligns with your chosen field of study. This topic will become the foundation on which you build your assignment.

Building a research project can be thought of as a road map with each decision made during the process affecting the options available for future decisions. Ultimately, each decision will inform the end product, with changes at any given step in the process impacting the final outcome.

In this learning unit, you will explore various concepts and terms that form the building blocks of research, particularly paradigms and theories. It is essential that you become familiar with these terms at the outset as they will be used throughout the module.

Although learning about research paradigms and theories for the first time can be a daunting task, go through each one slowly. Try to see which paradigm has characteristics that align most closely with your own worldview. This will help to contextualise the content of this learning unit. You can then begin to analyse the other paradigms in relation to your own understanding of the world.

Please work through Themes 1, 2 and 3 on Learn, together with the relevant sections of your prescribed source/s to ensure that you are working towards mastering the objectives for this learning unit.

Learning Unit 1: Theme Breakdown		
INRS7321 Sessions: 1-8 INRS7321p Sessions: 1-6 INRS7321w Weeks: 1-2 INRS7311 Sessions: 1-7	Theme 1: Introduction to Research	Prescribed Material (PM)
	LO1: Evaluate the purpose of research. LO2: Apply the research process.	Chapter 1
	Theme 2: Research Paradigms	Chapter 2
	LO3: Analyse paradigms and paradigm shifts. LO4: Discuss ways of generating knowledge. LO5: Differentiate between the three dominant research traditions. LO6: Compare positivism, interpretivism and critical realism in terms of their epistemological, ontological, metatheoretical, methodological and axiological positions.	
Related Outcomes: MO01	Theme 3: Theories in Research	Chapter 3
	LO7: Describe the nature, components and characteristics of theory. LO8: Analyse the functions of theory. LO9: Evaluate a theory. LO10: Differentiate between inductive and deductive theorising. LO11: Create a theoretical framework.	

Learning Unit 2	Research Topics, Questions and Hypotheses

Overview:

In this learning unit, your will explore research in greater depth. You will look at what it takes to convert a research topic of interest into a research title based on that topic. You will also cover the criteria for developing a research problem. Identifying the research problem will help guide your future research choices and should appropriately justify the importance of your topic. It ultimately explains why your topic of interest is one that should be explored further and should inform the aim you wish to achieve with your research.

You will also be introduced to the concept of a hypothesis. A quantitative research study, for example, will include conditional statements about the relationship between variables. This relationship is then investigated during the research process in order to test your prediction of the relationship between those variables. When developing a research project, the hypothesis becomes the golden thread that should keep the research project on topic. It is what dictates the kind of data that should be collected and is referred to when analysing and reporting on the final data collection.

Please work through Themes 1, 2 and 3 on Learn, together with the relevant sections of your prescribed source/s to ensure that you are working towards mastering the objectives for this learning unit.

<table>
<tr><th colspan="3">Learning Unit 2: Theme Breakdown</th></tr>
<tr><td rowspan="2">INRS7321
Sessions: 9 -16

INRS7321p
Sessions: 7-12

INRS7321w
Weeks: 3-4

INRS7311
Sessions: 8-14</td><td>Theme 1: From Research Topic to Research Question</td><td>Prescribed Material (PM)</td></tr>
<tr><td>LO1: Argue in favour of a particular research topic.
LO2: Formulate a research problem based on the research topic.
LO3: Formulate research questions based on a research problem.</td><td>Chapter 4</td></tr>
<tr><td rowspan="4">Related Outcomes:
MO01
MO02</td><td>Theme 2: The Aims of Research</td><td rowspan="2">Chapter 5
Chapter 7</td></tr>
<tr><td>LO4: Argue whether a particular research problem is an example of pure or applied research.
LO5: Justify the choice of a specific type of research (exploratory, descriptive, correlative, explanatory, predictive or pragmatic) for a research problem.
LO6: Explain how the terms research rationale, research design, research tradition and research purpose are all linked.</td></tr>
<tr><td>Theme 3: Hypotheses</td><td rowspan="2">Chapter 6</td></tr>
<tr><td>LO7: Analyse the use of hypotheses in quantitative research.
LO8: Distinguish between laws, theories and hypotheses.
LO9: Formulate null and alternative hypotheses.</td></tr>
</table>

Learning Unit 3	The Literature Review, Conceptualisation

Overview:

When developing a research project, it is important that readers of your research have a clear understanding of your view of the topic and where your research fits into the larger body of research on the same and similar topics. This is provided in the literature review which is a discussion of a careful selection of previous writing on the topic based on relevant literature accessed from journal articles and textbooks. It is also important that you and the reader share meaning with regards to the core concepts on which your research is based.

In this learning unit, we will explore the literature review process as well as the conceptualisation of specific concepts to ensure that their meanings are clearly defined.

Please work through Themes 1 and 2 on Learn, together with the relevant sections of your prescribed source/s to ensure that you are working towards mastering the objectives for this learning unit.

<table>
<tr><th colspan="3">Learning Unit 3: Theme Breakdown</th></tr>
<tr><td>INRS7321
Sessions: 17-24

INRS7321p
Sessions: 13-18

INRS7321w
Weeks: 5-6

INRS7311
Sessions: 15-21</td><td>Theme 1: The Literature Review</td><td>Prescribed Material (PM)</td></tr>
<tr><td rowspan="3">Related Outcomes:
MO01
MO03</td><td>LO1: Explain the purpose of a literature review.
LO2: Compare different types of literature reviews.
LO3: Describe the literature review process.
LO4: Compile a literature review.</td><td>Chapter 8</td></tr>
<tr><td>Theme 2: Conceptualisation</td><td rowspan="2">Chapter 9</td></tr>
<tr><td>LO5: Define conceptualisation.
LO6: Understand the importance of language when creating meaning.
LO7: Formulate a construct/s based on concepts relevant to a research study.</td></tr>
</table>

Learning Unit 4	Sampling and Data Collection

Overview:

Often, research involves extremely large numbers of people or artefacts which have to be reduced to a more manageable size. Choosing the right data collection method to achieve a specific research aim is equally important as this will affect the type of data to be collected as well as the validity and reliability of the final analysis. The ways in which this is done is the main focus of this learning unit.

In this learning unit, you will be introduced to the concepts of population and sampling, including different sampling and data collection methods, both of which depend on whether quantitative or qualitative studies are involved. You will also explore the advantages and disadvantages of specific data collection methods such as surveys and questionnaires, content analysis, experiments and field research.

Please work through Themes 1, 2 and 3 on Learn, together with the relevant sections of your prescribed source/s to ensure that you are working towards mastering the objectives for this learning unit.

<table>
<tr><th colspan="3">Learning Unit 4: Theme Breakdown</th></tr>
<tr><td>INRS7321
Sessions: 25-32

INRS7321p
Sessions: 19-24

INRS7321w
Weeks: 7-8

INRS7311
Sessions: 22-28</td><td>Theme 1: Population and Sampling
LO1: Describe the population best suited to the needs of a research study.
LO2: Argue the suitability of either probability or non-probability sampling methods for a particular research study.
LO3: Justify the use of a specific sampling method for a research study.</td><td>Prescribed Material (PM)
Chapter 11</td></tr>
<tr><td rowspan="3">Related Outcomes:
MO01
MO02</td><td>Theme 2: Quantitative Data Collection Techniques
LO4: Defend the use of surveys for the collection of quantitative data.
LO5: Differentiate between various types of surveys.
LO6: Develop a range of question types for a survey.
LO7: Analyse the various measurement scales used in questionnaires.
LO8: Justify the use of an experimental design in the collection of quantitative data for a research study.
LO9: Justify the use of content analysis as a quantitative data collection technique for a research study.</td><td>Chapter 12</td></tr>
<tr><td>Theme 3: Qualitative Data Collection Techniques
LO10: Differentiate between field research and unobtrusive qualitative data collection techniques.
LO11: Defend the use of a qualitative data collection technique in a research study.</td><td>Chapter 13</td></tr>
</table>

Learning Unit 5	Quantitative and Qualitative Data Analysis

Overview:

Once you have decided what data you will collect for your research, you will need to decide how that data will be analysed. Whether or not your data analysis is quantitative or qualitative will depend on the methods you used to collect the data as well as the type of data you collected.

In this learning unit, we will explore ways in which to convert research data into meaningful and convincing arguments related to a research problem. We will look at the analysis of data for both quantitative and qualitative research in order to identify patterns that will, when described, analysed and discussed, speak to the aim of the research project.

Please work through Themes 1 and 2 on Learn, together with the relevant sections of your prescribed source/s to ensure that you are working towards mastering the objectives for this learning unit.

Learning Unit 5: Breakdown		
INRS7321 Sessions: 33-43 INRS7321p Sessions: 25-33 INRS7321w Weeks: 9-11 INRS7311 Sessions: 29-35	Theme 1: Quantitative Data Analysis LO1: Evaluate the role of statistics in quantitative data analysis. LO2: Use descriptive statistics to summarise data in a data set. LO3: Determine the relationship between data using the correlation coefficient. LO4: Differentiate between the probability density function and normal distribution. LO5: Analyse the process of testing of a hypothesis and presenting the data.	Prescribed Material (PM) Chapter 15
Related Outcomes: MO02 MO04	Theme 2: Qualitative Data Analysis LO6: Discuss the nature of qualitative data analysis and interpretation. LO7: Explain qualitative data analysis. LO8: Analyse qualitative data analysis methods. LO9: Distinguish between different types of coding. LO10: Code qualitative data.	Chapter 16

Learning Unit 6	Validity, Reliability, Trustworthiness and Ethics

Overview:

Most researchers hope to add to the body of knowledge related to the focus of their research. However, for their research to be recognised by their peers, researchers need to ensure that their research is valid, reliable and trustworthy. They also need to guarantee that they have complied with the ethical standards and norms applicable to their research.

In this learning unit, we will examine the importance of validity, reliability and trustworthiness in research as well as the ethical considerations that all researchers need to take into account during the research process.

Please work through Themes 1 and 2 on Learn, together with the relevant sections of your prescribed source/s to ensure that you are working towards mastering the objectives for this learning unit.

<table>
<tr><th colspan="3">Learning Unit 6: Theme Breakdown</th></tr>
<tr><td rowspan="2">INRS7321
Sessions: 44-48

INRS7321p
Sessions: 34-36

INRS7321w
Week: 12

INRS7311
Sessions: 36-40</td><td>Theme 1: Validity, Reliability and Trustworthiness in Research</td><td>Prescribed Material (PM)</td></tr>
<tr><td>LO1: Critically discuss the difference between reliability and validity in the context of quantitative research.
LO2: Distinguish between internal and external validity.
LO3: Critically discuss the dimensions of trustworthiness in relation to qualitative research.</td><td>Chapter 17</td></tr>
<tr><td rowspan="2">Related Outcomes:
MO02
MO04</td><td>Theme 2: Ethics in Research</td><td rowspan="2">Chapter 18</td></tr>
<tr><td>LO4: Argue the role of ethics in research.
LO5: Critically discuss ethical issues related to participants and researchers.</td></tr>
</table>

Glossary of Key Terms for this Module

Term	Definition
Action Research	Action research requires a personal attempt, through a process of inquiry, to improve or reform social and professional practices. Action research is a systematic process in which a problem is studied scientifically and where the results are used to take a particular action to help solve the problem.
Alternative hypothesis	The alternative hypothesis is where the researcher predicts an expected outcome. This prediction is often based on prior literature and studies on the chosen topic.
Assumptions	They are beliefs that are unproven and are considered as neither true nor false. They are theoretical statements about a phenomenon, the nature of humanity and other issues that cannot be confirmed by direct observation.
Axiology	Axiology refers to the study of values and value judgements. In the widest sense of the term, it deals with the question of the role of values in research and it gives us insight into what is valued within a particular paradigm or tradition.
Concept	A concept can be an object, an event, a relationship, or a process. A concept is, therefore, a word that can have many different meanings depending on where it is used or who is using it.
Construct	A construct in research refers to an abstract and intangible idea or concept or group of related concepts.
Constructionism	It is a group of theories stating that each individual constructs his/her own reality based on interpretation resulting in multiple realities and interpretations of phenomena.
Dependent variables	Dependent variables are the variables affected by the independent variable. Thus, the dependent variable will change as a result of the independent variable being manipulated by the researcher. It is therefore dependent on the independent variable.
Empirical research	It is concerned with phenomena that are confirmable through direct observation and experience, as opposed to the application of theory or logic.
Epistemology	It is a philosophical notion that deals with the nature of knowledge and the different ways of knowing.
Ethnography	Ethnography, or ethnographic research, is a qualitative field research approach that involves the description of a particular culture that a researcher is interested in exploring. It allows the researcher to gain a

Term	Definition
	better understanding directly from the people involved in terms of the way of life of a particular cultural group or subculture.
Experimental research	A type of research that has the goal of determining whether or not one variable causes an effect on another.
Feasibility of research	The probability of finding answers to your questions and proving or disproving your hypotheses.
Hermeneutics	It is concerned with the 'theory and method of the interpretation of human action', (Bryman, 2012: 28).
Hypothesis	It is a statement you will attempt to accept or reject at the end of your research. A hypothesis is a tentative or conditional statement or explanation about a phenomenon or about the relationship between certain variables. A hypothesis can be tested. We tend to use hypotheses only in quantitative studies and then also only in those that are explanatory in nature.
Independent variables	Independent variables are variables that are likely to cause an effect. The independent variable is changed or manipulated by the researcher to test the impact of this change or manipulation on the dependent variable and the outcome.
Literature review	A comprehensive and systematic summary of past research and/or an evaluation of studies on a specific topic.
Metatheory	The word meta means 'about'. Metatheory is thus, literally, 'theory about theory'. Metatheory refers to exploring the theoretical lenses that provide direction to the research in a particular field of study.
Methodology	Methodology is a guiding system for solving problems. It includes the research methods that are deemed most appropriate for collecting and analysing data in order to generate knowledge about the phenomenon being studied.
Null hypothesis	A null hypothesis makes a prediction that no relationship exists between the variables that are being tested.
Observation	It is the collection of data by documenting the occurrence of events in a particular setting. Observation is a common method of data collection in qualitative research.
Ontology	It is the study of being, existence or reality and includes the assumptions that are made about certain phenomena. The main questions that it deals with are what reality is and how we know what is real.
Paradigm	It is 'a cluster of beliefs and dictates which for scientists in a particular discipline influence what should be studied, how research should be done, and how results should be interpreted', (Bryman, 2012: 630).

Term	Definition
Paradigm shift	It is when the researchers take on new views, methods and beliefs and start conducting their research in a different way.
Phenomenology	It looks at the way in which individuals make sense of the world around them. Phenomenologists maintain that human action is meaningful and that people therefore ascribe meaning both to their own and other people's actions.
Pilot test	It is the pre-testing of data collection methods or instruments.
Population	It is all the individuals or entities (social artefacts) belonging to a particular group that is being studied.
Population parameters	The population parameters of a study refer to the nature (people or social artefacts), size and unique characteristics of the population.
Positivism	It can be defined broadly as the approach of the natural sciences. Positivists advocate the application of natural sciences methods to study certain phenomena, including social phenomena.
Primary sources	Primary sources could include interviews, eye-witness accounts and any research that you need to conduct for the purposes of answering your research question and solving your research problem.
Qualitative research	Qualitative research generally examines people's words or actions in narrative or descriptive ways, focusing on understandings and meanings. The emphasis is on the quality of information gained to create in-depth understanding of phenomena.
Quantitative research	Quantitative research generally converts observations into discrete units that can be compared to other units by statistical analysis; it focuses on explanation and prediction. The aim is prediction and control and the emphasis is on quantifiable evidence.
Reliability	When assessing if a research method or instrument is reliable, you need to ask whether the same results would be produced if the research was repeated by a different researcher at a different time using the same method or instrument. It thus refers to the quality of a measurement procedure that provides repeatability and accuracy.
Research design	The plan of how data will be collected in a research study. The research design should be appropriate for the research question that the study is addressing.
Research ethics	What we do as researchers and the quality of work we produce often affect other people and we therefore have a responsibility to the bigger community that we serve to act with honesty and integrity so that everyone can have and maintain confidence in the research process.
Research method	Specific procedure(s) used to gather and analyse research data.

Term	Definition
Sample	It is a subset of a population that is considered to be representative of the population.
Sample frame	In order to draw a representative sample for a quantitative study, you need a list of all the people or objects in that particular population. We call this list our sampling frame.
Sample size	The number of participants in a study sample. Large numbers are preferred in quantitative research, because, if randomly selected, they are more representative of the population than small samples. However, smaller samples are favoured in qualitative research since the aim is not to generalise results.
Sampling error	The sampling error is an indication of how confident we are that a certain percentage of the population would provide answers similar to that of the sample.
Secondary sources	A description and/or summary of one or more prior research studies. This refers to data that you did not collect yourself but that was collected by other researchers and published in academic journals or dissertations. Secondary sources could include published journals, books, databases, online sources and more.
Triangulation	Triangulation is a technique that facilitates validation of data through cross verification from two or more sources. It refers to the application and combination of several research methodologies in the study of the same phenomenon.
Trustworthiness	The overarching term that is used for validity and reliability in qualitative research is 'trustworthiness', which is further divided into credibility, transferability, dependability and conformability.
Validity	Validity is about determining whether the research measured what it was supposed to measure. In other words, validity is the extent to which the instrument that was selected actually reflected the reality of the constructs that were being measured.