RHODES UNIVERSITY: DEPARTMENT OF ACCOUNTING

WRITING A RESEARCH PROPOSAL

Professor EM Stack
# WRITING A RESEARCH PROPOSAL

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1. INTRODUCTION

Welcome to this module on writing a research proposal. We trust that you will find the course a stimulating and rewarding learning experience and that the skills and knowledge that you gain in successfully completing this module will stand you in good stead in your future study and working careers.

Master’s degree studies are at level 9 on the National Qualifications Framework and the research requirement at this level is described as the ability to do independent research on a topic of your own choice, which makes some contribution to the body of knowledge. You will be expected to apply both knowledge and critical reasoning ability in identifying, analysing and dealing with vaguely defined, complex real world problems using evidence-based solutions and theory driven arguments. You will also be expected to engage with current research and scholarly or professional literature in the field and present and communicate academic work to a range of audiences. You will therefore appreciate that you need to work hard to master the new set of skills required for research and academic writing. You will be given all the support that you need to succeed, provided that you put in the necessary effort.

2. LEARNING OUTCOMES AND ASSESSMENT CRITERIA

There are a number of learning outcomes which the course aims to achieve. The ultimate outcome is the writing of a successful research proposal, but in the course of achieving this outcome, the module is designed to achieve the further outcome of providing you with a basic understanding of the research process. The specific outcomes and the assessment criteria are as follows:

Specific outcomes:

to present an acceptable research proposal that will enable the completion of a thesis conducted under supervision in a manner that is relevant to the discipline of Taxation and related fields at Master’s degree level.

Assessment criteria

- Demonstrate a broad and systematic knowledge base in Taxation and related fields.
- Display a coherent and critical understanding of the research methodologies, techniques and technologies relevant to research in Taxation and related fields.
- Demonstrate the ability to critique and evaluate current research.
- Participate in scholarly debates in Taxation and related fields.
- Demonstrate advanced skills in undertaking a study (under supervision) of literature and current research in Taxation and related fields.
- Demonstrate the ability to relate theory to practice and vice versa.
- Demonstrate mastery of the application of research methods and techniques relevant to Taxation and related fields.
- Demonstrate advanced information retrieval and processing skills.
- Draw systematically on the theory, research methods and literature of Taxation and related fields.
- Demonstrate the ability to undertake a research project and write an acceptable research proposal under supervision which meets the technical and language requirements expected at this level.
3. **DOING RESEARCH IN THE FIELD OF LAW**

Before discussing research as such, in order to prepare you to do research in the field of law, it is necessary to revise certain topics that you probably studied in first year Commercial Law. The first such topic is the sources of taxation law and the second is how to read a tax case.

### 3.1 SOURCES OF SOUTH AFRICAN TAX LAW

In general, the sources of law are:

- legislation;
- the rules of common law and customary law; and
- judicial precedent.

For the purposes of taxation, the two important sources of law are legislation and judicial precedent.

#### 3.1.1 Legislation

The taxing statues as well as the regulations promulgated in terms of these acts, which are of importance for your studies are:

- the Income Tax Act, 58 of 1962;
- the Value-Added Tax Act, 89 of 1991; and
- the Estate Duty Act, 45 of 1955.

**Interpretation Notes** issued by the South African Revenue Services (SARS) do not form part of legislation. They represent the interpretation of SARS in relation to certain sections of the taxing acts, where there may be doubt about the precise meaning or impact of the provisions. They serve only as guidelines. If challenged in courts of law, they may be overthrown or accepted by the courts and, if accepted, will have the force of law (judicial precedent is discussed below). They are, however, relevant for your studies.

**Notices and regulations**

The Minister of Finance is empowered by certain sections of the acts to issue notices and regulations. These are published in the *Government Gazette* (promulgated) and become part of the act. An example of such a section is section 107 of the Income Tax Act which provides for the making of regulations by the Minister of Finance in particular circumstances as listed in the section and, in general, “for giving effect to the objects and purposes of this Act”. Another example from the Income Tax Act is the motor vehicle rate per kilometre in terms of section 8(1)(b)(ii) and (iii).

**Other relevant legislation**

In addition to the taxing acts, the regulations and the Interpretation Notes, students must have a working knowledge of the Companies Act, 71 of 2008 and the Close Corporations Act, 69 of 1984.

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1 The notes in this paragraph and the following were summarised from Kleyn, D. and Viljoen, F. 4th Ed. 2010. *Beginner’s Guide for Law Students*. Claremont, Cape: Juta and Co Ltd.
3.1.2 Judicial precedent

Legal certainty is an important aspect of law: the law should be predictable, should be applied consistently and should have a fixed and certain content. The need for legal certainty implies that taxation legislation should not be amended with retrospective effect, although you would have noted that changes to taxation acts often apply from dates earlier than the date of promulgation of the amending act.

Legal uncertainty arises because the language of the statutes often has to be interpreted by the courts. In doing this, judges have to take account of the impact of changing values in society on matters not clearly set out in legislation. Unfortunately, judicial discretion provides opportunities for judges to be influenced by their subjective attitudes and prejudices.

Examples of differing attitudes of judges are to be found in cases dealing with tax avoidance where judges have expressed opinions ranging from the right of taxpayers to take advantage of all legal measures available to reduce their tax burden, to the opinion that taxpayers have a “moral” duty not to avoid the payment of tax. The use of the word tax “avoision”, which combines the concepts of tax avoidance (which is legal) and tax evasion (which is illegal) illustrates this moralistic attitude toward the obligation pay tax.

Lord Tomlin in *Duke of Westminster v IRC*, 51 TLR 467, 19 TC 490, at 420, said:

No man . . . is under the smallest obligation, moral or other, so to arrange his legal relations to his business or to his property as to enable the Inland Revenue to put the largest possible shovel into his stores . . . Every man is entitled if he can to order his affairs so that the tax attaching under the appropriate Acts is less than it otherwise would be. If he succeeds in ordering them so as to achieve this result, then, however unappreciative the Commissioner of Inland Revenue or his fellow-taxpayers may be of his ingenuity, he cannot be compelled to pay an increased tax.

This dictum has been endorsed in a number of South African tax cases. By contrast, in *COT v Ferera*, 1976 (2) SA 653 (RAD), 38 SATC 66, MacDonald, JP made the following statement:

I endorse the opinion expressed that the avoidance of tax is an evil. Not only does it mean that a taxpayer escapes the obligation of making his proper contribution to the Fiscus, but the effect must necessarily be to cast an additional burden on taxpayers who, imbued with a greater sense of civic responsibility, make no attempt to escape or, lacking the financial means to obtain the advice and set up the necessary tax-avoidance machinery, fail to do so. Moreover, the nefarious practice of tax avoidance arms opponents of our capitalistic society with potent arguments that it is only the rich, the astute and the ingenious who prosper in it and that ‘good citizens’ will always fare badly.

Judgements of the courts are an important source of law. It is necessary for an understanding of how the courts create law, to understand the Doctrine of Judicial Precedent. Courts must take into account previous judgements in similar cases (*stare decisis*). Therefore courts must stand by previous decisions. Previous judgements create binding precedents which must be followed. Only if the facts in a particular case are materially different from the facts of an existing precedent, can the two cases be distinguished. Lower courts are bound by decisions of higher courts and by their own previous decisions (unless these are wrong). There is therefore a hierarchy of courts as follows:
# Hierarchy of the courts

<table>
<thead>
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<th>Court</th>
<th>Binding force of judgements</th>
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<tr>
<td>Constitutional Court</td>
<td>The highest court with respect to constitutional matters and its judgements bind all other courts (and all organs of State)</td>
</tr>
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</table>
| Supreme Court of Appeal                    | - Bound by its own judgements (unless wrong).  
- Decisions of other courts have **persuasive** force only |
| Provincial and local decisions of the High Court | Bound by:  
- Supreme Court of Appeal judgements  
- Its own judgements (unless wrong)  
- Judgements by a full bench bind single judges  
- Provincial and local divisions are **not bound** by decisions of other provincial and local divisions (which have **persuasive** force only). |
| Lower courts (magistrates courts)          | - Bound by all judgements of the Supreme Court of Appeal and Provincial and Local Divisions of the High Court.  
- Judgements of lower courts are **not reported** and do not serve as precedents. |

## 3.1.3 Reporting of judgements

To make precedents accessible, they are published in Law Reports. In the case of court decisions relating to taxing acts, they are published in the **South African Tax Cases Reports** (as well as in the South African Law Reports, in certain cases), which is published by LexisNexis Butterworths (Durban). The cases can also be accessed on the SARS website:


When you **cite a case** you do so as follows:

*Stander v CIR, 1997 (3) SA 617 (C), 59 SATC 212*

The components of the citation (for the purposes of tax) are as follows:

- case name: Stander v CIR;
- v: stands for *versus*, Stander being the plaintiff and the Commissioner for Inland Revenue (CIR) being the respondent (now referred to as the Commissioner for SARS, C:SARS, and earlier as the Secretary for Inland Revenue, SIR, and if the case was reported in Afrikaans, KBI, K:SAID or SBI);
- 1997 (3) SA 617 (C): the case was reported in the SA Law Reports in the third quarter of 1997, beginning on page 617 of the journal, and was heard in the Cape Division of the High Court;
• 59 SATC 212: the case was reported in the South African Tax Cases Reports, in volume 59, beginning on page 212.

Certain tax cases are heard in the Special Income Tax Court, and these cases are not given a name, only a number - for example:

ITC 1671 (1999), 62 SATC 39

[Note: A comprehensive discussion of all the law reports, including foreign judgements is provided in Appendix 1.]

Other aspects of reported cases that may be of interest are:

• the letters “NO” in the name of a case means: nomine officio, that is a person in his or her official capacity (the plural is NNO);
• “in re” in the name of a case means: in the matter (case) of;
• “ex parte” in the name of a case means: on the application;
• when reading a case, you will note that the brief headings to the reported case contain a few important phrases describing the case and a head-note or summary by the editors of the law reports; they have no force in law, but help the reader to identify cases that are relevant to his or her inquiry or research;
• the words “cur adv vult” (curia adversari vult) are often found in reports, followed by “postea” and a date; this means that the court adjourns to consider its verdict and then the date is given on which it gives judgement;
• words often found are “semble”: it appears, and “quaere”: it is doubtful;
• the case as reported first sets out the facts, then the relevant law, and finally the order given by the court;
• judges are referred to by their surnames, followed by letters such as “J” (judge), “JA” (judge of appeal), “CJ” (chief justice), etc.

3.1.4 What part of the case is binding?

The court is called on to decide a case based on the facts and the law. The part of the decision that creates precedent is the “ratio decidendi”, or reason for the decision. It is not always easy to find. A judge may also make other comments in delivering the judgement, referred to as “obiter dictum”, which may be remarks made in passing or the statement of a hypothetical case. The ratio decidendi creates precedent, while the obiter dictum merely has persuasive force.

One judgement is usually handed down; this is a consensus judgement and obviously creates precedent. A majority and minority judgement may be handed down. The majority judgement creates precedent, while the minority judgement has persuasive force. A separate judgement by one of the panel of judges may be recorded; the judge is in agreement with the majority judgement but possibly for other reasons or he may wish to emphasise a particular matter. This separate judgement does not create precedent, but has persuasive force.

3.2 HOW LAW IS “MADE”

The process of “making” and enforcing the law is as follows:

• legislators make laws:
• the judiciary (judges) interpret laws; and
• the executive arm enforces the laws.

The process followed before a Statute (an Act) becomes law is:

• the government may draft a Green Paper which sets out policy options and is published in the Government Gazette for public comment; this is followed by a White Paper, also published for public comment;
• a Bill in draft form is published in the Government Gazette for public comment and is introduced by the Minister of Finance in the National Assembly; the South African Revenue Services (SARS) also publishes an Explanatory Memorandum to accompany the Bill, which provides further details about the tax amendments, including the reason for the change, the impact of the change and examples to illustrate this;
• the Bill is then referred to the Portfolio Committee on Finance, which investigates the Bill, studies public commentary and suggests changes where relevant;
• after possible changes, the Bill is then presented to the National Assembly for a second reading where the principles (not the details) are debated;
• the Bill is then referred to the National Council of Provinces;
• if the Bill is passed, the President assents to the Bill by signing it, at which stage it becomes a Statute or Act;
• the Act is published in the Government Gazette and the date of publication is usually the date on which it comes into force (unless specified otherwise, which is often the case with the Revenue Laws Amendment Acts which amend the taxation Acts);
• debates on a Bill in the National Assembly are recorded in Hansard.

Previously Parliamentary sovereignty applied and the courts could not test legislation against norms or standards of justice, fairness or equality and strike down non-compliant legislation. Only where the correct procedures and formalities were not followed in passing the legislation, could the courts interfere. The Constitution of the Republic of South Africa (Act 108 of 1996) contains a Bill of Rights which is guaranteed by the Constitution and provides a general standard or norm against which all legislation can be evaluated. All courts have the power of review and the Constitutional Court can review and declare any legislation invalid (or any part of it) which is in conflict with constitutional rights.

3.3 AUTHORITY FOR AN ARGUMENT OR TO JUSTIFY A VIEWPOINT

In writing your research proposal (and your thesis) you will be formulating legal arguments. Every statement of fact that you make or opinion that you express that is not your own, must be backed up by evidence in the form of an appropriate authority that you cite. The following may be relevant:

Primary sources (which have binding force):

• refer to a specific section in a taxation Act in full, as well as the Act concerned and the number and date of the Act: for example, section 22(1) of the Income Tax Act, 58 of 1962;
• in frequent references to the same Act you may wish to state the name of the act in full the first time you refer to it: Income Tax Act, 58 of 1962 (hereafter referred to as “the Act”), and then use the abbreviated form;
• refer to a judgement in a specific case by citing the case in full (the first time you cite it, after that you can simply refer to the case by name).
Secondary sources (which have persuasive authority):

- refer to *obiter dicta* and minority judgements from relevant cases;
- refer to the statements of influential writers in tax.

These authorities must be acknowledged in full in an appropriate citation.

Reading a tax case

As part of your research in tax you will need to read a number of cases. They are set out as follows in the law reports (based on *Commissioner for South African Revenue Services v McRae* (64 SATC 1)):

- The case name – for example, *Commissioner for South African Revenue Service v McRae*; in this case the Commissioner brings the appeal, in other cases the taxpayer; the person who brings the appeal is referred to as the appellant and the party against whom the appeal is brought is the respondent.

- The court in which the case was decided and the date – for example, the *McRae* case was decided in the Cape Provincial Division on 17 August 2001.

- The Judge or Judges in the case – for example in the *McRae* case the judges were Selikowitz J, Traverso DJP and Rose-Innes AJ; in this instance, “J” means Judge, “DJP” means Deputy Judge President and “AJ” means Acting Judge.

- The headnote follows – this is not the judgement given in the case and does not create precedent; it is merely a summary by the publishers of the Law Report (and may therefore not necessarily be accurate). It sets out the essential facts and the essential legal issues on which the final finding was based. You should read this as an aid to finding the *ratio decidendi* of the case and, because cases are often long and complex, it also serves as an aid to your memory.

- The facts of the case are then set out – these are important because if the facts that you are considering differ from the facts of the reported case, you may not be able to apply the decision or part of the decision.

- The decisions of the court follow, preceded by the word “Held” – this is the really important part of the reported case for the purposes of your research. It contains the *ratio decidendi*, but may also include *obiter dicta*.

- An order regarding the party to be responsible for the costs usually follows the judgement.

- The rest of the report provides details of the arguments of counsel and the exposition of the law by the judge.

- The final decision is then recorded – for example, in the *McRae* case the final paragraph reads: “I am therefore persuaded that the decision of the court *a quo* [this is the court from which the present appeal was noted] was wrong. The appeal is therefore dismissed with costs” [the person bringing the appeal is responsible for the costs].
3.4 THE BURDEN OF PROOF

You will notice when reading case decisions that a judge will often remark that the taxpayer has not discharged the onus of proof and it is necessary to remind you about this aspect. The burden (onus) of proof differs in criminal and civil cases. In civil cases, the burden of proof lies with the party that alleges (usually the plaintiff). In criminal cases, the burden of proof lies with the State. In civil cases the onus of proof must be discharged on a balance of probabilities, in a criminal case, the State must prove its case beyond a reasonable doubt. In the case of tax, the onus of proof usually lies with the taxpayer. In terms of section 82 of the Income Tax Act, the burden of proof “shall be upon the person claiming . . . exemption, non-liability, deduction, abatement or set-off, or that [an] amount must be disregarded or excluded” (the onus is therefore on the taxpayer) and must be discharged on a balance of probabilities. In a few limited instances, the burden of proof lies with the Commissioner, but these are the exceptions to the rule.

3.5 THE RULES OF INTERPRETATION

In paragraph 3.2 it was noted that the judiciary (judges) interpret the law. You will already have had experience of this process when you studied the “gross income” definition in section 1 of the Income Tax Act and the “general deduction formula” in the preamble to section 11, section 11(a) and section 23(g). As you will probably be reading case law as part of your literature survey (see later) in carrying out your research, you need to have a basic knowledge of the rules of interpretation.

In relation to the Income Tax Act, it should be noted that it contains two types of provisions:

- those sections which relate to the imposition of taxes, the exemptions from taxes, or the deductions granted - the charging sections; and
- those sections relating to procedures to be followed.

Where there is ambiguity in the charging sections, in theory, they will be interpreted in favour of the taxpayer, or contra fiscum. Exemption provisions, however, are restrictively interpreted. In the case of an ambiguity, the privilege of exemption will be limited (Badenhorst v CIR, 1955(2) SA 207(W), 20 SATC 39).

In the case of procedural sections, an ambiguity will result in a liberal interpretation - in such a way as to give them teeth (Glen Anil Development Corporation Ltd v SIR, 1975(4) SA 715 (A), 37 SATC 319 in relation to section 103(2)).

In the past the interpretation of tax legislation involved a strict literal construction, according to which statutory language was construed literally. Over time this approach was modified and “softened” and the Republic of South Africa Constitution, Act 108 of 1996 and the Bill of Rights lent an impetus to the change as a result of the requirement that the interpretation of legislation must promote the values that underlie an open and democratic society based on human dignity, equality and freedom. In contrast to a strict construction which stresses the literal meaning of the statutory text and resolves ambiguities according to rigid presumptions,
purposive interpretation emphasizes the reasons for which the statutory text was enacted and the objectives at which it aims, and interprets the text in light of these reasons and objectives. This interpretative approach, it is submitted, accords with the requirements of the Constitution and the Bill of Rights.

Read the series of articles by Professor Goldswain, in *Tax Planning*³.

In addition to the approaches to the interpretation of statutes discussed above, the following principles of interpretation should be noted:

- *Iusdem generis rule*: General words following particular and specific words must be restricted to things of the same nature as those specified.

- *Expressio unius est exclusio alterius*: The express mention of one person or thing excludes any other (this rule is to be used with extreme care).

- *Generalia specialibus non derogant*: Specific provisions are unlikely to be subservient to generalities.

- *Audi alteram partem*: The other party must be given the opportunity to make representations.

4. OVERVIEW OF THE MODULE

The outcomes of the module are achieved by integrating the process of writing a research proposal and an understanding of the research process required to write an effective proposal.

The research proposal consists of the following broad components:

- describing WHY the research is being undertaken;
- describing WHAT the research seeks to answer; and
- describing HOW the research is to be carried out.

The following diagram illustrates the process and the required knowledge and skills involved in writing a research proposal. At this stage you must not be concerned about terminology that is foreign to you – it will be explained in detail in the course of the module. The diagram merely serves as a summary that you can refer to when you have worked through the entire module. The diagram also includes a reference to the paragraph number where the detailed discussion can be found.

In the process of writing the research proposal, certain further skills are involved:

- Mastering the art of academic writing
- Structuring a logical argument based on:
  - deductive logic
  - inductive logic
- Learning how to use, acknowledge and reference the work of others

Acknowledgement and referencing is dealt with in a separate module. Structuring an argument using deductive or inductive logic is discussed in section 5.1 below. Certain hints on academic writing can be found in section 8.2.

The relationship between writing the research proposal and the research process can be illustrated as follows:
Each of these outcomes will be dealt with in separate sections of the Module. Although writing a research proposal is the ultimate outcome of the module, this cannot be seen as a separate step in the process, as the understanding of the process of research is interwoven with the writing of the proposal and integrated with it.

The process of research can be described as consisting of three phases:

- discovery – identifying the problem and defining it;
- planning – how the research will be conducted; and
- implementing – doing the research, interpreting the results, writing the report.

The following examples of scientific enquiry in the real world can illustrate the nature of the research process:

“Explorer”

Problem: an island in the ocean which is unmapped but which may yield untold riches or resources
Theory: ships logs of other voyages, existing maps, climate, sea conditions and other known facts
Planning: time, resources, measuring and recording instruments, etc
Journey: getting there, collecting the data, recording and measuring
Outcome: the report, its interpretation, the detailed map.

“Detective”

Problem: the crime
Theory: known facts, study of criminology
Planning: resources and time
Investigate: photographs of the scene, fingerprints, post-mortem, clues, witness interviews
Outcome: interpret the data, solve the crime (maybe), arrest the criminal, write the report.

These examples illustrate that scientific enquiry is based on theory and evidence.

5. LOGIC, THEORY AND THE SCIENTIFIC METHOD

In designing your research, writing your research proposal, carrying out your research and writing your thesis, there are three essential attributes of mind:

• Curiosity – research entails a continuous process of asking why? and then setting about finding the answer. Your curiosity about what is happening in the world around you may help you to find a research topic and even to design an innovative method to carry out your research. Velcro is an example of how curiosity led to an invention we all use today. The inventor of Velcro was walking in the fields and stopped to pull some burrs (blackjacks) out of his socks. He was curious about the structure of the burr that enabled it to cling so tightly to his socks and proceeded to examine the burr. He saw an opportunity for the possible application of the structure of the hooks at the base of the burr in clothing and other practical applications. And Velcro was born.

• Analytical thinking – in reading journal articles while reviewing the literature relevant to your research topic, or in doing your own research, or reflecting on the outcome of your research, you need to analyse and reflect on all the factors and aspects of the research endeavour. Statistical methods are often used to analyse large data sets, but it is then essential that you apply your analytical thinking skills to decide exactly what meaning has been created by the outcome of the statistical analysis. The Concise Oxford English Dictionary describes “analysis” as a “detailed examination of the elements of something; the process of separating something into its constituent elements”.

• Critical thinking – in research we take nothing for granted. The research published in a journal article or another literature source may appear on the face of it to be appropriately designed and carried out to address the research question and the results may appear to be valid. You need to analyse the article critically in a search for flaws in the argument or the design or the interpretation of the results. You need to consider whether

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- the data and results are derived from a sufficiently large number of people, objects or events – if very few people have responded to a questionnaire, can we claim that the data and the results of the questionnaire are valid?
- in the author’s analysis of the results, has he or she considered possible other explanations for what the research revealed? and
- can the results based on the particular situation that was the subject of the research be applied in other situations?

It is only by applying a critical approach to research, that new knowledge can be created. Think of how Einstein’s theories changed what scientists around the world accepted as “truth”. In critically analysing the research of others, you may come up with a topic for your own research.

5.1 LOGIC

A research proposal (and a thesis) is an extended argument based on evidence. Arguments may involve deductive logic or inductive reasoning. These have been described as follows5:

- **Deductive logic** begins with one or more premises, which are statements or assumptions that are self-evident and widely accepted “truths”. Reasoning then proceeds logically from these premises to conclusions that must also be true. Deductive logic is useful for generating hypotheses and testing theories. Consider the following example. I have observed that the third-year taxation students appear to be achieving higher marks for tax than for management accounting and finance (which I lecture). I could start with the premise that the reason why these students get higher marks is the superior lecturing ability of the tax lecturer. I would then pursue the argument that if I, as the management accounting and finance lecturer, adopt the same lecturing technique, the results of these students will improve. I could adopt a more interactive method of lecturing and use PowerPoint slides with numerous examples and illustrations. I could use the new lecturing method with one group and the old lecturing method with a second matched group (the control group) and test the two groups after a number of lectures. If the group receiving the “treatment” achieves higher marks than the control group, my experiment would have supported the premise.

- **Inductive logic (reasoning)** starts with an observation and then specific instances or occurrences are used to draw conclusions about entire classes or objects or events – a sample is observed and then conclusions are drawn about the population from which the sample is selected. Using the same example of students’ results, I have observed the difference in results and proceed to collect data (by administering a questionnaire or interviewing students) on possible reasons for the difference. I may arrive at the conclusion, based on the data, that the superior lecturing technique of the tax lecturer explains the difference in results.

An example of deductive logic in tax is the logical process where the following statement of Lord Cairns in *Partington v The Attorney General*, 21 CT 370, is accepted as a premise:

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5 Leedy & Ormrod. Pages 34 – 35
If the person sought to be taxed comes within the letter of the law, he must be taxed, however great the hardship may appear to the judicial mind to be. On the other hand, if the Crown, seeking to recover the tax, cannot bring the subject within the letter of the law, the subject is free, however apparently within the law the case may otherwise appear to be. In other words if there be an equitable construction, certainly such a construction is not admissible in a taxing statute, where you simply adhere to the words of the statute.

The judge in a subsequent case may examine the facts of the case in the light of this premise and conclude that the decision in the Partington case is applicable to the present case.

An example of inductive reasoning may be where a researcher makes the observation that there appears to be no certainty relating to the capital/revenue quality of an amount. The researcher will gather evidence (case law) and arrive at a theoretical framework against which the capital or revenue nature of an amount of income can be assessed.

5.2 THEORIES AND THEORETICAL FRAMEWORKS OR MODELS

Most research sets out to test a theory (or a theoretical framework or model) developed in earlier research or uses a theory developed in earlier research as the basis for the design of the current research. Different authors describe theory or the development of a theory in similar ways. According to Leedy and Ormrod\(^6\), “[a] theory, in the form of a verbal statement, is offered to explain the phenomenon in question”. Welman, Kruger and Mitchell\(^7\) describe a theory as “a group of logical related statements that is presented as an explanation of a phenomenon”; and \(^8\) as “a system which orders concepts in a way that produces understandings and insights”; . . . “a statement or collection of statements that specify the relationship between variables with a view to explaining phenomena . . . in some or other population”. Bailey\(^9\) states that

Explanations and predictions are provided by theories. Theories attempt to answer the why and how questions. Theorizing can be described as the process of providing explanations or predictions of . . . phenomena, generally by relating the subject of interest . . . to some other phenomenon.

An example may help to explain this. The subject of interest may be tax avoidance. The phenomena to which it is related (the theory explaining why people avoid paying tax) may include income levels, education or tolerance for risk, for example.

Terre Blanche and Durrheim\(^10\) describe the process for the development of theories as follows:

Theories stand for truth when, through a process of falsification, incorrect theories are rejected on the basis of empirical evidence. The process, described as the hypothetico-deductive model of science, is as follows: a theory is used to develop a hypothesis (a deductive process), the hypothesis is tested empirically (observation), then the results are interpreted and the theory adjusted to fit the new facts.

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\(^6\) Leedy & Ormrod. Page 155
\(^8\) Pages 20 – 22.
Theories are therefore the “premises” or “truth” of deductive logic. Examples of theoretical frameworks in tax that can be used to test the data (evidence) are as follows:

- The most well-known theoretical framework in tax is Adam Smith’s canons of taxation described in his *Wealth of Nations*:
  - Equity: The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their abilities; that is, in proportion to the revenue which they enjoy under the protection of the state (refer to the gradated scale of tax for individuals and capital gains tax).
  - Certainty: The tax that every individual is bound to pay ought to be certain, and not arbitrary. The time of payment, the manner of payment, the amount to be paid, ought all to be clear and plain to the contributor, and to every other person (this relates to the importance of tax amendments not being applied retrospectively).
  - Convenience: Every tax ought to be levied at the time, or in the manner in which it is most likely to be convenient for the contributor to pay it (provisional tax and employees’ tax are designed for this purpose).
  - Economy: Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible, over and above what it brings into the public treasury of the state (the need for an efficient and economical South African Revenue Services).

In the modern context, these maxims may be interpreted in terms of the broader principles of social justice, which demand that taxes should not only be equitable in the sense of impartiality, the ability to pay and the equity of sacrifice, but should be designed to reduce economic inequalities, that is, to redistribute wealth\(^{11}\).

- In research in taxation, the theory or framework on which the research is based is usually developed from legislation and case law. A theory or framework can also be identified or developed from the broader literature survey. A researcher may, for example, perform a literature review on tax compliance risk and the management of the risk and arrive at a theoretical framework designed to measure the exposure of a particular organisation to the risk.

Theories are more prevalent in areas of commercial research, other than taxation. Where taxation research interfaces with social research, theories or frameworks are more critical.

The logic on which your research is based and the theoretical framework you adopt for your research dictates how you will design your research. Starting with a theory (derived from your literature survey), you will gather evidence (data) to support the theory and reach a conclusion as to the validity of the theory (deductive logic), or you could begin with an observation, gather the evidence and arrive at a theory (inductive reasoning).

### 5.3 THE SCIENTIFIC METHOD

The scientific method has been described as\(^{12}\)

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\(^{12}\) Leedy & Ormrod. Page 36.
A means whereby insight into the unknown is sought by (a) identifying a problem that defines the goal of one’s quest, (b) positing a hypothesis that, if confirmed, resolves the problem, (c) gathering data relevant to the hypothesis, and (d) analysing and interpreting the data to see whether they support the hypothesis and resolve the question that initiated the research.

You will see as you progress through the module that the scientific method describes exactly the nature of the research process.

6. THE RESEARCH HYPOTHESIS OR QUESTION

The first step in writing a research proposal is to identify a suitable research topic. The research topic will then be refined into a research hypothesis or hypotheses or a research question or questions. An appropriate research hypothesis or question needs to satisfy two criteria:

- the research must be relevant;
- the research must be achievable; and
- the research must be actionable; there is little point in carrying out research that cannot be applied in practice.

6.1 RELEVANT RESEARCH

To decide whether the research is relevant you need to understand what is meant by research. Leedy and Ormrod\textsuperscript{13} describe research as follows:

[Research is] the systematic process of collecting and analyzing information (data) in order to increase our understanding of the phenomenon about which we are concerned or interested. Also, we expect to communicate what we discover to the larger scientific community.

and:

The ultimate goal of research itself: to derive conclusions from a body of data and discover what was hitherto unknown.

The authors also discuss what research is \textbf{not}. It is:

- not mere information-gathering;
- not transporting facts from one location to another (without \textit{interpretation}) – thus not simply looking up facts and transferring them to a written paper;
- not merely “rummaging” for information;
- not a catchword to get attention (as in advertising).

Research has also been described as a process involving discovery, interpretation and \textbf{communication}, stressing the need for researchers to publish their work in theses and journal articles. As has been indicated above, the essential attributes of mind that you must bring to research are curiosity, and analytical and critical thinking.

The following is an illustration of what is and is not research:

**Stage 1:** I am interested in the taxation of groups of companies. I have identified a potential research interest.

**Stage 2:** How are groups of companies taxed in South Africa? I have not yet identified a topic, but I am narrowing down the area of interest. If I proceeded to carry out the research at this stage, I would simply be gathering information (data).

**Stage 3:** What tax problems do groups of companies have in South Africa? Now I have a research topic, but not yet a research question. If I were to carry out the research at this stage, I would be interpreting data according to certain criteria. This is not yet research as it will yield no new insights or knowledge.

**Stage 4:** What tax changes are required to ensure tax neutrality for groups of companies in South Africa? This is a research question and is a combination of stages 1, 2 and 3, but takes it further:

- I could identify an international model for the taxation of groups of companies; and
- adapt the model to the South African tax regime.

This is research: it involves interpretation and creates new knowledge.

The defining attributes of research are therefore:

- it starts with a problem;
- there is a clear articulation of a goal;
- it is carried out according to a plan or procedure;
- it involves the collection and interpretation of data in an attempt to resolve the problem; and
- it requires the communication of our findings in an appropriate manner to a wider audience.

Certain authors discuss a number of other attributes that characterize high quality research that were not raised in defining research earlier in this section. Is it based on the work of others? As will be explained in the discussion of the literature review, finding a niche for your research means that your research is based on the work of others, expanding on or refining it. Can it be replicated? Is it generalisable to other settings? These aspects are discussed later in the module when the validity and reliability of research is discussed. Is it based on some logical rationale and tied to theory? The role of theory has been discussed above and will be referred to at various points in the module. Is it an apolitical activity undertaken for the betterment of society? This will also be referred to when the need to justify the importance of your research in the research proposal is discussed.

### 6.2 ACHIEVABLE RESEARCH

The question whether your proposed research is achievable must be carefully considered right at the start of the research process. One of the requirements of half or full theses at master’s
degree level is that the student selects a research project that falls within the prescribed scope (number of words or pages). Other aspects are also important. There are many recorded instances of research disasters where the achievability of the research project has not been considered – master’s degree candidates have been known to work on their theses for ten years and students have frequently planned their research without taking into account potential problems such as the accessibility of documents or people to interview, the lack of funds, the time and distance and failure to be granted permission by some authority to carry out the research.

Aspects which relate to the achievability of your research include the following:

- the time needed to complete and write up the research – universities prescribe a maximum time for the completion of your thesis;
- the funds needed to collect the data – this includes the availability of outside funding, scholarships or grants;
- logistical problems involved – travelling to distant field sites to carry out the research, accommodation at these sites, internet access, etc.;
- the accessibility of data – rare documents in archives or private collections may not be available, data in the possession of authorities may be withheld, participants may refuse to be interviewed, access to field sites may not be granted, etc.;
- unavailability of data – you may assume that certain data such as statistical records are in existence, but they may not be;
- permission to conduct the research – authorities such as public institutions, the police or prison services, companies or other institutions may refuse permission for the research to be carried out using certain data, staff or field sites;
- ability to carry out the research – certain types of research require particular skills, for example, quantitative methods involve the use of statistics or econometric methods and qualitative methods involve the sophisticated use of language and communication skills; and
- ethical considerations – permission may be refused to carry out research involving children or other vulnerable participants, the use of research methods that could cause harm to the participants or the communication of sensitive or damaging results.

Therefore, careful planning is required to prevent problems that may undermine your planned research.

6.3 IDENTIFYING A TOPIC FOR RESEARCH

Some research students are in the lucky position that they come to the research process with a topic that they want to research. Most of us embark on the research process having no idea what we want to research. In some instances (and this is common in the natural sciences) supervisors will provide candidates with topics, but this is seldom the case. In any event, one of the requirements of the National Qualifications Framework is that at master’s degree level, the candidate is able to identify a suitable research topic.

How do you find a topic to research? There are various ways in which this can be done:

- you may identify a practical problem in the workplace – for example, one student employed by a financial services provider wrote a half thesis on the impact of the new
dividends tax on the systems, staff, documentation and costs for financial intermediaries and how this could be planned for;

- you may have a specific area of research that you are interested in – for example, one student whose parents had been through a traumatic divorce wrote a half thesis on the tax implications and other consequences of marriage and divorce; or
- by reading research carried out by others – this is the most common way in which research ideas are generated as research reported in journal articles and theses generally identifies areas for potential future research or you may identify gaps in the existing research that you can focus on for your research.

The third method for identifying research possibilities referred to above is the most common. Examples of such research opportunities include replicating existing research in another setting, for example, research that has been done on listed companies in America that can be done using South African listed companies, research that has been done abroad on tax compliance costs for small business that can be done using South African small businesses, etc. Identifying a gap in existing research is also a common way to find a research topic, for example, one researcher was interested in environmental research and after extensive reading found that no research had been done on the impact of the levy on plastic bags. The world around us is full of ideas – just look around!

Research problems may relate to:

- people – educational and social issues – learning or motivation;
- things – natural sciences research;
- records – documents of various kinds – for example, financial statements, minutes of meetings, etc.;
- thoughts and ideas – opinions, viewpoints, perceptions, beliefs; or
- dynamics and energy – human energy and activity, metabolism, quantum mechanics, etc.

In your research the units of analysis would probably be restricted to people, records, thoughts and ideas.

### 6.4 NARROWING THE RESEARCH TOPIC DOWN TO A SPECIFIC RESEARCH PROBLEM

As you would have realized by now, you need to narrow the broad research topic down to a more focused research problem. The way that this is done is by reading research literature. This is referred to as a literature survey. By reading journal articles and theses, you identify the gap in existing knowledge or the niche into which you can position your research. The process of narrowing the topic down to a specific problem can be illustrated by the image of a funnel:
6.5 THE LITERATURE SURVEY AND THE LITERATURE REVIEW

Every article, paper or thesis must be positioned within the body of knowledge relating to the research topic. In order to do this, the existing literature must be reviewed. The extent of the literature review depends on whether you are writing an article for a refereed journal, a paper to be presented at a conference or a master’s or doctoral thesis. There are theses which consist only of an exhaustive literature review.

The terms literature survey and literature review are often used interchangeably, but a literature survey is simply what the name infers, a survey of what has been written on your particular topic. Once you have a clear idea of the “body of knowledge” on your research topic, this needs to be written up in the form of a review of the literature.

A literature survey is an exhaustive survey of the relevant literature for a specific purpose.

We carry out a literature survey for a number of reasons in addition to narrowing the research topic down into a specific research problem. The functions of a literature survey are as follows:

- to identify a research topic;
- to find out what other research has been done in the field;
- to refine our research topic into a specific problem that can be expressed in the form of a working hypothesis or question;
- to identify a possible theoretical framework or model on which to base our research; and
- to justify the importance of our research in the research proposal.

Using published literature to identify a research topic has been discussed above, as has using the literature to narrow down the research topic to a specific research problem. We also need to find out what research has been done in the field for another reason: we must make sure that we are not duplicating the work of others, as an important requirement of research is that we add (however modestly) to the existing body of knowledge. Another important reason why we carry out a literature survey is to identify a possible theoretical framework or model on which to base our research. Finally, when we write our research proposal, we need to justify the importance of our research – WHY we are doing the research – and the literature survey will assist us to do this.

6.6 CARRYING OUT A LITERATURE SURVEY

How do we perform a literature survey? Where do we start? There are two basic approaches to performing a literature survey:

The first method involves searching all the relevant data bases at your university library and through them, other libraries. These data bases are usually electronic data bases, but in some
instances may still be in the form of card indices. By using key words relating to your topic, you would be able to identify relevant literature. The problem is that you often find so many possible data items, that it becomes extremely time consuming to weed them out. This is particularly the case if you use popular search engines, such as “Scholar Google”. The academic value of some of this material is also questionable.

In more detail, a literature survey entails the following steps:

- access a search engine or an online data base;
- specify a subject area, for example, South African tax;
- identify key words, for example, normal tax, value-added tax, international tax;
- specify a time period, for example, five years;
- select the type of publication, for example, a journal;
- read all relevant articles, recording the sections of the article relevant to your research and full reference details to enable you to compile your reference list or bibliography;
- file the information electronically or in hard copy; and
- back the information up in more than one place to avoid the loss of all your hard work.

The second method entails scanning recent editions of relevant journals to find an article relating to your research topic. Once you have identified one relevant article, the bibliography provided at the end of the article will identify further relevant material. Accessing this material will enable you to judge its relevance and will also be the source of further bibliographies. Continuing in this fashion, you will soon find that authors are citing the same important sources and you will have exhausted the relevant literature. The advantage of this method is that you are able to identify the most authoritative writers in your field of interest, as they will be the most frequently cited. The process is completed by carrying out the last two steps:

- read all relevant articles, recording the sections of the article relevant to your research and full reference details to enable you to compile your reference list or bibliography; and
- file the information electronically or in hard copy.

You will often use a combination of the two methods.

6.7 THE LITERATURE REVIEW

Once you have carried out your literature search and identified all the relevant literature, the next step is to write a review of the literature. The literature search would probably be carried out in several stages. The first would be to enable you to get enough information to write the first part of your research proposal. This would have to be expanded for the purpose of writing the literature review chapter of your thesis (which would be far more detailed than the proposal). In both the research proposal and the literature chapter the literature review is not simply a record of existing research, it is a critical comparative review of the literature.

A literature review is a structured discussion from a critical and comparative perspective of the important research relevant to your research topic.
In the research proposal, the literature review must achieve the following goals:

- demonstrate your familiarity with the most important research in the field;
- identify a theory, framework or model on which your research will be based or which your research will test;
- indicate the gap or niche in existing research that your research aims to fill; and
- justify your research – demonstrate the importance of your research.

Your literature review starts from a very broad basis and gradually narrows down, becoming more specific to your topic and usually culminates in a very broad research problem – much like the funnel referred to above. You may wish to start with a historical overview, discussing the development of research in the field. You would also explore the theory underlying the research and the definitions of the main terms used in the field of research. You would then critically evaluate existing research, contrasting and comparing different approaches, points of view or findings, and theoretical bases. Your research may take a particular view on these or challenge certain findings, which you will discuss, and you will indicate the place your research occupies in the general body of knowledge. A well-written literature review is infused with the mind of the researcher.

The literature review which forms part of your research proposal should not be too long (between five and ten pages) and should summarise the main points. In writing a master’s thesis, the literature review would not be as extensive or as wide-ranging as for a doctoral thesis. It may form part of the first chapter of the thesis, or may occupy a chapter of its own. In a doctoral thesis, the literature review is detailed and wide-ranging and occupies its own chapter, or substantial sections of several chapters.

A well-written literature review is critically important to the success of your research and is also a valuable source of information for other researchers.

Read: Practical research, Chapter 2, pages 16 to 22 – Tools of research – and Chapter 4 – The reviewing of the related literature.

6.8 FORMULATING THE RESEARCH HYPOTHESIS(ES) OR QUESTION(S)

You have now carried out the literature survey and should be in the position to give a broad description of the research problem that you plan to address. The problem must be set out concisely, but clearly. The research problem must now be translated into a formal research hypothesis(es) or question(s). Before you do this, in your research proposal you will need to:

- state the research goals; and
- state the purpose of the research.

The goals of your research set out WHAT you aim to do. Usually a main research goal is stated, followed by the sub-goals relevant to achieving the main goal of the research. There must be a clear link between the title of the thesis, the research problem and the research goals. Do not, in setting out your goals, confuse research goals with research methods. For example, if your goal is to investigate the reason why taxpayers avoid paying tax, the fact that you plan to send out a questionnaire is not a goal, but the method by which you will achieve the goal. As a literature survey forms part of every journal article, research project or thesis, to state that carrying out a literature survey is one of your goals would also be incorrect. If you have
chosen the research topic and problem in such a way that you ensure that the scope of your research is appropriate, the goals will also be realistic and achievable.

Stating the purpose of the research explains WHY you are doing the research. You need to state clearly what the purpose of your research is – the reason why you are carrying out the research. This is based on the research problem. For example, the purpose of the research may be to bring certainty to an area of study where uncertainty exists, to develop a model for future use in solving a problem, to test a theory in a context where it has not been tested, to attempt to solve a practical problem, to bring a new perspective to a field of research, etc.

Once you have set out the goals and purpose of the research, the research problem and goals must be translated into a research hypothesis(es) or question with, possibly, sub-questions. Research hypotheses are usually used in quantitative research methods and questions in qualitative methods. The research hypotheses or questions must be designed to address all the variables relating to the problem and achieve all the goals of the research.

Variables

Variables in research will be discussed later in the module in the section dealing with the design of the research and the research hypotheses explained in the same section, but at this stage you need to have a basic idea what research variables are. Consider the following research problem:

I am a lecturer presenting the Management Accounting and Finance course at third-year level at a certain residential university. I have noted that over a number of years the final results of third-year students studying Taxation have been much higher than the marks for my course. I need to find out why this is so, in order to take steps to improve the results of the students on the Management Accounting and Finance course.

List all the variables that you can think of, that may be involved in explaining the difference in students’ results. Which variables are dependent and which are independent variables?

Refer to the footnote\textsuperscript{14} for a list of some of the possible variables and their categorization as independent or dependent.

\textsuperscript{14} Possible variables include:
- the quality of the textbooks;
- the quality of the lecture material;
- the quality of the lectures;
- the standard of the course;
- the equivalence of the standard of difficulty of the assessment (tests and examinations);
- the knowledge of the lecturer;
- the lecturer’s communication abilities;
- the lecturer’s availability for consultations;
- the time of day and the day of the week when lectures are presented;
- the nature of the cognitive process involved – more memorisation or more logical reasoning;
- etc.

The only dependent variable is the students’ results. All the other variables are independent variables that may or may not have an influence on the dependent variable.
We will return to this imaginary research later in the module and use it to demonstrate a number of research principles.

6.9 CONCLUDING COMMENTS

At this stage, you will be in a position to write the first two sections of the research proposal:

![Diagram](describewhytheresearchisbeingundertaken)

DESCRIBE WHY THE RESEARCH IS BEING UNDERTAKEN

- Identify a suitable research topic
- Conduct a literature survey
- Using the literature survey, refine the broad research topic into a research hypothesis(es), question(s) or problem(s) that is relevant and achievable

![Diagram](describewhatthelanguageseekstoadver)

DESCRIBE WHAT THE RESEARCH SEEKS TO ANSWER

- Articulate the problem statement
- Specify the goals of the research
- State the purpose of the research
- Set out the research question(s) or hypothesis(es) the research will answer or confirm

7. DESIGNING THE RESEARCH

In order to address the final phase of writing your research proposal – designing your research – you will have to understand and be able to apply a number of principles of research. This was illustrated in the diagram in the overview to this module and is repeated below:

![Diagram](designingtheresearch)

- Decide on a suitable research methodology
- Design the research process, including the following:
  - specify the data to be collected
  - determine the method of collection and measurement of the data
  - determine the method of analysing the data
  - specify the ethical considerations to be addressed and the way in which this will be done
- Provide an overview of what will be covered in each chapter of the thesis

Acquire a broad understanding of the various research methodologies, their ontology and epistemology

Understand the various data collection methods, including:
- Questionnaires
- Interviews
- Observations
- Experiments
- Documents

Understand the two broad methods of data analysis:
- Quantitative
- Qualitative

Each of these components is discussed below.
7.1 RESEARCH METHODOLOGY

At this stage, before you start designing your research, we need to engage in a philosophical discussion of the research paradigms and orientations that underpin the various research methodologies. A basic knowledge of paradigms and orientations is necessary as they will influence the design of your research. You will find that different writers describe and define the various research paradigms and their associated orientations differently. Before summarising some of the approaches, examples are presented below to assist you to understand the paradigms, before discussing the definitions relating to each of the paradigms.

7.1.1 Examples of research approaches

**Positivist, post-positivist or empirical research**

Imagine that you are trying to prove that water boils at 100 degrees centigrade at sea level. It is clear that your research will be based on a belief that there is a universal “law” or principle governing the temperature at which water boils and that this is an observable fact. There are, however, other independent variables that may influence the temperature (the dependent variable) besides the application of heat to the water. For example, impurities in the water could influence the boiling point of the water or weather conditions (atmospheric highs and lows) could slightly alter the atmospheric pressure at sea level. The researcher would seek to control these other variables by conducting the experiment in the laboratory instead of in the field at sea level. He or she would ensure that the water is distilled and the pressure is exactly correct. From this it is clear that any other researcher carrying on the same research under exactly the same conditions would arrive at the same result. Thus the researcher is objective and detached – his or her presence will have no influence on the results.

It is possible to carry out research in taxation (or any of the accounting disciplines) within an empirical paradigm. Questionnaires are one example of this type of research. Imagine that you want to do research on leadership. Your research may be based on a belief that there is such a thing as an “ideal” leader – that is, that there is a universal “truth” and that this truth can be discovered. You have carried out an extensive literature survey and have synthesised this into a “model” of an ideal leader by identifying all the attributes of such a leader – this will be the theory underpinning your research. You then construct a measuring instrument – a questionnaire – to test your model. The questionnaire will include questions on all of the possible attributes that you have identified. The questionnaire will be administered remotely by post (the researcher cannot influence the responses) to a randomly selected representative sample of the population you have selected for your study (sampling techniques for the various research methodologies are discussed later in the module), the responses will be coded using numbers or other symbols and analysed using statistics. All of the independent variables that may influence the quality of leadership (which is the dependent variable) have been controlled by incorporating them into the questionnaire. The research can be replicated by any other researcher using the same methods and if the research is carried out correctly, the results of your study will represent the views of (can be generalised to) the entire population from which you have selected your sample.

**Interpretative research**

The same research (leadership) can be based on a belief that there is no universal “good leader”, but that the attributes of a good leader depend on the society in which leadership is exercised – a different type of leader may be successful in a Western, Eastern or African
culture, or a good business leader is not necessarily the same as a good university leader or community leader. A good leader is therefore created through shared cultural and social practices and a shared belief system and there are multiple understandings of what good leadership is. Again you have carried out the literature survey and have identified possible attributes of a good leader. You plan to carry out your research by way of interviews and you define a population that you are interested in (for example lecturers, students and administrative staff at a certain university). You proceed to select a number of participants who are representative of all the members of the population (but not by random selection) and proceed to interview them. You ask questions which test the attributes your literature survey has identified, but allow interviewees to express their opinions freely and add other attributes that they consider to be important. It is clear that in this type of research, you are seeking to understand and interpret. You are not necessarily objective and detached in the sense that simply by asking the type of questions that you ask and your follow-up questions you may influence the responses. The results of your research could also not be generalised to the whole population as you have not selected the participants randomly and the fact that they can express their own opinions means that if you had selected other participants they may have had different opinions. Another researcher carrying out similar research may not reach the same conclusions as you have done as his or her participants may raise different attributes of leadership and may respond differently to the questions he or she raises.

**Critical research**

The research on leadership could also be approached from a critical perspective. You may believe that the leadership structures at a university are a construct of history (possibly the influence of “apartheid” on power structures in a university) and you may wish to uncover these underlying power structures with a view to emancipating the university community (liberating the community from the inappropriate power structures by revealing them for what they are). You could carry out this research in several ways. First you would need to study the origins and development of the university system and analyse it from a political perspective, using a sceptical (suspicious) approach. You may then use the results of this part of the research to inform and emancipate the university community using a participative approach (where the researcher and the community work together to bring about change). Again the researcher is not an objective observer and interacts with the university community. The aim of the research is not simply to understand, but to effect change. The results cannot be generalised to all universities, as leadership structures and cultures may differ from university to university.

**Post structural research**

An example of this type of research is a study that was carried out on children’s story books to try to demonstrate how children are socialised into the “appropriate” male/female roles in society. The discourses revealed by both the stories and the illustrations were closely analysed. This type of research illustrates how worlds can be created through language.

There are a number of examples of how words and images can construct world views. Just think about advertisements with sexy girls, the newspaper reporting of Muslim society after the world trade centre attack and the portrayal of other population groups in “apartheid” South Africa. Our perceptions are formed by these discourses and we are often not aware that we view the world through a particular lens.
### 7.1.2 Research paradigms - definitions and summaries

From the examples above, we can now consider the definitions of the terminology used to describe the approach adopted for the various types of research.

**Paradigm:** A paradigm is a basic belief system based on ontological, epistemological and methodological **assumptions**.

**Ontology:** Ontology relates to a “world view” and in particular the answer to the question: what is the form and **nature of reality**?

**Epistemology:** Epistemology is the **theory of knowledge**, providing the answer to the question: what is the relationship between the knower (the researcher, in our case) and what can be known?

**Methodology:** Methodology relates to the question: how can the enquirer go about finding out whatever he or she believes can be known?

The paradigms are usually divided into two categories and described by various writers as follows:

- First category: Positivist or post positivist or empirical; and
- Second category: Non-empirical or interpretative.

The non-empirical category is often split into a number of sub-categories, including:

<table>
<thead>
<tr>
<th>Interpretative</th>
<th>Constructivist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

Some authors split the non-empirical paradigm even further, as follows:

<table>
<thead>
<tr>
<th>Interpretative</th>
<th>Critical</th>
<th>Deconstructive/ post-structural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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</table>

The ontology, epistemology and methodology, as well as other information relating to the various paradigms is summarised below. If you refer back to the practical research examples described above, you will be able to recognise the attributes summarised in the tables below.
### Positivist / post-positivist / empirical

<table>
<thead>
<tr>
<th><strong>Ontology:</strong></th>
<th>Assumes a stable external reality which is “out there” and is rational and observable – “law”-like.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epistemology:</strong></td>
<td>The truth can be discovered by an objective, detached observer.</td>
</tr>
<tr>
<td><strong>Methodology:</strong></td>
<td>Empirical, quasi-experimental, hypothesis-testing, quantitative (numbers). The methodology is described in detail later in the module.</td>
</tr>
</tbody>
</table>

In general, the field of interest is technical, investigating cause and effect, the research has the purpose of controlling variables; results can be generalised and may have predictive capacity.

### Interpretative

<table>
<thead>
<tr>
<th><strong>Ontology:</strong></th>
<th>an internal reality of shared experience, “truth” is a process of agreement; reality is a construct of the human mind, created through shared cultural and social practices and a shared belief system. Multiple realities (understandings) are created.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epistemology:</strong></td>
<td>Observer inter-subjectivity, empathetic, observer closeness to the subject may affect what is observed (that is, it is not necessarily objective).</td>
</tr>
<tr>
<td><strong>Methodology:</strong></td>
<td>interactive, interpretative and qualitative.</td>
</tr>
</tbody>
</table>

The field of interest is practical (practices), with the main purpose being to understand. Research findings are usually specific and unique and cannot be generalised. It is sometimes said to be suitable for hypothesis generation (identifying research questions or theories).

### Critical

<table>
<thead>
<tr>
<th><strong>Ontology:</strong></th>
<th>Truth is teleological (inherent in history), a socially constructed reality.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epistemology:</strong></td>
<td>Observer-constructed versions, suspicious, political.</td>
</tr>
<tr>
<td><strong>Methodology:</strong></td>
<td>Deconstruction and textual analysis.</td>
</tr>
</tbody>
</table>

The purpose of the research is usually to emancipate (liberate). Research is participatory, identifying an ideology and the stripping away of “false consciousness”. The research orientation had its origins in Marxism.
Post-structural

<table>
<thead>
<tr>
<th><strong>Ontology:</strong></th>
<th>Worlds are created through language, through discourses; plural, shifting realities.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Epistemology:</strong></td>
<td>Transactional/subjective, created findings.</td>
</tr>
<tr>
<td><strong>Methodology:</strong></td>
<td>Discourse analysis.</td>
</tr>
<tr>
<td>The research identifies and analyses discourses.</td>
<td></td>
</tr>
</tbody>
</table>

In designing your research you would need to identify the nature of the “truth” that you wish to uncover (the ontology) as well as the relationship between you, the researcher, and what can be known – for example, an objective observer or an interactive, subjective and possibly critical participant in the research process (the epistemology), in order to select the appropriate methods to be applied in carrying out your research (the methodology).

The above analysis has been based on a combination of various readings.15

Research textbooks discuss other types of research orientations. You may encounter reference to both constructionist and constructivist research orientations. Constructionist theory recognises multiple realities and the belief that all understanding is relative – the example of leadership in different social contexts and cultures illustrates this – while constructivist theory believes that there is a real world “out there” that can be studied – for example there are certain enduring social structures that will be present in any social context or structure. One of the newer theories that has been described (Bhaskar: 1979) is critical realism which is based on the belief that reality is made up of distinct layers – the “real” which is relatively enduring and exists in both the natural and social world, the “actual” which changes depending on historical and social contexts and the “empirical” which is experienced or observed by our senses. A mixed methodology consisting of both empirical and non-empirical research is often suitable for business studies.

15 The analysis was prepared from:

- Lecture notes prepared by the Faculty of Education at Rhodes University for the Research Methodology course presented in 2001.
The methodologies adopted for research can be broadly divided into:

- quantitative – applicable to the empirical research paradigm; and
- qualitative – applicable to non-empirical research paradigms.

Read: *Practical research*, Chapter 1.

### 7.1.3 Legal research

The research orientations and studies described above are encountered in social research. It is not inconceivable that you may conduct your research in taxation from a social perspective. An example of such research is a doctoral study (Oberholzer: 2008) carried out to analyse the perceptions of taxation of members of the various population groups in South Africa and their propensity to evade or avoid paying tax. The research was based on a theoretical model identified through a literature survey of other research carried out, which identified the attitudes of people towards paying tax and the reasons why people might evade paying tax. The model was then translated into a questionnaire which was administered to a selected sample of the various population groups. The results were coded and then analysed using statistics. Clearly, this type of study lies in the field of both pure tax research and social research and is situated within an empirical paradigm.

Many of you, however, will do your research in the area of legal interpretative research. The field of legal research can be divided into two main categories:

- doctrinal research; and
- fundamental research, which is research designed to secure a deeper understanding of law as a social phenomenon, including research on the historical, linguistic, economic, social or political implications of law. Fundamental legal research falls into the category of social research and the methodologies described above would apply to this type of research.

**Doctrinal research** can be described (McKerchar: 2008) as a research methodology which provides a systematic exposition of the rules governing a particular legal category, analyses the relationship between rules, explains areas of difficulty and, perhaps, predicts future developments. This is sometimes referred to as “black letter” law, as it is based purely on documentary data. Comparative law, which compares the legal systems of different countries and possibly also a comparative analysis of the law over time, falls into this research methodology.

Also falling into the category of doctrinal research are the following:

- reform oriented research, which intensively evaluates the adequacy of existing rules and recommends changes to any rules found wanting; and
- theoretical research which focuses on a more complete understanding of the conceptual bases of legal principles and of the combined effects of a range of rules and procedures that touch on a particular area of activity.

In carrying out doctrinal research, the research methodology comprises the application of logic
(either inductive or deductive logic) to documentary evidence in a rigorous analysis of the principles of the particular area of law relating to the research question.

7.1.4 Research methodology – conclusion

Different authors describe research in different ways and analyse the types of research in different ways. If the theme of the relationship between poverty and crime is used, some of the types of research methodologies described include:

Exploratory - Levels of crime in SA: the research will explore possible reasons for the levels of crime, for example poverty, inadequate policing, etc.

Descriptive - Describe the situation in SA: the research would simply attempt to describe aspects such as poverty levels, present policing capacity, the types of crime, etc.

Explanatory - Explain the impact of poverty or inadequate policing on crime levels.

Applied - Trying to assist in solving the problem: the research will investigate ways of alleviating poverty or “beefing up” policing.

Fundamental (in contrast to applied) - researching the profile of, for example, a serial rapist.

Quantitative - counting or measuring crimes, the number of police per capita the population, or the resources available to the police.

Qualitative - Investigating the causes of crime by interviewing police, criminals, or members of the community in order to describe or identify underlying causes.

Action research: setting up community-policing units and evaluating their effectiveness.

Discourse analysis: analysing the way the media reports crime.

A case study: investigating the impact of an intervention to reduce crime in a single community (for example the introduction of a neighbourhood watch).

In designing your research, the preceding discussion will enable you to decide what methodology you will apply in carrying out your research.

The decision relating to research methodology is crucial to your research. It determines the methods to apply and how you will collect, measure and interpret your data. The research questions or hypotheses, the methodology and the methods must all form a congruent whole.

7.2 ETHICS IN RESEARCH

Before proceeding with the design of your research there are ethical considerations to be addressed. There are a number of aspects that need to be considered and ethical implications are particularly important where living beings are the units of analysis:

- Protection from harm: most research involving living beings will involve some measure
of potential harm or distress. Think of research involving animal testing or medical research involving testing on humans (including the ethical dilemma of using placebos for a control group of individuals who are seriously ill). Although research in the accounting or taxation fields is unlikely to be physically harmful, it could involve other types of distress. Imagine doing research on tax evasion and avoidance – this could cause anxiety, embarrassment or fear. Steps would have to be taken to protect participants from harm.

• Informed consent: participants in any research project must be clearly informed about the nature of the research, the potential for harm, how the raw data will be used and how it will be protected from third parties and must give their written consent (or the consent of parents or guardians must be obtained). The use of deception in carrying out research is only permissible under very limited circumstances and only when the study cannot be conducted meaningfully without it.

• The right to privacy and confidentiality: participants must be assured that their privacy will be protected and how this will be done and that their responses will be treated as confidential, and this must be strictly adhered to.

• The right of a participant to withdraw at any stage: participants must be informed of their right to withdraw from the research project at any stage.

• Internal review boards or committees assessing research proposals will ensure that the ethical requirements have been complied with.

• Professional codes of ethics: in many disciplines such as medicine and psychology, ethical codes are prescribed.

Honesty with one’s professional colleagues is of paramount importance. Where the work of another is used or consulted, this must be fully acknowledged to prevent deliberate or inadvertent plagiarism.

The essential ethical attributes of any researcher are academic honesty, integrity and modesty.

Read: Practical Research, pages 107 to 110 – Ethical issues in research.

7.3 DATA AND THE COLLECTION AND MEASUREMENT OF DATA

At this stage you will have decided on:

• the units of analysis to which your research will be applied – these may be documents, people, incidents, etc.;
• the theory that you want to test or the framework or model that will inform your research – you would have established this in carrying out your literature survey; and
• you will have a general idea of the data you wish to collect, measure and analyse.

Data are pieces of information that any particular situation gives to the observer; these may be the data extracted from documents, the responses to questionnaires, the outcome of interviews, the observations made while observing participants or the outcome of tests applied to participants in a study. You must recognise certain characteristics of data. Data
may be transient, volatile and ever-changing. If you are interviewing people in a particular
eighbourhood about the levels of crime at one point in time, a week later their responses
may change due to an incident of violent crime. Accident statistics change from moment to
moment, political opinions may change over time, depending on the performance of the party
in power. People’s attitudes to tax avoidance may be influenced by reports of a widespread
tax avoidance scheme that has cost the fiscus millions of rand in tax revenue. The fact that
data are only “true’ at a particular time must be acknowledged in your research when drawing
your conclusions.

Data may consist of primary data or secondary data, and caution must be used in placing
reliance on secondary data. If you observe an accident, your observation is primary data,
whereas an account of an accident in the local paper is secondary data. Primary data in
relation to legal research would be represented by statutes (for example the tax acts) and
those judgements of the courts which are binding (judgements of the Supreme Court of
Appeal, for example). Secondary data would be the interpretations of scholars on the
application of the provisions of the acts, obiter dicta in court decisions and Interpretation
Notes and other interpretations by the South African Revenue Services on aspects of the
taxing acts. Therefore, when relying on secondary data in legal research, it is important to give
the greatest weight to the work of recognised experts in the field.

Read: Practical Research, pages 94 to 97 – The data: their nature and role in
research.

7.3.1 DEFINING THE DATA TO BE COLLECTED

You will recall that research is a systematic process and therefore data cannot be collected at
random (a fishing expedition), everything should be carefully planned. Research should be
replicable under precisely the same conditions. The criteria for the admissibility of data must
therefore be stipulated clearly and adhered to stringently. This is also essential in order to
ensure the validity of the research outcomes. Data may be incomplete, biased (bias is
discussed below), or confounded with other data. Data are therefore restricted, limiting
them by stipulating criteria for admissibility; defining or standardising the data.

Restricting the admissibility of data is closely linked to defining exactly what will be researched
and setting out critical assumptions underpinning the research. It is also linked to restricting
the scope of the research. Using the example of research on qualities of leadership, the
researcher would have to define clearly what leadership means for the particular research
project and the context in which the research will apply. Using the example of the
investigation into why students get higher marks for tax than for management accounting
and finance, the researcher may make assumptions about certain of the variables, for example
that because the textbooks for both subjects are prescribed by most universities, the quality is
equivalent, that because the syllabi for both subjects are prescribed by the South African
Institute of Chartered Accountants, the work load is equivalent and that because examination
papers are evaluated by fellow academics from other universities, the levels of difficulty of
examinations are equivalent. These variables will therefore be assumed to be constant for
the purposes of the research. Other examples of critical assumptions include the assumption
that investors are rational decision-makers (in research on financial markets), that the
objective of a company is to maximise the return to shareholders (also in research in the field
of finance) and that tax evaders use a cost/benefit analysis to weigh up whether or not to
evade tax.
Carrying out research on a particular concept (such as leadership, boredom, aggression, etc.), will involve performing a conceptual analysis in order to set the criteria for the admissibility of data. Whole theses have been devoted to analysing the concept of tax avoidance.

### 7.3.2 PERFORMING A CONCEPTUAL ANALYSIS

A practical example will illustrate how a conceptual analysis is carried out. Imagine that you are doing research on “tax compliance costs for small businesses”. Clearly there is more than one concept involved. Firstly, it would be necessary to define what taxes your research will include. Will you include income tax and value-added tax only, or will you include unemployment insurance and other levies?

Then you need to define what you mean by a “small business” – would this be defined by the turnover, the net value of the assets, the number of employees? Various bodies have defined small businesses in different ways, for example small business corporations and micro business in terms of the Income Tax Act.

Then “compliance costs” must be defined. Are you referring to the taxpayer costs or will the research include the South African Revenue Services (SARS) costs? Do compliance costs include the actual tax liability (income tax as assessed)? Do you include only the costs of expert professional assistance? Is that part of the audit fee relating to verifying the provision for taxation and auditing the value-added tax payments included in compliance costs? Do you include the cost of staff dealing with tax matters and what of the cost of accounting systems required to comply with tax obligations, such as the value-added tax on expenses and sales and the information required for tax invoices? Will you include the opportunity costs of non-compliance, such as penalties and interest? Or the costs of legal advice in relation to objections and appeals against tax assessments? Or the interest on loans raised to pay tax? And do costs include only to costs quantifiable in money terms? What of the cost of wasted time in dealing with tax queries, or even the anxiety and annoyance costs relating to queries and tax inspections?

All of these questions must be addressed in defining exactly what your research will include as small business tax compliance costs and any assumptions that you will make in limiting the scope of the research must be set out clearly and precisely. One of the attributes of research is its replicability – can another researcher replicate your research and arrive at similar results? Only if a clear definition of the concept to be tested is provided will it be possible to replicate the research.

How do you perform a conceptual analysis? The following steps are often involved:

- decide what lies at the “heart” of the concept (the literal meaning): in the conceptual analysis of compliance costs, the following costs appear to lie at the heart of the concept:
  - taxpayer direct cost
  - the SARS direct cost may be relevant depending on the scope of the research;
  - non-compliance costs – taxpayer (and possibly SARS);
  - opportunity costs – the cost of an investigation by SARS;
  - litigation costs and penalties;
• meanings at the boundary:
  - “annoyance” costs;
  - “anxiety” costs;
  - “humiliation” costs;

• costs lying outside the boundary – the actual payment of tax.

In developing your definition, therefore, the following aspects are relevant:

• the models used to conceptualise:
  - positive – what lies at the heart of the concept
  - negative – what lies outside of the concept
  - borderline – stretching the boundaries of a concept
  - socially constructed meaning of a concept (for example, Sharia as compared to
    Western understandings of justice, or beauty as perceived by different
    cultures)
  - linguistic – how is a construct symbolised in language (for example, a terrorist
    or a freedom fighter)?

Where does one start when performing a conceptual analysis? A useful place to start is with
the dictionary meaning. Then you would naturally consider definitions in acts or other
documents. The conceptual analysis is often simply based on the literature survey. Often you
will need to sit down and mind map all the ideas that come to mind.

A conceptual analysis is not only used in social research, but may also be required when
adopting a doctrinal approach to research. Consider the example of the tax problems
experienced by groups of companies. The methodology may be qualitative comprising only
the analysis and interpretation of documentary data, but you would still need to define what
types of groups, for example, national or multinational groups, what taxes will be considered,
how you will define a group, for example, will you adopt the definition in the Income Tax Act
or some other definition?

A conceptual analysis defines the variables to be tested and therefore the characteristics of
the data to be collected, determines the assumptions that you will make in carrying out your
research, sets out the limitations of scope and can also be used to develop a measuring
instrument – for example, the questions to be included in a questionnaire or an interview.

7.3.3 COLLECTING THE DATA

You have now defined exactly what data you will collect and the next step involves planning
for the collection of data. This requires the answers to the following questions:

• How will the data be gathered? Data may result from:
  - observations in the field, for example, you may be observing the actions and
    behaviour of students in a class or lecture;
  - questionnaires;
- interviews;
- photocopies of documents;
- paper and pen tests, such as psychometric or aptitude tests; or
- experimental results, such as before-and-after tests when a research intervention has been applied, for example, the introduction of a new teaching method to improve the students’ results.

Will special equipment be needed? Do you have the requisite skills to carry out the research or will you have to consult experts? Will you need to appoint and train research assistants?

- Where are the data located, that is, how available are the data in relation to time, distance and the expense involved in obtaining them?
- How will access to the data be secured? Are the documents confidential? Will you be given access to the data?
- How will the data be interpreted? This may relate to the statistical procedures, which will determine certain parameters of the data collection. You may need to consult expert help, for example, trained statisticians or translators.

7.3.4 SPECIFYING THE POPULATION AND THE SAMPLE

The population to be studied must be defined clearly. If it is small, the entire population may be studied. Examples of studies where the whole population will be surveyed include ethnographical studies where an entire human population group (a cultural group) may be studied or a case study, for example, a study involving an entire school or a business.

In other cases only a sample will be surveyed. Only if the sample is truly representative (that is, the entire population in miniature), will you be able to generalise the findings derived from the study of the sample to the whole population (that is, secure external validity).

In the case of doctrinal research, you would not select a sample, but would perform an exhaustive literature survey of appropriate legislation, case law and the writings of tax experts. Preference would be given to primary data, rather than secondary data and the writings of acknowledged tax experts and journal articles in accredited journals would be afforded more credibility than writings in the popular media.

The sampling procedure depends on the purpose of the sampling and a careful consideration of the parameters of the population. There are two main types of sampling techniques: the first group are related to quantitative methods where statistics are used to analyse the data and the results may be generalised to the entire population, and qualitative methods, where statistics and generalisation are not relevant.

Quantitative sampling methods involve probability sampling. This entails random selection, thus choosing a sample in such a way that each member of the population has an equal chance of being selected. This may consist of:

- simple random sampling, using a random number table;
- **stratified random sampling**, where the population is first stratified and then the samples from each stratum are selected randomly (for example, a debtors' circularisation);
- **proportional stratified random sampling**, where the strata are of different sizes and the sample sizes randomly selected reflect this proportion;
- **cluster sampling**, where clusters of the population are randomly selected (for example, a city block may be a cluster); and
- **systematic sampling**, where, from a random start, each \( n \)th item is selected (for example, starting from item 33, each 50th item is selected).

Qualitative methods involve **non-probability sampling**, which may include:

- **convenience sampling** (accidental sampling) of units that are readily available;
- **quota sampling**, which is the proportional, but not random, selection of units;
- **purposive (or purposeful) sampling**, where units are selected for a particular purpose; and
- **sampling to redundancy**, where sample units are selected for specific characteristics and units are selected until the characteristics begin to be replicated, indicating that the possibilities of the population have been exhausted.

The question may be asked: what is a **sufficient sample size**? In applying a qualitative methodology (where statistical testing is not applicable) the sample size will depend on the goals and design of the research. Analysing questionnaires with open-ended questions, interviewing participants or observing their behaviour is very time consuming and this limits the size of the sample. As qualitative research is not designed to generalise the results, the size of the sample is not as important, provided valid conclusions can be drawn from the research.

In the case of a quantitative research design, the size of the sample depends on how homogeneous the population is and the degree of precision required in making predictions of the population from the sample. A homogeneous population may, for example, consist of all male African third year students studying for the BCompt degree at UNISA, who are not yet employed. All UNISA students in all years of study and in all faculties would not represent a homogeneous population. Clearly, the larger the sample, the more statistically significant the results will be, but the following guidelines are provided\(^{16}\):

<table>
<thead>
<tr>
<th>Sample Size</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>( N \leq 100 )</td>
<td>Entire population</td>
</tr>
<tr>
<td>( N = \pm 500 )</td>
<td>50% of the population</td>
</tr>
<tr>
<td>( N = \pm 1500 )</td>
<td>20% of the population</td>
</tr>
<tr>
<td>( N = 5000 )</td>
<td>400 units</td>
</tr>
</tbody>
</table>

The next consideration is: What is the **nature** of the data? This consideration again relates mainly to data that will be subject to **statistical** measurement. The answer to these questions will determine the nature of the statistical tests that can be applied to the data. The following are possibilities:

- Are we dealing with a single group or with multiple groups (as, for example, in the case of correlation studies where we seek to establish the relationship between two or more groups)?

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\(^{16}\) Leedy and Ormrod, 2001: page 221.
• Are the data continuous (they can take on an infinite range of values, such as the age of a person) or discrete (having a small, finite number of possible values, such as school grades or classes)?

• Are the data nominal, ordinal, interval or ratio units? This question addresses the levels of measurement. The level of measurement will dictate the types of statistical tests that can be applied to the data. These levels are:
  
  - nominal - numbers are used to identify different characteristics only (nominal = name), for example, male = 0, female = 1;
  
  - ordinal - the numbers assigned to the data units reflect a particular order or sequence, for example, ranking your lecturers in order of excellence;
  
  - interval - these reflect standard and equal units of measurement, thus not only a difference in degree or quantity, but how much difference there is (however, zero(0) does not necessarily reflect a total absence of the characteristic being measured), for example, a person’s IQ;
  
  - Ratio - these are similar to interval data, but have a true zero point, for example, measures of income or the results of an examination in tax.

Read: Practical Research, pages 210 to 223 – Choosing a sample in a descriptive study.

Other considerations that will influence the type of statistical tests that can be applied to analyse the data are:

• Does the data display a normal distribution that is not skewed or seriously leptokurtic or platykurtic? A normal distribution has the shape of a bell curve, in a skewed distribution the peak is to the left or right of the centre point, leptokurtic distributions display a very sharply pointed curve and platykurtic distributions a very flat curve.

• Will the research involve the application of parametric statistics, where the assumptions are that data reflect an interval or ratio scale and are normally distributed. Data not complying with these parameters are non-parametric.

7.4 DATA COLLECTION METHODS

You have now defined your data. The next step is to decide how to collect your data. In certain instances, collecting and measuring the data take place simultaneously. For example, when you are measuring the height of children in primary school, you are both collecting and measuring the data, the results of a pen-and-paper test both collect and measure the data. In other cases, the collection and measurement are separate actions, for example, the data collected through the application of a questionnaire still requires measurement using statistical techniques.

The various ways in which data can be collected have been referred to in a number of the preceding sections, these methods being:

• questionnaires;
Survey research can be used to investigate phenomena that occur naturally (that is, non-experimental phenomena). Because survey respondents answer the same questions, the incidence and distribution of characteristics of the population can be studied. The incidence of characteristics refers to the frequency with which a particular characteristic is encountered in the sample and/or the population and the distribution refers to the range that a particular characteristic can assume. The incidence or distribution of these characteristics is measured using descriptive statistics, which will be dealt with at a later stage. Surveys cannot explore the feelings or interpretations of individual respondents in any depth. They can, however, explore the relationships between variables.

All of the collection methods referred to above, except for experimental research, fall into the category of survey research and the data collection methods that you are most likely to use in your research on taxation are questionnaires, interviews, extracts from documents and possibly observation of participants in their natural surroundings (for example, observing SARS frontline staff in interaction with the public).

### 7.4.1 DESIGNING A QUESTIONNAIRE

The questions in a questionnaire can be used to test facts, attitudes or behaviour. Facts must be evaluated in terms of credibility. Memory is fallible but there are techniques that can be used in a questionnaire to aid memory and it is sometimes possible to check the accuracy of responses, including using statistical methods. Non-trivial, non-sensitive and non-threatening facts are usually reported accurately. Attitudes are subjective and the respondent may not know what his or her attitude is. Attitudes are many-sided and determined by the situation being investigated.

When designing your questionnaire, the first decision you should make is whether open-ended or closed questions should be included. Quantitative research requires closed-ended responses, while qualitative research is based on open-ended questions. Often a mixture of both types of questions can be used very effectively in mixed-method research. Open-ended questions are time consuming and costly to code and can be confusing. Respondents may answer on differing grounds (for example, moral or legal). Closed questions only work if the researcher knows what the true range of alternative attitudes is. Open-ended questions are best for questions calling for reasons or explanations. Open-ended questions allow the researcher to gather “rich” data.

When investigating past behaviour, it is advisable to use specific rather than general questions as the length of time of recall of past behaviour is limited. The use of diaries is often valuable. The wording of questions about illegal or anti-social behaviour requires delicacy.

**Procedures for constructing a questionnaire**

It is advisable to use and adapt questionnaires that have already been developed and tested (or use them as an example).
Steps in constructing a questionnaire:

- Decide exactly what information is sought. This will be dictated by the research question.
- Decide what type of questionnaire you will use. Questions can ask explicitly for information or the information can be inferred through indirect questions.
- Several questions can be asked to establish a certain fact.
- In the first draft of your questionnaire use all the possible questions and later eliminate certain questions.
- Re-examine and revise questions before the questionnaire is finalised.
- Questions should be pre-tested. This is best done by way of interviews, with a discussion of the questions afterwards, in the form of a pilot testing.
- Edit the questionnaire and clearly specify the procedures for its use.
- Follow-up questions can be made use of to clarify or confirm responses. Responses can also be probed in later interviews.

Some issues to consider about the questions

When designing your questionnaire, there are a number of additional issues to be considered: 17

- Question content:
  - Is the question necessary and useful?
  - Are several questions on the subject-matter needed?
  - Do the respondents have the necessary information?
  - Does the question need to be more concrete, specific or related to the respondent’s personal experience?
  - Is the question content sufficiently general and free from spurious correctness and specificity?
  - Do the replies express general attitudes and only seem to be specific?
  - Is the question content biased or loaded in one direction, without balancing questions?
  - Will respondents give the information asked for?

- Question wording:
  - Can the question be misunderstood or is the phraseology difficult or unclear?
  - Does the question adequately express the alternatives with respect to the point being probed?
  - Is the question misleading because of unstated assumptions or unforeseen implications?
  - Is the question biased? Is the question emotionally loaded or slanted to a particular answer?
  - Is the wording likely to be objectionable to any respondent?
  - Would a more (or less) personalised wording of the question produce better results?

Can the question be better asked in a more direct or indirect form?

The form of response to the question:

- Can the question be asked in the form of a check-answer (fixed alternative, short answer of a word or two or a number), free answer or check-answer with a follow-up answer?
- If it requires a check-answer (a tick or a cross), which is the best type of response required – dichotomous (yes or no) or multiple-choice (“cafeteria”) or scale?
- If it is in the form of a checklist, does it cover all significant alternatives without overlap and in a defensible order, reasonable length and is the wording impartial and balanced?
- Is the form of response easy, definite, uniform and adequate for the purpose?

The place of the question in the sequence:

- Is the answer to the question likely to be influenced by the content of preceding questions?
- Is the question led up to in a natural way? Is it in the right psychological order?
- Does the question come too early or too late from the point of view of arousing interest and receiving sufficient attention, avoiding resistance, etc?

Using the information provided below, design an appropriate questionnaire.

Background:

You are a researcher at Campus University, a residential university in Johannesburg. The university enrolls a large number of foreign students each year and the management of the university wishes to find out from its foreign students what problems they experience during their academic career at the university. The university has contracted you to carry out the research.

Research design:

In designing your research, you have decided to make use of a questionnaire, instead of interviewing students. In this way you hope to get feedback from a greater number of students. In reviewing the relevant literature on the topic, you have decided to obtain data on the following aspects of the students’ experience at the university:

- their problems in leaving home and settling in at the university;
- problems that they may have had with obtaining finance;
- cultural problems that they may have experienced and difficulties with social integration;
- language difficulties; and
- problems relating to their actual studies.

You believe that if you ask only foreign students to complete the questionnaire, they may raise issues that are also problems for other students studying at the university. You will therefore administer the questionnaire to all students in all academic years, but you will need to be able to separate the responses of the foreign students from those of the local students.
Hints on designing a questionnaire:

- Start with the research question.
- Decide what information you need. This will be dictated by the research goals and the theoretical basis of your research, in other words the nature of the data you wish to collect.
- Decide on the methodology – quantitative or qualitative:
  - Open-ended questions (qualitative);
  - Closed-ended questions (multiple choice) (quantitative);
  - Advantages of open-ended questions: they are a rich source of varied material which may not have been anticipated in the closed-ended questionnaires; they are a lot of work to analyse.
- Closed-ended questions:
  - Take care with the formulation of the questions – they must be clear and unambiguous.
  - Plan the order of the questions – usually demographic information first, then the less contentious questions to build confidence and finally the more sensitive questions.
  - Make provision for all the possible alternative responses.
  - Alternative responses must be mutually exclusive.
  - You can use the “other” response category – usually with a space to provide details.
- Types of closed-ended questions:
  - Dichotomous – for example, male/female; yes/no;
  - Scales – levels of a variable, for example, earnings, age;
  - Scales – ranking, for example, rank the following from 1 to 10, based on your preference;
  - Scales – rating, for example, lectures are boring – disagree strongly / disagree/ neutral / agree / agree strongly (Likert scales);
- Preamble:
  - The questionnaire must have a heading.
  - Introduce yourself and provide your contact details.
  - Describe the research you are carrying out.
  - Assure participants of their anonymity, the confidentiality of their responses, their right to withdraw and how the data will be used and safeguarded.
  - Offer to share the outcome of the research with participants on request.
  - Thank your participants.
- Keep it short.
• Start with a mind map, list all potential questions and then narrow them down and place them in order.

• Pilot test the questionnaire and amend (if the participants in the pilot test have indicated problems, omissions, ambiguities or inadequate response options).

**7.4.2 CONDUCTING AN INTERVIEW**

In the same way as questionnaires can include closed and open-ended questions, interviews can be **structured** or **unstructured**, depending on the research question, the design of the research and the data. Structured interviews are used in quantitative research, whilst unstructured or semi-structured interviews are more suited to qualitative research where “rich” data is required. Interviews can either be with single participants or a group of participants. One type of interview is a **focus group**, where a number of participants are interviewed at the same time.

Effective interviewing is an art which is mastered with practice. The following are a few simple guidelines to assist with effective interviewing:

- Make sure that the interviewees are representative of the group being researched.

- Plan the interview carefully:
  - the location should be suitable;
  - the equipment to be used to record the interview must be available and tested before the interviews start;
  - make arrangements with the interviewees well in advance indicating the time, place and duration of the interviews;
  - confirm all arrangements in writing;
  - as is the case with questionnaires, informed consent is essential: explain the nature of the research to the prospective interviewees, how the results will be used, give them assurance of the confidentiality of the information and their anonymity, their right to withdraw and obtain their written consent.

- Pilot test the interview questions.

- Record (on tape or in writing, or, preferably, both) the responses to questions verbatim and submit the transcript of the interview to the person interviewed, for checking and follow up issues that are not clear.

- During the course of the interview:
  - take a few minutes to establish rapport with your interviewee;
  - your questions should focus on the actual, rather than the abstract or the hypothetical;
  - ask confidential questions later in the interview, when you have established rapport;
  - don’t put words into your interviewees’ mouths by asking “leading” questions; and
  - keep you reactions to yourself.

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You must always bear in mind that, in an interview, you may not necessarily be establishing facts or the truth. This is a possible source of bias in your research (validity, reliability and bias are discussed later in the module).

**Read:** *Practical Research*, pages 159 to 160 – Conducting a productive interview.

### 7.4.3 OBSERVATION STUDIES

A third type of survey research is based on observing participants in their natural surroundings. For example, in carrying out the research on why tax students fare better in their studies than management accounting and finance students, one of the tests that you could carry out is to observe the actions, reactions and behaviour of the lecturer and students during lectures and tutorials.

**Read:** *Practical Research*, pages 195 to 196 – Observation studies.

### 7.5 TYPES OF RESEARCH

The data collection methods described above can be applied in a number of different types of research. Some of the types of research are described only briefly in this module. Should you plan to engage in these types of research, you will have to study textbooks that deal specifically with this type of research.

The diagram below summarises some of the various quantitative and qualitative research designs.
Quantitative research methods:

- Correlation research will be dealt with later in the module.
- Developmental designs:

- Observation studies and survey research have been described above. 


- Causal research will seldom be used in your research, but if your research question requires you to use this type of research you can read your textbook and possibly consult a textbook specific to this type of research.

Qualitative research methods:

Of the qualitative methods listed above, case studies could be used fairly frequently in the type of research you are likely to carry out. You would need to consult a textbook specific to this type of research. Leedy and Ormrod\(^{19}\) provide some basic notes on case study research.

Your research question may require you to do historical research, for example, into the development of taxation.

**Read: Practical Research**: pages 172 to 182 – Historical research.

### 7.6 STATISTICAL RESEARCH

At some stage in your career you may be required to do empirical research involving the use of statistics. You should also have a basic knowledge of statistics to assist you when you read other research as part of your literature survey. There are two main groups of statistical testing: descriptive statistics and inferential statistics. If you are using statistics, you would probably have to enlist the assistance of statistical experts.

The first step in carrying out research using statistics is to collect your data in a form appropriate to statistical analysis:

1. Design the data collection form.
2. Design a coding strategy to be used to represent the data on the data collection form.
3. Collect the data.
4. Enter the data on the data collection form.

### 7.6.1 DESCRIPTIVE STATISTICS

You will now be in a position to analyse the data. The first step is to describe the data by computing the descriptive statistics. There are three types of descriptive statistics:

- the description of the central tendency in the research data, including the mean, mode and median;
- the description of the dispersion of the data, including the range, the standard deviation and the z-score; and
- the relationship between two or more sets of data, including the correlation between them.

Measures of central tendency act as predictors – the measure of optimal chance (the best guess). Measures of dispersion answer the question: what are the worst odds?

\(^{19}\) Leedy, PD and Ormrod, JE. pages 114, 149 – 150, 157.
Using statistics to describe the central tendency and the dispersion (spread) of the data would be appropriate for one set of data. For example, in describing the results of a third-year tax test, you could describe:

- the average mark (the mean);
- the mark that occurs most frequently (the mode);
- the median (the centre point of the marks);
- the range (highest and lowest mark) or the inter-quartile range (the number of marks falling below the 75th quartile); or
- the standard deviation of the marks.

If you have two sets of data, you may wish to establish the correlation between them. Using the example of the final examination marks for third-year and fourth-year tax students, you can use correlation analysis to establish:

- if there is there a relationship between the examination marks in the two years;
- the direction of the relationship (positive or negative); and
- the strength of the relationship.

In carrying out the correlation analysis, you would establish the correlation coefficient (‘r”), which lies between – 1 and + 1. A minus sign signifies that the results are inversely correlated (in other words, high marks in third year are associated with low marks in fourth year) and a plus sign signifies a positive relationship (high marks in third year are associated with high marks in fourth year). A value of “r” that lies close to zero indicates that there is no or little relationship between the marks. The closer the value of “r” is to 1, the stronger the relationship is between the marks. It is important to recognise that correlation does not signify causation.

If you are comparing two sets of data, you may find that their distributions differ considerably – the mean and standard deviation may be different for the two distributions. Using the example of the tax scores of third-year and fourth-year tax students, the mean for third-year marks may be 65% and for fourth-year students 55% and the standard deviation for the third-year marks may be 10% and 20% for the fourth-year marks. To be able to compare the two sets of scores in a meaningful manner, a z-score can be calculated for each score, as follows:

\[ z = \frac{(X - \bar{X})}{s} \]

where

- \( z \) = the standard score
- \( X \) = the individual tax score
- \( \bar{X} \) = the mean of the group of tax students to which \( X \) belongs
- \( s \) = the standard deviation of the group to which \( X \) belongs

Read: *Practical Research*: pages 252 to 272 – Statistical techniques for analysing quantitative data.

Descriptive statistics can be used in many types of research and is often also used in mixed methods research.

**TASK**

To illustrate the use of descriptive statistics, you are required to complete the following research project.
**Problem Statement:**

The Department of Accounting at a residential university is considering the introduction of two Accounting streams – a terminal course and a continuing course – with a view to providing prospective Chartered Accounting students with more adequate preparation to major in Accounting 3. The streaming could be based on a number of criteria:

- the students’ choice regarding their intended major subjects;
- whether or not the students had passed Accounting in their matriculation examination;
- the students’ results in the Accounting 1 semester courses (Acc101 or Acc 102) or the Accounting 2 first semester course (Acc 201).

The research is based on the assumption that the students’ marks may be the best indicator of potential success. The research question is therefore: Could the marks in Accounting 1 or 2 be used to predict success in Accounting 3?

**Data:**

The Accounting 1, Accounting 2 and Accounting 3 final results are available for a number of years (refer to Appendix 2). The results of cohorts of students who passed Accounting 1 and 2 and went on to Accounting 3 in three consecutive years will be used for the research. In other words the results of students who repeated a year of accounting or who skipped a year have been excluded from the data. The identity of the students has been disguised by allocating a neutral code number to each student’s results.

**Methodology:**

The research project entails finding the best “fit” between Accounting 1 and 2 marks and success in Accounting 3. In order to do this, the correlation between the following results and the Accounting 3 results will be determined:

- Accounting 101
- Accounting 102
- Accounting 201.

The mean, median and mode of the data sets, as well as the range and standard deviation will also be determined, in order to assess whether the results are reasonably consistent over the years.

Design a research project which will address the research problem. Discuss all aspects relating to the research design. Carry out the research and write up the project, discussing the following:

- the context
- the data
- the ethical considerations
- the design of the research, including the methodology
- the results of the correlation analysis and other descriptive statistics
- conclusions and recommendations
7.6.2 INFERENTIAL STATISTICS

Descriptive statistics are used to describe the characteristics of a sample; inferential statistics are used to infer something about the population from which the sample is drawn, based on the characteristics of the sample. The sample is selected randomly from a larger population and the results of the research are generalised to the whole population. At this stage, you need to know more about hypothesis testing.

Hypotheses

Salkind explains that a hypothesis is an objective extension of the research question that was originally posed. A good hypothesis expresses a question in a testable form. It should express a clear relationship between different factors. It is important to note that you set out to test a hypothesis, not to prove it.

Salkind continues to explain that a theory is a set of statements that predict what will occur in the future or explain things that have occurred in the past. By testing the hypothesis, the results may support the theory or may not support it. In the latter case, further research may enable researchers to refine or extend the theory.

Read: Practical Research: pages 275 to 278 – Hypothesis testing.

The null hypothesis ($H_0$) represents the outcome that there is no relationship between the variables being tested:

$$H_0: \mu_a = \mu_b$$

If you have not yet proved a relationship you must assume that there is no relationship. If there are differences, you must assume that these are due to chance (random variability). Researchers endeavour to eliminate chance as a factor. A research hypothesis is a definite statement of the relationship between two variables – a statement of inequality:

$$H_1: X_a \neq X_b$$

This is a non-directional hypothesis which posits that the average score of a certain variable (a) is not equal to the average score of another variable (b).

$$H_1: X_a > X_b$$

This is an example of a directional hypothesis which posits that the average score of a certain variable (a) is greater than the average score of another variable (b).

Null hypotheses always refer to the population, while research hypotheses always refer to the sample, therefore you can never actually say that there is no difference between the variables; you cannot test the null hypothesis. You can only test the research hypothesis by means of the sample. You will notice that the null hypothesis is expressed using Greek letters and the research hypothesis uses Roman letters.

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A good hypothesis should:

- be stated in a declarative form (not as a question);
- express a relationship between variables;
- reflect a theory or body of literature on which it is based;
- be brief and to the point;
- be testable.

**Inferential statistics**

Inferential statistics allows researchers to separate the effects of an isolated factor from differences between groups that might be due to some other factor or to nothing other than chance, by assigning a probability level to an outcome. By assigning a probability level to an outcome, you can conclude that the effect that you observe is due to the factor of interest or to some other factor. In the discussion of descriptive statistics, the role and calculation of the z-score was explained. An important consequence of a z-score is that it can be used to assign a probability to a certain outcome.

**Read:** *Practical Research*: pages 272 to 277 – Inferential statistics.

If your research design requires the use of inferential statistics, you will need the assistance of a statistician. In reading journal articles involving inferential statistics, you need to have a very basic understanding of certain aspects to be able to understand the results. You also need a basic awareness in order to interact meaningfully with the statistician and to report on your research results. From the reading above, the following matters are important:

- You need to be aware that the Central Limit Theorem enables you to predict a result for an entire population from the result obtained from a sample, even though the population may not have a normal distribution. You need not understand the workings of the theorem.

- You need to understand that statistical significance represents the level of risk that you are willing to accept (or the researcher whose article you are reading is willing to accept) that the results obtained from the sample do not hold true for the population as a whole – that is, the risk that you will reject the null hypothesis when it is true; a Type I error.

- You need to understand how the test of significance works.

- Finally, in evaluating your own research and that of others, you need to be able to distinguish between statistical significance and the meaningfulness of the result.

The statistician will have to advise you on the choice of an appropriate statistical test to be applied to your own research.

### 7.7 QUALITATIVE DATA ANALYSIS

As many of you will be doing qualitative data analysis, the following brief summary is presented of the techniques to be used. If you do undertake qualitative data analysis, you will need to read a textbook that specifically deals with the techniques. The discussion is based on
the work of Strauss and Corbin\textsuperscript{21} as summarised by Dr A Rau. These notes discuss the practice of open coding, a technique of thematic coding.

There is no right way to analyse qualitative data, you can be creative and you can combine techniques. You must, however, be as consistent, rigorous and honest as possible. An effective analytical approach is to keep asking yourself questions to challenge assumptions (your own assumptions, those contained in the literature and the theory on which your research is based and, even, the participants’ or respondents’ assumptions). By constant questioning and cross-questioning you can discover rival interpretations and new insights.

The analytical process can be broken down into working steps. The four phases discussed below represent the steps but it is important to remember that they are not really separate – they occur simultaneously and the one influences the other. Processes carried out in one analytical phase impact on other phases, with the result that you may find different ways of reading your literature and theory and may come to a new understanding of your data. To accommodate these new insights, you are likely to backtrack and make changes to your analysis.

- **Phase 1: getting to know your data well**
  
  The technical term for this is “data immersion”. During this process you read and re-read the data many times in order to get a sense of the whole of the material until you become intimately familiar with it. The first phase is transcribing the data (from interviews or the open-ended questions in questionnaires). This is a time consuming process but helps you to get to know the data well.

- **Phase 2: finding central ideas or themes**
  
  The technical term for this is “open coding”. This is a data reduction technique. In this phase, each phrase, paragraph or statement is allocated a conceptual label or code that represents its central idea. It is from sifting and combining or grouping central ideas that themes emerge from the data. At this stage you need to ask yourself: What is this phrase, paragraph or statement saying? You may already have some idea of what you are looking for and may already have formulated some codes, based on the theory derived from the literature review. You need to be open to other possibilities that you have not considered, however. Some data will not be relevant to the focus of your research at this stage and you may choose not to code them. During the process of your research the focus may change and this data could become much more relevant in the light of new insights. It is also important not to ignore data because they challenge your assumptions or your argument – part of doing research is to include challenges in your argument and work with uncertainty.

- **Phase 3: looking for relationships or links**
  
  The technical term for this is “axial coding”. It is a data expansion technique. In this process you examine relationships by, for example, comparing responses to open-ended questions and drawing links between responses. In this phase you examine relationships occurring:

- between open codes, themes or central ideas that you have identified;
- between actual phrases, paragraphs or statements in the data; and
- between the open codes and the phrases, paragraphs or statements.

A few examples of asking questions about the relationships in the data (axial coding) are:

- Where do statements occur? What is the context? Participants may say something in one context (such as a formal report) and something different in another context (such as an interview). Participants may be creating a metaphorical or psychological context for themselves or others, for example, “I change all the time, but my friend is a rock”.

- When do statements occur? What precedes a statement and what follows it? You may be looking for relationships in time.

- What are the similarities and what are the contrasts? A participant may say one thing and something different later on. Ask yourself why.

- Which statements are repeated? That may indicate their significance.

- What are the patterns of interaction? How does the open code, central idea or theme relate to another, in the light of what participants say?

• Phase 4: developing a story

The technical term for this is “selective coding”. It is a data integration technique. In this process you merge your data with the literature you have reviewed and your theory, if your research is based on one. You are constructing a coherent and cohesive story – a discussion – that promotes your research argument. This is a complex process in which you move backwards and forwards through the data, between the data, literature and theory, searching for evidence that supports or challenges an interpretation. This is not like solving a puzzle or a maths problem, it has to be created, not solved.

A questionnaire was administered to a group of postgraduate students in the Accounting Department at a residential university in which only two questions were asked: What is your gender? What, in your opinion, are the reasons why students fail to attend lectures?

You are required to analyse the data from the transposed responses to the open-ended question (refer to Appendix 3):

You will note that when transposing data, it is transposed verbatim. In transposing interviews, you should also indicate where the interviewee paused for a while.

7.8 VALIDITY, RELIABILITY AND BIAS IN RESEARCH

In every research project carried out, the researcher strives to obtain a reliable and valid result. In testing the effect of independent variables on a dependent variable, you can never be 100% sure that the change in the dependent variable is explained by changes in the
independent variable or variables, but it may be due to other unanticipated variables or just to chance. In designing the research, one should take all possible precautions to obtain both validity and reliability. In writing up the final results, the researcher should critically discuss threats to the validity of the results and should try to estimate the effect of the threats. In the section on inferential statistics, you saw how you can assign a probability to the chance that the result was not due to the factors being tested. In any type of research designs, however, there will be threats to the validity of the outcome, and these should be discussed.

A very simplistic task will illustrate some of the issues relating to reliability, validity and bias.

A researcher is interested in the topic of ethics as practised by chartered accountants and has distributed a questionnaire.

Example 1

- Population: 25 000 Chartered Accountants in South Africa (a list was obtained from the South African Institute of Chartered Accountants)
- A random sample of 500 accountants was selected
- Only one question was asked: do you attend formal religious services regularly? The participants were asked to answer yes or no.

There were responses from 50 participants – 40 answered “yes” and 10 “no”.

Conclusion: 80% of Chartered Accountants are ethical.

Criticise the research project.

Refer to the footnote for some suggestions on problems identified in the research project. 22

Some of the problems with this research are set out below.

- Professional ethics has not been defined and the researcher has only asked whether participants attend religious services regularly.
- The researcher has confused personal ethics and professional ethics and has equated ethics with being religious. Are all churchgoers ethical?
- What does “regularly” mean – once a day, once a week, weekly, monthly?
- The size of the sample is adequate and the participants were randomly selected.
- The research question appears to be whether South African Chartered Accountants behave ethically in carrying out their professional duties. If that is the research question, the design of the research is not congruent with the research question.
- Sources of bias include:
  - the very low response rate indicates that there may be a non-response bias;
  - respondents may have given a socially acceptable response, rather than the truth;
  - are “yes” or “no” the only alternative responses? What about “sometimes”?
- The conclusions are not valid. The only possible conclusion that can be made from this research is that 80% of Chartered Accountants appear to attend formal religious services.

22 Some of the problems with this research are set out below.
Example 2

- **Population**: this was defined as Chartered Accountants who are auditors and directors of companies in Port Elizabeth, East London and Grahamstown.
- **Total population of 80 members was selected.**
- **The following scenario was described in the questionnaire:**

You are a director of a listed company and own a large number of shares in the company or

You are the auditor of a listed company and you earn a large proportion of your fees from the company and would lose the audit if you issued a qualified report.

You (as a director or auditor) are aware that the share price has been decreasing slightly over the last few months. Just after the company’s year-end you learn that a major debtor of the company, who has owed a material amount for the past 10 months, is about to go into liquidation. The directors do not want to write the bad debt off at year end as it would have an adverse effect on the share price.

- **Question:**
  - Would you (the director) “blow the whistle” on the company? or
  - Would you (the auditor) issue a qualified report?
    - yes/no

- **Responses**: 75 participants responded – 68 answered “yes” and 7 answered “no”.

**Conclusion**: 80% of Chartered Accountants are ethical.

Criticise the research project.

Refer to the footnote for some suggestions on problems identified in the research project.\(^{23}\)

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Now that you have some idea about the problems that can arise from research that is poorly thought out and designed, we can return to the discussion of reliability, validity and bias. One text\(^{24}\) defines the terms “validity” and “reliability” as follows:

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\(^{23}\) The research appears to have a slightly better design than the previous example. The following problems can be identified:
- the response rate was very high, so the non-response bias will not be present;
- respondents are very likely to have given a socially acceptable response and this source of bias would seriously jeopardise the validity of the conclusions;
- one scenario in this type of research is inadequate for a valid conclusion to be made; less compromising scenarios should have been used, before the final scenario as set out above;
- The results of the research have been generalised to the entire population of South African Chartered Accountants. Only respondents in the three cities were surveyed.
- The conclusion is not valid. From the research carried out, the only conclusion that could be made is that the Chartered Accountants serving as directors and auditors of listed companies in the three cities appear to be willing to “blow the whistle” or issue a qualified report when actions are taken that would compromise accuracy of the financial results as set out in the financial statements.

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Validity is the degree to which what was observed or measured is the same as what was purported to be observed or measured. Reliability is the extent to which observations or measures are consistent or stable.

The need to ensure validity and reliability in research affects all aspects of the research design. It should be noted that reliability does not necessarily imply validity but that without reliability, there can be no validity. The two aspects are therefore closely related. A useful illustration of the relationship between validity and reliability is a game of darts, where the bull’s eye is the “truth” we are trying to establish. If all of the darts hit the board clustered closely together, but not in the bull’s eye area, the results will be reliable, but not valid. If the area in which the darts hit the board is dispersed all over the board, the results are neither reliable nor valid. Only where the darts hit the board closely clustered around the bull’s eye, can the results be said to be both reliable and valid.

Qualitative researchers prefer not to use the terms “reliability” and “validity”, but speak of “replicability” and “authenticity”. In other words, are the data sufficiently detailed and the analysis and interpretation sufficiently rigorous to enable another researcher to replicate the research and are the conclusions which the researcher has reached justifiable?

Validity

To establish the validity of a research study two basic questions must be answered:

- Does the study have sufficient controls to ensure that the conclusions are warranted by the data (internal validity); and

- Can the research observations be used to make generalisations beyond the specific research study (external validity or generalisability).

Internal validity relates to the extent to which the research design and the data it yields allow the researcher to draw accurate conclusions about cause-and-effect and other relationships within the data. To ensure the internal validity of a research study, all possible precautions must be taken to eliminate other possible explanations for the observed results (rival plausible hypotheses or explanations). Strategies that are often used to ensure internal validity include:

- controlled laboratory studies to eliminate confounding variables (known also as third variables);

- double blind experiments, which are often used in medical research;

- unobtrusive measures or observations of the subjects of the research (which may have ethical concerns that must be addressed);

- triangulation, which involves the use of multiple measures or sources of data.

External validity relates to the extent to which the results of a research study can apply to situations beyond the study itself; the extent to which the conclusions drawn from the study can be generalised to other contexts. Commonly used strategies to ensure external validity include:
• doing the research in a real-life setting, such as during a lecture or a tutorial session;
• using a representative sample; in the case of quantitative research the sample must be selected randomly and be of a sufficient size to ensure generalisability and in the case of qualitative research the sample must be broadly reflective of the attributes of the whole population;
• replicating the study in a different context, for example, conducting research on effective lecturing methods at two or more universities.

Qualitative researchers are often less concerned with external validity. In a single case study, for example, it is accepted that the results may not be generalisable. In qualitative research, researchers often use triangulation to support the validity of their findings. This may include triangulation of the data used (data from different universities, for example), the method applied to measure the data (for example, both questionnaires with open-ended questions and interviews probing the same issues), using different research assistants to collect and analyse the data, or applying different theories underpinning the study to interpret the data.

Additional strategies to ensure validity in qualitative research may include:

• spending extensive time in the field – not relying on a single observation but on observations repeated many times (for example, observing the behaviour in a taxation lecture over a long period of time to ensure that the behaviour of the lecturer and the class is not simply the result of the fact that you are observing them);
• negative case analysis – actively seeking cases that will not support the anticipated results; if none can be found, this would strengthen the conclusion;
• “thick” (detailed) descriptions – to enable any other researcher to understand a situation under investigation and to judge the validity and reliability of the reported outcomes;
• obtaining feedback from others on the research – by sharing your findings with colleagues or by presenting a paper at a conference; and
• obtaining respondent validation of interviews and the interpretation of data – interviewees will validate the transcripts of the interviews and may suggest other interpretations of what they said in the interview.

In quantitative research, external validity is important. Particularly when statistical techniques are used, if results are to be generalisable, the sample must be selected randomly. In relation to statistical correlation, the validity of the research depends on how appropriately the characteristics have been measured and how reliably.

In the case of experimental and quasi-experimental designs (for example, in pharmaceutical studies or studies measuring the effect of educational interventions), the problem of confounding variables arises, that is, other uncontrolled variables that may affect the results. These can be controlled by:

• keeping some things constant and only testing the variables that you are interested in (for example, controlled experiments in a laboratory);
• including a control group (to which, in medical research, a placebo can be administered and, in the case of the experiment to test the effect of a change in lecturing techniques on the results of tax students, including a control group that will be exposed to the old
lecturing methods);

- the use of matched pairs (for example, in the research on the impact of changed lecturing techniques, matching the members of the two groups on the basis of their intellectual capacity and gender to control these two variables);
- random assignment to groups (if you are unable to match the groups in order to control certain variables, random selection will help to increase the probability that the variables that you wish to control are fairly represented in both groups);
- exposing participants to both or all experimental conditions (in the experiment on lecturing to tax students, by exposing both groups to both lecturing techniques at different stages and measuring the results);
- using statistical techniques for control (as discussed in the section on inferential statistics).

The need for validity arises in all aspects of research: The following examples illustrate this.

**Construct validity**: in relation to behavioural research, this determines the extent to which an instrument measures a characteristic (construct) that cannot be observed directly but must be inferred from patterns in people’s behaviour (for example, when measuring aggression in young children, we may define aggression in terms of how often a young child will snatch a toy from another or attempt to use physical confrontation - our construct of aggression). Performing a conceptual analysis will indicate the variables to include in the measuring instrument (for example, a questionnaire).

**Validity of method**: (irrespective of methodology) relates to the accuracy, meaningfulness and credibility of the research project as a whole - to the extent that the method allows you to draw meaningful and defensible conclusions from the data, it will be valid.

**Validity of data**: defective data will affect the validity of a researcher’s conclusions and must therefore satisfy stringent criteria (discussed earlier).

**Validity of measuring instrument**: the extent to which the instrument measures what it is supposed to measure (particularly when measuring insubstantial phenomena). The validity of measuring instruments includes the following aspects:

- face validity: the extent to which, on the surface, an instrument looks as if it is measuring a particular phenomenon;
- content validity: the extent to which a measuring instrument is a representative sample of the content area (domain) being measured – the example that was used before in relation to the qualities of a good leader illustrated the problem where only one attribute (assertiveness) was tested;
- criterion validity: the extent to which the results of an assessment instrument correlate with another, presumably related, measure (the criterion) – for example, if the research involved both questionnaires and interviews, the results should correlate if they are properly designed and administered.
Reliability

Reliability in research relates mainly to the measuring instrument(s) used. The reliability of a measuring instrument relates to the consistency with which a measuring instrument yields a certain result when the entity measured has not changed (measuring insubstantial phenomena is naturally a problem). Consider the example of a scale with a faulty spring. The results of using the scale to weigh a number of items will not be reliable. Another example will illustrate the problem of the reliability of a measuring instrument. I am doing research on the attributes of a good leader but the questionnaire contains questions that do not have the appropriate response options. Respondents may select any option at random or may omit the question altogether. The results will not be reliable.

Measuring something consistently does not necessarily mean accurately. Both aspects must be present. Thus reliability is a necessary but not a sufficient condition for validity. A simple example will illustrate this. In a research project to compare the height of boys and girls of a certain age, the one research assistant may be using a tape measure calibrated in inches and the other researcher a tape measure calibrated in centimetres. Each result will be accurate, but if they are directly compared (without converting the measures to a common measure) the results will not be valid. The research on the attributes of a good leader can also be used to illustrate this. If the questionnaires only contain questions testing assertiveness, the results will be reliable as all respondents will be answering the same questions, but not valid. In both examples, the measuring instruments are faulty or flawed.

The reliability of measuring instruments may relate to:

- inter-rater reliability: the extent to which two or more individuals evaluating the same phenomenon will give identical judgements;
- internal consistency reliability: the extent to which all items within a single instrument yield similar results;
- equivalent forms reliability: the extent to which two different versions of the same instrument yield similar results;
- test-retest reliability: the extent to which the same instrument yields the same result on two different occasions.

Reliability can be enhanced by:

- standardising the way in which an instrument is administered;
- specifying exact criteria for subjective judgements;
- training research assistants.

Thus validity and reliability in research influences the extent to which you are able to learn something about the phenomena you are studying, the probability that you will obtain statistical significance in your study and the extent to which you will be able to draw meaningful conclusions from your data.

We must always consider all aspects of validity and reliability in the design phase of our research and provide evidence of the validity and reliability of our research in the discussion of the research methodology and in the conclusions drawn from our research.
In the case of **doctrinal research**, validity and reliability will be promoted by:

- performing an exhaustive literature survey;
- using credible sources of documentary data – legislation, case law (particularly case law establishing a precedent) and the writings of acknowledged experts in the field;
- establishing or using an appropriate theoretical basis for the research; and
- carrying out a rigorous analysis and interpretation of the data, based on established rules for interpreting statutes and sound arguments supported by credible evidence.

**Bias in research**

Bias in research is any influence, condition or set of conditions that, singly or together, distorts the data. It therefore attacks the integrity of the facts. A number of different types of bias can undermine the validity of the research. Many of the types of bias are associated with questionnaires. The types of bias include:

- **Experimenter bias** or **interpreter bias** - the researcher’s personality can influence an interview or personal prejudices may affect the way that qualitative data are analysed;
- **Sampling bias** – any influence that may have disturbed the randomness by which the choice of the sample has been made (for example, substituting one sampling unit with another);
- **Response-rate bias** – the characteristics of non-respondents to a survey may influence the conclusions;
- **Central tendency bias** – respondents ticking boxes in a questionnaire may consistently tick the “medium” response to avoid making a choice;
- **Leniency bias** – respondents hesitate to be too critical;
- **Volunteer bias** – the characteristics of volunteers are such that they may give responses reflecting what they believe the researcher wants, or socially acceptable responses;
- **Halo-effect bias** – when judging a person or product that has one outstanding attribute (for example a popular sportsman), this may affect the respondents’ judgement of all other attributes;
- **Acquiescent-response set bias** – Respondents who always choose the “yes” response.

There are techniques available in all types of surveys which can help to combat these types of bias.

Possible bias can arise in relation to non-respondents which can sometimes be identified in the following ways:

- scrutinise the questionnaire for items that could distinguish respondents from non-respondents;
- compare early responses with later ones – significant differences in response may
indicate a bias;

- select a number of non-respondents at random and contact them directly to obtain their responses. If these differ from the responses of those who responded voluntarily, this would indicate probable bias.

It is a fact of research that some measure of bias is often present. An honest and ethical researcher will acknowledge the possibility of bias and will try to estimate its effect.

Read: *Practical Research*: pages 98 to 100 – Identifying appropriate measuring instruments.

At this stage you are required to answer and submit a short-question test, which will be provided. The test will cover the aspects discussed thus far.

### 7.9 CONCLUDING REMARKS

You have now mastered all the essential tools that you need to write your research proposal, the last component of which is describing the research methodology:

- Decide on a suitable research methodology
- Design the research process, including the following:
  - specify the data to be collected
  - determine the method of collection and measurement of the data
  - determine the method of analysing the data
  - specify the ethical considerations to be addressed and the way in which this will be done
- Provide an overview of what will be covered in each chapter of the thesis

### 8. WRITING THE RESEARCH PROPOSAL

You have decided on a topic for your research and have narrowed the topic down to a research hypothesis(es) or question(s). You have set out your goals and you have performed a conceptual analysis (where relevant) in order to define your data, identify the assumptions you need to make to limit the scope of your research and possibly to decide what questions you will include in your survey. You have decided exactly what research approach you will adopt and thought about how you will deal with ethical considerations. You have planned how you will collect and measure and analyse your data. NOW you need to write your research plan up in the form of a research proposal.

A research proposal is a very formal structured document, that must be presented in the format prescribed by the university and contain the prescribed information. The research proposal will be evaluated by an academic committee of the school and when approved, you can start with your research. Remember that you are using this document to “sell” your
proposal to a committee, which may include academics who are not experts in your field of research or even your discipline. You must set it out clearly and explain fully, so that the readers are left with no unanswered questions. Presentation is important, as well as language, grammar, sentence construction and punctuation.

A research proposal (and a thesis) is an extended argument based on evidence. Arguments may involve deductive logic or inductive logic. These were described earlier in the module. The type of logic on which your research is based will determine the design of your research. Starting with a theory (derived from your literature survey), you would gather evidence (data) to support the theory and reach a conclusion as to the validity of the theory (deductive logic), or you could begin with an observation, gather the evidence and arrive at a theory (inductive reasoning).

8.1 THE STRUCTURE AND CONTENT OF THE RESEARCH PROPOSAL

In broad terms, your research proposal must explain WHY you are undertaking your research, WHAT your research aims to achieve and HOW you plan to carry out your research.

Read: Practical Research: Chapter 6 – Writing the research proposal.

The diagram below provides a detailed description of exactly what a research proposal should contain. The structure of your research proposal may not follow the exact structure in the diagram, but all the elements must be present.
# RECOMMENDATIONS FOR AN ACCEPTABLE PROPOSAL

## 1. Cover page

The cover page must comply with the university/faculty/departmental requirements. Ensure that all relevant information is provided.

## 2. Provisional title

- The provisional title must be brief – usually between 12 – 15 words
- It must reflect the nature of the research, the research problem and should include the key words
- Avoid “catchy”, funny or clever titles
- It should not be in the form of a question.

**Note:** A person carrying out a search of library data bases should be able to decide, based on the title, whether this thesis is relevant for his or her own research. An example of a poor title: *Tax avoidance – quo vadis?*

## 3. Background and problem statement

- Describe the background to and context of the study

  **Note:** This could be done by means of a limited literature review in order to describe the nature of the problem, or by way of a clear description of the practical, work-related problem giving rise to the research, together with references to literature (where relevant).

- Formulate the research problem clearly and concisely, but comprehensively
- State the research hypothesis (hypotheses), where relevant, incorporating all research variables.

  **Note:** This section usually starts with a broad description of the background, narrowing down to the research problem – therefore, from the general to the specific. It must be clear from this section where the present research fits into the broad body of knowledge. You will note also that the research problem and the goals of the research (next section) must be closely aligned.

## 4. Research goals

- State the goals of the research clearly
- An overarching goal is usually stated, following by the sub-goals which would achieve the broad goal of the research
- There must be a clear link between the research goals, the title and the research problem
- Do not confuse the research goals with the research methods
- Make sure that the goals are realistic and achievable – this relates to the scope of the research.

  **Note:** The goals set out WHAT you aim to do.
5. **Purpose of the research**

- Clearly state the reason why the research will be undertaken – this is based on the research question.

[Note: The purpose of the research may be, for example, to attempt to bring certainty where uncertainty exists in a particular area, to develop a model for future use in solving a problem, to test a theory in a context where it has not been tested, to attempt to solve a practical problem, or to bring a new perspective to a field of research, etc. The section explains WHY you are doing the research.]

6. **Significance of the study**

- Describe the contribution that the present research will make to the general body of knowledge.
- Do not make the claim that “this study will make an important contribution . . .” – you should simply indicate, to the extent necessary to enable the reader to judge its importance, where the research fits into the existing body of knowledge, indicating the gap that it could fill or the practical problem that it could help to solve.

[Note: This section sets out WHY the research is important.]

7. **Literature review**

- The literature review takes the form of an argument, using relevant literature to support the argument.
- Major landmark studies or classic, seminal studies related to the research problem must be included.
- The most recent research must also be included.
- Predominantly journal articles should be included in the body of the literature surveyed (books and textbooks are often not up to date or at the cutting edge); internet sources must be used judiciously as the standard of the content varies.
- Contrasting views or research findings must be discussed, compared and critically evaluated.
- The literature review must be set out clearly and systematically and could be set out in chronological order.
- The literature survey must support the research question, justify the significance of the research and reflect its purpose. Your research is grounded in literature and the review should reflect this.
- The literature must be well presented and interpreted.
- Do not present material that may be interesting but not relevant. Focus on the research question.

8. **Research methods and design**

In describing your research methods and design, you must include the following:
- Describe the data to be used for the research, including the population and how the sample will be selected (where relevant).
- Describe how the data will be obtained – documentary sources, questionnaire or interview or observations.
• Describe how the data will be measured (where relevant) – for example, by way of a pen and paper test.
• Describe how the data will be analysed – qualitative thematic analysis or quantitative statistical analysis, or a combination of both.
• Describe how the results will be interpreted – for example, using existing research, an existing model or theory, etc.
• Justify the research methods you have chosen to use.
• Reflect on potential sources of bias.
• Explain how you will try to ensure the objectivity, reliability and validity of the conclusions (for example, using multiple methods, models, populations, measuring instruments, sources of documentary data, etc.).
• If you are doing empirical research, describe the design of the questionnaire, interview schedule, observation checklist, etc.

9. Definitions, assumptions and limitations of scope

• State the relevant definitions and if you have adopted special definitions for the purpose of your research, these must be clearly explained.
• Set out any assumptions that you will make in designing and carrying out your research.
• Any limitations of scope must be clearly identified – these limitations may apply to the research population, time period, etc.

10. Ethical considerations

• Clearly identify all relevant ethical considerations (which would apply in every case where human beings or animals are the subjects of the research).
• Explain how the ethical considerations will be addressed in order to protect the participants:
  - confidentiality of the responses
  - anonymity of the participants
  - the right of participants to withdraw from the research or the voluntary nature of their participation in a once-off intervention
  - how the participants will be protected from harm (where relevant)
  - the use of a letter of consent and its contents
  - any de-briefing that will be carried out (where relevant)
  - compliance with the requirements of ethical committees, panels, etc.
• In the case of doctrinal research, where documents are all in the public domain, ethical considerations seldom arise.

11. Preliminary chapter outline

This could be in the form of a draft list of the contents of the chapters or set out in paragraph form describing what will be covered in each chapter of the thesis.

12. Reference list

• Make sure that you follow the prescribed referencing method TO THE LETTER.
• Make sure that the reference list is accurate and complete.
• At some universities the research proposal reference list only contains the list of sources actually cited in the proposal; at other universities a full bibliography is required.

The following notes relating to research proposals may also be helpful:

8.2 THE ROLE OF A RESEARCH PROPOSAL

The research proposal is usually submitted to a Faculty Higher Degrees Committee for approval. Students are often required to defend their research proposal before the Committee. This satisfies, in part, the SAQA requirement for a Master’s or doctoral student to be able to present and communicate the [interim] results of his or her research. Whether you are presenting it in person or only the written document, the research proposal should “sell” your research to the Committee. A well written proposal should leave the readers with no unanswered questions.

8.3 PROBLEMS EXPERIENCED BY STUDENTS IN WRITING THE PROPOSAL

In getting to the point where they are able to submit an acceptable research proposal, students often experience a number of problems. Some of the common problems are discussed below.

• Setting out the research question and the goals and sub-goals

Because students have not surveyed and studied the literature in sufficient detail, identified the particular research niche that their research will fill or carefully thought through exactly what they want to achieve, the section of their research proposals which deals with the goals of the research is often set out in vague and incoherent terms.

• Confusing an idea with a well worked-out research plan in the research methodology section

Students often present only a vague idea of how they will carry out their research, not a well thought-out and detailed plan, showing what data they will use, how the data will be obtained and secured and how the data will be analysed and interpreted.

• Not considering the scope of the proposed research

One of the most common errors that students make is to underestimate the scope of the research that they propose. One student proposed to conduct 400 interviews (for a mini thesis of 80 000 words). From both a resource and a time point of view, that would have been ridiculous. He obviously had no experience of the time it takes to transpose the interview, obtain confirmation from the interviewee and analyse the responses.

• When to stop surveying the literature

Students find difficulty in judging when they have done enough reading in order to write the research proposal. The research proposal does not require an exhaustive survey of the literature; that is required for the thesis itself. You need to do sufficient reading to be able to explain the context of the research, the nature of the research problem, the niche that your
research occupies in the body of knowledge and to demonstrate the contribution it will make to this body of knowledge.

- **Not appreciating the time it takes to write a research proposal**

To write a research proposal that is likely to be accepted takes up a considerable portion of the total time taken to complete the thesis. After all, you need to do a fairly comprehensive literature survey, design the research (that requires a lot of hard thinking and probably a lot of reading on research methods), get ethical clearance, where relevant, and write the proposal in the required format.

- **Writing skills**

Some students in the accounting field have had very little training in formal academic writing. In many instances you will need to make use of an editor.

- **Logical reasoning skills**

Students often find difficulty in constructing a logical argument. This starts from the internal logic of each sentence, each paragraph, etc. This often manifests as a problem with writing, but has a deeper underlying cause – problems with logical reasoning. It is also reflected in the inability to structure the chapters, headings and sub-headings in a logical way to reflect the development of the research argument. Remember that your proposal (and your thesis) is an extended argument, supported by evidence. You must be constantly aware of possible illogicality in all aspects of your research and make sure that every aspect of your proposal is logical.

### 8.4 ASSESSING THE QUALITY OF THE RESEARCH PROPOSAL

Leedy\(^\text{25}\) lists the following weaknesses identified in proposals submitted to the National Institute of Health:

- **Weaknesses related to the research problem**

The description of the project is so nebulous and unfocused that the purpose of the research is unclear. The problem is unimportant or unlikely to yield new information. The hypothesis is ill-defined, doubtful or unsound, or it rests on insufficient evidence. The problem is more complex than the investigator realises. The problem is of interest only to a particular, localized group, or in some other way has limited relevance to the field as a whole.

- **Weaknesses related to the research design and methodology**

The description of the design and/or method is so vague and unfocused as to prevent adequate evaluation of its worth. The data the investigator wishes to use are either difficult to obtain or inappropriate for the research problem. The proposed methods, measurement instruments, or procedures are inappropriate for the research problem. Appropriate controls are either lacking or inadequate. The statistical analysis has not received adequate consideration, is too simplistic, or is unlikely to yield accurate and clear-cut results.

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- **Weaknesses relating to the investigator**

The investigator does not have sufficient training or experience for the proposed research. The investigator appears to be unfamiliar with the literature relevant to the research problem. The investigator has insufficient time to devote to the project.

- **Weaknesses related to resources**

The institutional setting is unfavourable for the proposed research. The proposed use of equipment, support staff, or other resources is unrealistic.

Some other common failings include the following:

- The title usually has to be changed as it does not reflect the tenor of the research, including the main key words.

- The introductory or context paragraph(s) do not set out the logical development of the research problem or question. Research identified in the literature survey is simply documented, with no attempt to use the literature to present an argument, by comparing and contrasting earlier findings in order to demonstrate where the student’s research fits in – the gap that it fills – and therefore the research problem.

Instead of allowing the reader to judge the relevance and importance of the proposed research from the presentation of the argument leading up to the formulation of their research problem, students often make ambitious claims about the importance of their particular research and its contribution to the body of knowledge.

Many students fail to recognise that they are writing the proposal to be read by a person who is an informed reader, but not an expert in the topic. The discussion is not sufficiently explanatory. Terms and concepts are often not fully explained or defined.

The literature survey in the contextual discussion and the reference list appended to the proposal often reflects the use of mainly references from the popular press instead of reputable journal articles and the most recent, as well as seminal research.

- The section in which the goals of the research are set out is usually one of the weakest sections of the proposal. Ideally, an overall goal or research question should be presented, followed by all the sub-goals or aims that need to be achieved in order to achieve the main goal.

Students frequently mix the goals with the contextual discussion (particularly the contribution to be made to the field of study) and, even more frequently, include research methods with the goals. Often the poor articulation of goals reflects the fact that the student has a broad idea of what he or she wants to achieve, but has not done enough reading or thinking in order to present clear goals for the research.

- The description of the research methods and design is always the most poorly written section of the research proposal. The proposal does not set out clearly what data will be used, how the data will be obtained, how it will be analysed and how interpreted.
Research goals, the anticipated contribution that the research will make and the contextual discussion are often described, instead of the method.

Frequently, the student does not have any clear plan for how he or she is going to set about doing the research, and puts down some vague ideas. In other instances, the student has extravagant plans to conduct the research, including large numbers of interviews. Often the student has not made sure that the data will be available before submitting the proposal.

Many students forget to identify ethical issues that arise and the need for ethical clearance by the appropriate structure in the university.

- There is often a lack of alignment between the title of the research, the goals and the research method and design. The question arises whether in carrying out the research in the way the student proposes, he or she will be in a position to achieve the goals.

- The scope of the research is inappropriate. The student may propose to take on too much for a Master’s these or half thesis, or too little for a doctoral thesis.

You may feel at this stage that you have done so much work and all that you have to show for it is a single document. Don’t despair. The work required to write a proposal usually involves a substantial proportion of the total time required to write a thesis. It also usually forms the basis for chapter 1 of your thesis and is therefore time well spent. Once you have written your research proposal, you will know exactly what you plan to do and how you are going to set about doing it.

8.5 HINTS ON WRITING

While we are discussing the writing of your research proposal, you may benefit from the following hints on academic writing.

Technical aspects

Language use must be clear and correct and no slang terms or jargon should be used. The proposal (and the thesis) should be written in “academic register”. Avoid the use of emotive words, such as “huge”, “terrifying”, “shocking”, etc. Academic writing appeals to the logic of the reader and not the reader’s emotions.

Pay particular attention to language, punctuation and grammar.

- Use the “spell check” option, but set it on UK or South African English.

- Make sure that you write full sentences. Many students start sentences with words like “while”, “if”, “although”, “since” or “because”. These are conjunctions which join sections of a sentence. Students often write a sentence such as: “As research is a skill which few have mastered and there are few textbooks relevant to accountants.” This is not a sentence.

- Students often mix singular and plural, for example: “One class of taxpayers are . . . “ (and it appears in textbooks as well).
• Students often use a semi-colon “;” instead of a comma “,”. If you feel tempted to use a semi-colon, you probably need to break the sentence into two sentences.

• Many students use “...’s” incorrectly. If you write “taxpayer’s returns”, you are saying “the returns of the taxpayer”. In the plural that would be: “taxpayers’”. “Taxpayer’s” is not the plural of “taxpayer”.

• Avoid using capital letters, unless absolutely necessary.

• Don’t use the expression “per” – “per section 1” should simply be written as “in terms of section 1”.

• Don’t use the first person “I” (or “we”). In the Humanities Faculty, use of the first person is acceptable, but not in the Commerce Faculty. You can use expressions such as “it is submitted . . .”, or “it appears . . .”, rather than “I think” or “I conclude”.

• Use the simplest possible language. Some students believe that academic writing must use “big” words. Unfortunately they then use them incorrectly. One student, who had a real problem, used words that sound the same, but have a different meaning, like “confer” when he meant “infer”. Use a dictionary.

• Abbreviations and acronyms must be used very sparingly. Only use an abbreviation or acronym when a particular term is used many times in the proposal (or thesis) and is in common use in this form, for example, “gross domestic product” is invariably referred to as GDP. Another example that would be acceptable is the “South African Revenue Services” (referred to as SARS). I have seen students refer to the Income Tax Act as “the IT Act”. Not only is the use of acronyms and abbreviations irritating to the reader, but also unprofessional. Write the expression out in full the first time that it is used and then, in brackets, the abbreviation or acronym that will be used in the document.

Make your document look professional. Use 1,5 spacing and leave a margin suitable for binding. Use paragraph numbering sparingly, but use it well.

Proofread very carefully. Placing a ruler under the line of type that you are proofreading helps to slow the eye down. Reading your work out loud enables you to identify the lack of clarity in logical reasoning.

If you include a “bulleted” list of items following a colon (:), each bulleted item should begin with a lower case letter and end with a semi-colon. If the bulleted items are complete sentences, you should start with a capital letter and end with a full stop. Numbers of up to two digits must be written out in words; numbers of more than three digits are expressed in figures.

Referencing

Every statement that you make, that is not your own must have a reference, whether it is a quotation or simply a paraphrase of something someone else has stated. Statements such as “it is a well-known fact” or “most writers agree” must be backed up by references as authority for these statements. Where the reader of your work would be uncertain whether a statement is your own or that of another writer, make it clear by stating, for example, “it is submitted . . .”, “it appears that . . .”, “clearly . . .”, “therefore . . .”, or “it can be concluded . . .”.
Another way of doing this is by saying “in the opinion of the writer . . .”, but this can become clumsy.

Refer to the Resource Kit where the prescribed referencing method is described.

Long quotations are indented and a smaller font is used, without inverted commas. Shorter quotations within a sentence of text should be within inverted commas.

Primary data is preferred to secondary data – refer to the original texts (that is, directly to the taxation Acts or the decided tax cases and not to texts where these are described). Reference to writings of acknowledged experts on a topic is preferable to reference to writings in the popular media.

Logical argument

Research is, in essence, an extended argument in which a hypothesis or question is subjected to testing and interpretation, using sound logic. Each paragraph should consist of a single unit of logic – not each sentence as a paragraph or long paragraphs consisting of different units of logic.

It is important to include a sufficiently detailed explanation of the background and important concepts. You are not writing for your lecturer or supervisor, but for other readers (including outside examiners). You should assume that the person reading your work is a reasonably informed, but not an expert reader. To give a few examples: Eugene, who is writing on failure prediction models, has explained why it is important to be able to predict corporate failure and has discussed the background to the development of failure prediction models. Blake, who is writing on share valuations, discusses why it is important to value shares and describes the various valuation models and their uses. Lance, who is comparing the test of intention with similar tests for the general deduction formula, would first sketch the background of how tax is levied, the gross income definition and the general deduction formula, the capital versus revenue question and the need for the courts to interpret certain terms used in the Income Tax Act. Only once you have adequately explained the background and technical aspects, is your reader able to contextualize and understand the research and follow your argument. Never lose sight of the fact that, in your research proposal, you must answer the questions: What? Why? How?

The most important aspect of reporting on your research is maintaining the “golden thread” of your argument. On a macro level, the goals, methodology and the methods used in your research must be logically aligned. On a more detailed level, each chapter must start with an introduction briefly setting out what the chapter will cover and what it contributes to attaining the goals of the research. It must also be linked with what was covered in the previous chapter. Each chapter must also end with a brief summary of the findings of the chapter and must be linked with the following chapter. The headings of sections within the chapter must also present a logical development of the argument presented in the chapter. Each paragraph must represent a unit of logic (not every sentence a new paragraph). Where a section or a paragraph of the chapter has presented a lengthy and involved argument, this should briefly be summarised and linked with the new section or paragraph. You must lead the reader through your argument, using “sign posts” and linkages.
To give you some idea of the structure of a research essay (or term paper as it is often called) you can refer to:


There are examples of term papers in the textbook, which are fully annotated with comments on various aspects.

**TASK**

To test your writing ability, the following exercise may be of assistance. Identify the nature of the errors.

1. As South Africa is a country of many cultures with differing values and beliefs that affect the political perceptions of its people.
   
   There are three methods to calculate free cash flows. Namely the operating perspective, the finance perspective and the migration method.

2. It will make a huge difference to the Gross National Product of South Africa.
   
   Many taxpayers engage in disgraceful tax evasion schemes, depriving the country of desperately needed tax revenue.

3. I will compare and contrast international methods of energy taxation to South Africa.
   
   I will analyse how electricity consumption is taxed in countries around the world.

4. Amounts are taxed on the earlier date of receipt or accrual. This research will analyse this aspect of tax.

5. Peter Dingaza who is a South African resident earning his income in the form of remuneration and investments. However, Peter has a hunch that dividends paid by foreign company’s will not be taxed as per the income tax act; and wishes to affect huge foreign investments. As a friend informed him that their tax advisor suggested with regards to Section 1 of the act. Peter is terrified that he will be fined; because he is a good citizen and tax avoidance is an evil.
Refer to the footnote below for suggestions as to the type of errors in these examples.

9. CONCLUSION

You have now covered all the material that you need to write a successful research proposal. You have done more than that, however, you have mastered all of the skills that you need to carry out your research – collecting and measuring the data, analysing and interpreting it and writing your research thesis.

Before we end the discussion, however, a few remarks are necessary on a problem that most researchers encounter at some stage in their research – either the inability to start writing, or writer’s block during the course of writing. There are a couple of techniques that may assist with this. Don’t imagine that you need to see the “end of the road” before you start writing. Write paragraphs or even sentences that may be useful in your proposal (or your thesis). Don’t be concerned about putting them into logical order or under certain headings. Simply write. You can always delete them or restructure what you have written so that they fit into a certain section or under a certain heading. If you experience writer’s block, set your research aside for two weeks and forget about it. When you come back to it and read what you have written, you will be surprised to see how good it is. Taking a break also helps you to see things in perspective. Often, while you have stopped consciously thinking about your research, your brain seems to have been carrying on and when you return to the research, the words will simply flow out in logical sequence. If all else fails, start editing or even formatting the text, just to get started. Soon you will be adding sentences and paragraphs and you will have broken the log jam.

All that is left for us to do is to wish you good luck!

261. Incomplete sentences
2. Using emotive words – appealing to emotions rather than rational minds
3. Internal logic of a sentence
4. Explain to the non-expert reader
5. Incomplete sentences: starting with “Peter Dingaza, who ...” and “As a friend informed ...”
   Starting a sentence with “however”
   Using the expression “as per” instead of “in terms of”
   Using slang: “hunch”
   Incorrect use of the apostrophe: “country’s”, instead of “countries”
   Incorrect use of upper and lower case letters: “income tax act”, “act” and “Section 1”
   Using the semi-colon incorrectly: “as per the income tax act; and wishes to...”
   Incorrect use of a word: “affect” instead of “effect”
   Emotive language: “huge foreign investments”, “terrified”
   Mixing singular and plural: “a friend [singular] informed him that their [plural] tax advisor”
   Incorrect use of the word “regards”: should be “with regard to”; or “as regards”
   Illogical sentence: “Peter is terrified that he will be fined, because he is a good citizen ...”. He is a good citizen and would therefore pay his taxes, not because he is terrified of a fine. “...he is a good citizen and tax avoidance is an evil”. The fact that tax avoidance is an “evil” has nothing to do with the fact that Peter is a good citizen.
APPENDIX 1

LAW REPORTS

South Africa (principal series)

(a) In the register of cases the name of the case is given fully. In the text and footnotes all non-essential information should be left out, for example NO, NNO, and others, et cetera.

(b) The case must be cited in the form, also as regards brackets, given in the particular law report.

(c) Specific sections of a case are referred to with reference to either the page(s), for example 263H, where it is indicated in the reported volume, or a paragraph(s) of the judgment (as has become customary nowadays). The paragraph is identified by way of square brackets, for example [137].

(d) Since 4 February 1997 the Appellate Division of the Supreme Court is known as the Supreme Court of Appeal, and the other divisions (provincial or local) of the Supreme Court as those of the High Court. In references to judgments before and after 4 February 1997 this distinction has to be observed.

(e) Note the following explanations: Ex parte means by (from) only one party, or as the sole interested party; In re means in the matter of; NO (NNO) stands for nomine officii - in his (their) official capacity or by virtue of his office (say, as trustee in insolvency); R stands for Rex or Regina - the Crown (King or Queen) in a prosecution before South Africa became a republic, after which the State (S) prosecuted.

The following is an alphabetic list of the principal South African law report series:

AD
Reports of the Appellate Division of the Supreme Court of South Africa. Annual volumes. 1910-46.
Example: Marks Ltd v Laughton 1920 AD 12

All SA
All South African Law Reports: 1996-. Current. Four volumes a year, three monthly issues making a volume. It covers decisions of the Constitutional Court, the Supreme Court of Appeal, the divisions of the High Courts of South Africa and the superior courts of Botswana, Lesotho, Namibia and Zimbabwe. The reference to the court is in the letter or letters in the last parenthesis of the citation.
Example: Holomisa v Argus Newspapers Ltd [1996] 1 All SA 478 (W)

BCLR
Example: S v Makwanyane and another 1995 (6) BCLR 665 (CC)

BLLR
Example: Roberts and Another v OK Bazaars Ltd t/a Hyperama [1994] 7 BLLR 1 (LAC)

Buch
Buchanan's Reports. Cape Supreme Court. 1868-9;1873-9.
Example: Mostert v The Master (1878) 8 Buch 83

Buch AC
Buchanan's Appeal Cases. Cape Appeal Court. 1880-6; 1904-10.
Example: Kemp v Roper NO (1886) 2 Buch AC 141.
CPD  Reports of the Cape Provincial Division. Annual volumes. 1910-46.  
Example: Wilson v Wilson 1943 CPD 352

CTR  Cape Times Reports. Annual volumes. 1891-1910. 
Example: Solomon v Wolff (1898) 8 CTR 184 (cite only if the case is not reported in SC).

Thereafter annual volumes to 1909.  
Example: In re Estate of Barnes (1880) 1 EDC 5.

EDL  Reports of the Eastern Districts Local Division. Annual volumes. 1910-46. 
Example: Ex parte Francis 1936 EDL 377.

GWL  Reports of the Griqualand West Local Division. Volumes: 1910-17; 1918-23; 1924-6; thereafter annual volumes to 1946.  
Example: Ex parte Klein 1938 GWL 11.

HCG  Reports of the High Court of Griqualand. There are ten volumes, each covering two or more years, as from 1882.  
Example: R v Nel (1903) 9 HCG 286.

Hertzog  Hertzog's Reports. High Court of the South African Republic 1893.  
Example: Bailey v Bailey (1893) Hertzog 56.

ILR  Industrial Law Reports: 1980-. Current. Report relevant judgments of the Constitutional Court, the Supreme Court of Appeal, the divisions of the High Courts of South Africa and the Industrial Court. Published in the Industrial Law Journal (ILJ).  
Example: Metal and Allied Workers Union and another v A Mauchle (Pty) Ltd t/a Precision Tools (1980) 1 ILJ 227 (IC).

Kotzé  Kotzé's Reports. High Court of the Transvaal. 1877-81.  
Example: Ex parte De Hart (1880) Kotzé 590.

Menz  Menzies' Reports - (sometimes referred to as M). Three volumes, covering reports of the Cape Supreme Court 1829-49. Cases arranged according to subject matter.  
Example: Barker v Barker (1829) 1 Menz 265.

Examples: Bell v Ramsay (1929) 50 NLR 265. In re Hardwood Timber Co Ltd 1932 NLR 312.

NPD  Reports of the Natal Provincial Division (and the Durban and Coast Local Division). Annual volumes. 1933-46.  
Example: Johnstone v Johnstone 1941 NPD 279.
Off Rep
Official Reports. (Sometimes referred to as OR.) Reports of the High Court of the South African Republic 1893-8. Six volumes, each covering a year. Original version in Dutch, but reference is usually made to the English translation.

OPD
Reports of the Orange Free State Provincial Division. Annual volumes. 1910-46.
Example: *Smith v Philips* 1931 OPD 107

ORC
Orange River Colony Reports. High Court of the Orange River Colony. Annual volumes. 1903-9.
Example: *Attwell v Botha* 1907 ORC 2

PH
Prentice-Hall Weekly Legal Service. 1923-1995. After 1930 two volumes a year. Digest of decisions. Cases arranged according to subject-matter. Thus 'A' refers to mercantile law. The reference to the court in the last parenthesis is the same as with SA (below).
Example: *Ex parte Atkinson* 1943 (1) PH B11 (W).

R and N
Rhodesia and Nyasaland Law Reports. 1956-64. Among the reports is those of the Federal Supreme Court (cited FC or FSC) and the High Court of Southern Rhodesia (cited SR). Annual volumes. 1956-64.
Example: *Smith v Smith* 1962 R and N 469 (FC)

RLR
Example: *R v Phineas* 1965 RLR 217 (A)

Roscoe
Example: *Domov v Hackett* (1871) 2 Roscoe 38

SA
South African Law Reports 1947-. Current. Six volumes a year, two monthly issues making a volume. It covers decisions of the South African Constitutional Court, the Supreme Court of Appeal, the High Courts, the Labour Court, the Competition Appeal Court, the Labour Appeal Court, the Land Claims Court; the superior courts of Namibia, Zimbabwe and their predecessors; and the previously independent states of Transkei, Bophuthatswana, Ciskei and Venda. The reference to the court is in the letter or letters in the last parenthesis of the citation.
Example: *S v Soci* 1986 (2) SA 14 (A)

SACR
Example: *S v Maseko* 1990 (1) SACR 107 (A)

SAR
Reports of the High Court of the South African Republic (Transvaal). Four volumes, covering 1881-92.
Example: *Fern Gold Mining Company v Tobias* (1890) 3 SAR 134

SC
Cape Supreme Court Reports. 27 volumes.1880-1910.
Example: *Tradesmen's Benefit Society v Du Preez* (1887) 5 SC 269

SR  Reports of the High Court of Southern Rhodesia. 1899;1911-55. (Followed by R and N.) Example: *Ex parte Low: In re Estate of Mangan* 1915 SR 147

SWA  Reports of the High Court of South West Africa. Annual volumes. 1920-45. (No volume for 1946.) Example: *Kehrmann v Weiss* 1935 SWA 33


TPD  Reports of the Transvaal Provincial Division. Annual volumes 1910-46. Example: *Hurwitz v Taylor* 1926 TPD 81

WLD  Reports of the Witwatersrand Local Division. Annual volumes. 1910-46. Example: *Ex parte Groth* 1927 WLD 303

ZLR  Zimbabwe Law Reports. 1980-. (S) at the end of the citation stands for the Supreme Court of Zimbabwe (prior to 28 August 1981, it was the High Court of Zimbabwe, Appellate Division, cited as (A)).

NOTE: If a series of law reports (whether from South Africa or abroad) has volume numbers (as with the Cape SC), keep to the year of publication of the volume number as the indicated year of decision of the case, not the year in which judgment was delivered, unless (as with Menzies' Reports) the year of publication of the volumes bears no relationship to the judgments in it.

List of abbreviations indicating the court:

Courts with the highest authority:

(CC)  Constitutional Court (KH: Konstitusionele Hof)

(SCA)  Supreme Court of Appeal (HHA: Hoogste Hof van Appèl)

High Court of South Africa

(C)  Cape Provincial Division (K)

(D)  Durban and Coast Local Division (D)

(E)  Eastern Cape Division; prior to 28 June 1957, the Eastern Districts Local Division (E)

(GW)  Griqualand West Local Division (31 May 1910-30 April1969; succeeded by the Northern Cape Division) (GW)

(N)  Natal Provincial Division (N)

(NC)  Northern Cape Division (from 1 May 1969) (NK)

(O)  Orange Free State Provincial Division (O)
(SE) South-Eastern Cape Local Division (SO)
(T) Transvaal Provincial Division (T)
(W) Witwatersrand Local Division (W)

Other courts

(CAC) Competition Appeal Court
(IC) Industrial Court
(LCC) Land Claims Court
(LAC) Labour Appeal Court

South West Africa/Namibia

(SWA) High Court of South West Africa until the coming into operation of the Supreme Court Act 59 of 1959; thereafter a 'provincial division' of the Supreme Court of South Africa, under the name of the South West Africa Division; from 1 January 1982 the independent Supreme Court of South West Africa until 1990 (2) and thereafter:

(Nm) High Court of Namibia

(NS) Supreme Court of Namibia

Zimbabwe

(FC) Supreme Court of the Federation of Rhodesia and Nyasaland 1955-63
(R) High Court of Rhodesia, General Division, 1966-79
(RA) High Court of Rhodesia, Appellate Division, 1966-79
(SR) High Court of Southern Rhodesia, General Division, until Unilateral Declaration of Independence (UDI) in 1966
(SRA) High Court of Southern Rhodesia, Appellate Division, until UDI in 1966
(Z) High Court of Zimbabwe, General Division, after 1980 when the country was given this name, until 27 August 1981, thereafter the High Court of Zimbabwe
(ZA) High Court of Zimbabwe, Appellate Division, during this period, then replaced by (ZS) - see below
(ZR) High Court of Zimbabwe-Rhodesia, General Division, 1979-80
(ZRA) High Court of Zimbabwe-Rhodesia, Appellate Division, 1979-80
(ZS) Supreme Court of Zimbabwe from 28 August 1981
Independent States

The previously independent states of Transkei, Bophuthatswana, Ciskei and Venda were cited as follows during their existence:

(THC) High Court of Transkei from 1 August 1973 until independence on 26 October 1979

(Tk) Supreme Court of Transkei thereafter, until 30 April 1979, and thereafter Supreme Court of Transkei, General Division

(TkA) Supreme Court of Transkei, Appellate Division, from 1 May 1979

(B) High Court of Bophuthatswana from 27 April 1977 until independence on 6 December; thereafter, until 3 October 1982, the Supreme Court of Bophuthatswana; thereafter the Supreme Court of Bophuthatswana, General Division

(BA) Supreme Court of Bophuthatswana, Appellate Division, from 4 October 1982

(Ck) High Court of Ciskei from 21 August 1981 until independence on 4 December 1981, and thereafter the Supreme Court of Ciskei

(V) High Court of Venda from 1 July 1979 until independence on 13 September 1979, and thereafter the Supreme Court of Venda

Foreign countries

For a full guide to the law reports of England, Scotland, Ireland and the Commonwealth countries, see volume 1 of the fourth edition of Halsbury's *Laws of England* or volume 1 of *The Digest* (which used to be called *The English and Empire Digest*).

A very useful general guide to modes of citation of foreign law reports generally is Donald Raistrick *Index to Legal Citations and Abbreviations*.

Very often a volume of law reports from a country will indicate in its opening pages how it is to be cited. But sometimes you will have to scout around for the correct mode of citation of a case. Normally you will pick it up from a secondary source, such as a book or article.

Legislation

South Africa

(a) The basic form is the Income Tax Act 58 of 1962. The first time where reference is made to an act, the full reference is given in the text or in a footnote. After that an abbreviated form can be used, such as the Income Tax Act of 1962, the Income Tax Act 1962 or even (depending on whether the date has been established) the Income Tax Act or (exceptionally) the 1962 Act. Do not refer to Act 58 of 1962 in place of the Income Tax Act 58 of 1962; indeed, do not use this mode of reference at all. If there are references in the text to only one specific act, the later references - after the first full reference to the specific act - are to the Act (note the capital A) or to an abbreviated
form. If reference should be made to a whole series of different acts, a list of the acts should be supplied in a separate list. Please note that the Citation of Constitutional Laws Act 5 of 2005 provides that the final Constitution should always be referred to as Constitution of the Republic of South Africa, 1996. This is therefore an exception to the general rule. If an act is referred to more than once, you can quote the full title once and add in brackets (hereinafter referred to as the Act or the Income Tax Act). This then makes it unnecessary to repeat the reference every time you refer to the act.

(b) No commas or repetitions of the word Act should be used in a reference (such as the Income Tax Act, Act 58 of 1962).

(c) Acts are divided into sections. A section may be divided into subsections, a subsection into a paragraph, and a paragraph into subparagraphs. They run as follows: section 1; subsection (1); paragraph (a); subparagraph (i). Section, subsection, paragraph and subparagraph must each be spelt in full when it is the first word in a sentence; otherwise abbreviate as a rule as s (plural ss), subsec (plural subsecs), para (plural paras). For example: s 56(1) or subsec (1) of s 56, but not subs 56(l) which is illogical. If you wish to cite two or more subsections of a section, do it as follows: subsecs (1) and (4) of s 56, or s 56(1) and (4).

(d) Provincial ordinances are referred to in the same way as acts, except that where necessary the first letter of the name of the province must be added in this way: the Town-planning and Townships Ordinance 25 of 1965 (G).

(e) In subordinate legislation (such as schedules to an act or ordinance, proclamations, rules, regulations, and bylaws) and other material in the Government Gazette (abbreviation: GG) and similar official publications, the following is applicable:

(i) A schedule normally has paragraphs or items; and subparagraphs or subitems. Example: Schedule 4 para 13 (2) (a) of the Income Tax Act 58 of 1962.

(ii) A proclamation (abbreviation: proc) has sections, subsections and paragraphs. Example: Proclamation 51 GG 3651 of 15 April 1983 (also see the explanation under (iii)). Within a sentence use Proc, thus: By Proc 51 of 1983 certain substances were declared to be special nuclear material for the purposes of the Nuclear Energy Act of 1982.

(iii) A Government Gazette is identified by way of different numbers on the first page. Some editions are regulation gazettes, some are extraordinary government gazettes, and some are ordinary editions. Regulation gazettes and extraordinary gazettes are numbered independently and apart from the successive numbering. For the purposes of quotation, these numbers, as well as the volume number given on the left-hand side under the title block of the first page of each Government Gazette, should be ignored. A specific Government Gazette is effectively identified with the aid of the date of publication and the ongoing numbering. These details are found on the first page of the relevant gazette right under the title block in the middle (date) and right-hand side (number). The complete example of reference is as follows: Proclamation R138 Government Gazette 8331 of 6 August 1982.
(iv) Rules are made under acts. The subdivisions are subrules and paragraphs. Example: rule 57(2)(a) of the Uniform Rules of the Supreme Court.

(v) Regulations (abbreviation: reg) are made under acts and ordinances. The subdivisions are subregulations and paragraphs. Example: Reg 5(2)(f) of the regulations in terms of s 22G of the Medicines and Related Substances Act 101 of 1965 (GN R553 GG 26304 of 30 April 2004). (GN stands for Government Notice.)

(vi) Bylaws of local authorities have sections, subsections and paragraphs.

Foreign countries

Cite the name of the relevant legislation or subordinate legislation fully, and precisely follow the divisions found in the legislation. If uncertain, scout around for the correct mode of citation which you will normally pick up from a related secondary source, such as a book or article dealing with the legislation. A few countries may be mentioned:

United Kingdom: Up to 1962 the mode of citation referred to the regnal year and chapter (as c), with the monarch's name (the number in an arabic numeral), thus the Pilotage Act 1913 (2 and 3 Geo 5 c 31). (After the first reference, it is enough to speak of the Pilotage Act 1913 or even simply the Pilotage Act.) Since 1962 the monarch's name has been dropped, as in the Housing Act 1977 (c 48). (Often it is considered unnecessary to refer to the chapter.)

United States of America: In general statutes use sections, but § for the abbreviation, thus: § 20 (where we would say s 20). But a sentence starts as we would start: Section 20 states. For federal legislation, the full reference includes both the name of the Act, as well as its reference in the annotated statutes (the Sentencing Act of 1984 (18 USC § 3551)).

Germany and Switzerland: The codes are divided into sections, the § sign being used.

France and Italy: The codes are divided into articles. Thus: art 1156 Code Civil.
## APPENDIX 2

### CORRELATION ANALYSIS

#### STATISTICAL TESTING TASK – RAW DATA

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APPENDIX 3
QUALITATIVE DATA ANALYSIS

STUDENTS NOT ATTENDING LECTURES: EXPLORATORY QUESTIONNAIRE – RESPONSES

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| 1 Male | • Laziness/indifference/hung over/peer pressure.  
• At times it may be due to lecturer incompetence — in other words a “whats the point in going” mentality may exist.  
• At times, work pressure. A trade-off may exist between going to the lecture and spending the period working on an assignment/studying for a test.  
• Timing of lectures may also play an important factor. “Dawnies” are “too early” for students. The lunchtime lecture is also missed regularly due to hunger (12.20-1.05). Late afternoon lectures are also particularly unpopular.  
• Winter is another reason, students would rather spend the day in bed watching movies/drinking coffee etc. |
| 2 Male | • To study for tests as they are all clumped together (3rd year Acc).  
• To catch up/do tuts for hand in, due to lack of time. Afternoons were taken up by tutorials.  
• Super 14/Cricket on TV.  
• Inability of some lecturers/content to keep or even gain class interest.  
• Generally lectures are not missed, as the work tends to snowball. |
| 3 Female | • In most situations, students do not honestly intend to miss lectures, however, there are circumstances where students will miss lectures because of some honest excuse. I for one have a medical issue, hence am some days when am supposed to be in lectures, am off to the doctors. However, we also miss these lectures because we assume we can easily catch up, and before we know it we are over a month behind in lectures. |
| 4 Female | • Health reasons  
• Sometimes waking up late  
• Too much workload to be covered therefore people end up avoiding class to cover up |
| 5 Male | • If the subject matter is boring then this will more often than not lead me to miss the lectures for that course. Examples of this are management and auditing, where attending the lectures was optional for me because the subject matter was of no interest.  
• For some courses, it is easier to do the work in my own time than to go to lectures. Where this is the case, I will skip the lecture and practice the work in my own time (Stats/TOF/Math/Ecos).  
• Sometimes it could be because of lecture style. The work itself may be interesting however the lecturer may not be able to keep my interest (Accounting 2).  
• The work is too easy (Prof Com/Ethics).  
• Afternoons are for sport in my opinion so if lectures are in the afternoon I used to skip (Philosophy).  
• Sometimes simply sleeping seems like a good idea and therefore missing a day of lectures seems like a good idea. |
| 6 Male | • Studying for tests  
• Raining outside and too lazy to get out of bed  
• Please note: This is not applicable to this year. I have not missed a lecture this year & I hope to continue this practice. |
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<th>Reasons for missing lectures</th>
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| 7 | Female | | • I try to attend all my lectures but when I have too much work and I need to catch up on work, I sometimes miss lectures.  
• I think my fellow students miss lectures when there are tests coming up or if they feel they are not getting any benefit from attending lectures. |
| 8 | Female | | • I miss lectures if I’m sick or due to unforeseen circumstances have not slept and don’t think that I will miss much.  
• I might also miss a lecture if I need to study for a test, because they are too close together.  
• I generally don’t miss lectures, but if I do I would only miss the lectures that believe I could catch up quickly. |
| 9 | Female | | • Due to illness (this really does happen, not an excuse)  
• May not feel well that day or feel like I will go to lectures & sleep  
• I may have a clash with another lecture  
• It may be because I am bunking (bed is better)  
• First years have hangovers  
• There was a good party the night before  
• There is a test to learn for |
| 10 | Male | Under-Grad’s: | • Students feel they can catch up the work when it is “crunch time”, and would rather skip lectures and relax, and then work hard when it is necessary.  
• Some lecturers are boring and “well below average” compared to other lecturers e.g. the 2nd year accounting lecturer. Students may feel that they are not going to benefit from the lecture and feel they can spend their time better by not attending the lecture.  
• Some courses can be passed through minimal lecture attendance. For example, Info. Systems, which is a subject where marks are generally extracted from tutorials.  
• They might be hung-over  
Post-Grad’s:  
• These students, I believe, don’t really miss lectures unless they have a test coming up, and they feel their time is better spent learning than attending lectures. Or, if they are sick. |
| 11 | Male | Undergrad | • The reasons were just that I did not find many lectures from 1st to 3rd yr useful, & therefore missed lectures for any possible reason.  
• Most lectures, if not all, the students are capable of covering the work on their own without any help, especially subjects like, Management, commercial law, Auditing & even economics.  
• I’ve only missed 2 lectures because I was sick. |
| 12 | Male | | • The lectures I tend to miss are those that don’t add value to the text book. If the section looks self-explanatory or I am capable of going through that section without having problems then I feel it is not necessary to attend the lecture. I also have missed lectures because the lecturer does not explain himself clearly, so it tends to make me more confused when I go to the lecture. |
| 13 | Male | | • I find an hour spent going over my notes is more beneficial to me than an hour spent in lectures  
• The pace of lectures is very slow  
• Laziness!  
• Some lectures don’t have enough examples (the kind of questions we will expect in exams) — and seem to contain information that we will never be tested on. |
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| **14** | Male | Lectures can be very boring!  
• Other commitments such as test/assignments  
• Lectures are not interesting  
• Lectures are conducted at an inconvenient time e.g. in the afternoon on Friday  
• Students feel that they are not learning anything |
| **15** | Male | Exhaustion  
• Other commitments  
• Oversleeping  
• Laziness  
• Sometimes some lecturers are not engaging hence lectures are a bore.  
• Illness / sickness |
| **16** | Male | I usually weigh up whether I get enough out of the lecture to make it worth my while. It also relates to whether I think the lecturers or material is good and adds value to the course.  
• In general, I think some students miss lectures for various reasons, namely:  
• Some are lazy, tired or perhaps just don’t feel like going.  
• Some may miss if they are hungover after drinking during the week.  
• Some may miss because of an unfavourable timetable, i.e. they have a break before a late lecture and don’t feel like coming back to campus. |
| **17** | Male | I found at undergrad level, the lecturers were not making the lecture beneficial to me.  
• I spent a lot of time studying out of text-books, because this was adequate.  
• Lecture material was not adequate for test preparation, I found my time better spent going through old tests/exams.  
• If a lecture slot was set for help with answering a test question, that would be a good idea. |
| **18** | Male | If I do not feel the lecture would add value to my studies, I mite miss the lecture  
• Any unexpected personal reason If I am extremely stressed before a test/assignment I mite miss a - lecture - I do, however find this year, my lectures are vital and I would gain more by attending. |
| **19** | Female | Feel that I can better use that time for another purpose  
• If core work is not being done I find I am more likely to skip  
• Legitimately sick  
• Oversleep  
• Just don’t feel like it / lazy  
• May find lecturer/material boring (or easy) |
| **20** | Female | Feel that you are going to learn much, hence would rather stay away and learn on your own.  
• Have tests.  
• Lecture to early or to late. |
| **21** | Male | I think students miss lectures due to the fact that they are lazy.  
• There is normally never attendance registers at lectures and in ungrad this does not effect their DP.  
• Most ungrad students don’t realize how much they jeopardise their results by missing lectures.  
• Students going out during the week are also most likely to miss early morning lectures. If the lecturer is difficult to understand or boring then students feel they not missing out on anything by missing the lecture. |
REFERENCES


Connole, H. 1993. The research enterprise. In H. Connole, B. Smith & R Wiseman. Issues and methods in research: Study guide. Underdale, S. Australia: Distance Education Centre, University of South Australia.


