INRS7321

SUMMATIVE PROJECT 2024

The word count for the entire project is between **4500-5500 words**.

The wordcount is to be stipulated on the **title page of your document in square brackets i.e. = [4 873 words]**

Word count = INTRODUCTION to CONCLUSION

*This means that students exceeding the word count could lose a substantial amount of marks. For example, a student exceeding the 5500-word limit by submitting 6000 words, could find that they lose **all possible marks** allocated to the final section of the project.*

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- **Number** each heading and subheading except for REFERENCE LIST
- **Add page numbers accurately**

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REFERENCE LIST

REMEMBER!!!!

Your numbering, headings and subheadings should look EXACTLY the same as in my table of contents.

UPPERCASE font should be UPPERCASE in-text and…

Sentence case font should be Sentence case in-text

2. PARADIGMATIC SHIFTS

2.1 Positivism

EXAM ARTICLES

<u>Preselected articles:</u>

Article 1:

Makola, Z. and Ntoyanto-Tyatyantsi, N., 2023. Post graduate students' experiences with research ethics: A south African perspective. *Journal of Empirical Research on Human Research Ethics*, *18*(4), pp.208-217. [Online]. Available at: https://journals.sagepub.com/doi/epub/10.1177/15562646231188004 [Accessed: 1 February 2024].

Article 2:

Dlamini, S. and Chinje, N.B., 2019. The influence of loyalty programs on South African Youth's repeat purchase behaviour. *Journal of Business and Retail Management Research*, *13*(3). [Online]. Available at: DOI: https://doi.org/10.24052/JBRMR/V13IS03/ART-21 [Accessed: 1 February 2024].

Article 3:

Adu, E.O. and Badaru, K.A., 2020. University students' media use and political participation in South Africa. *South African Journal of Higher Education*, *34*(1), pp.18-36. [Online]. Available at: https://ezproxy.iielearn.ac.za/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=eue&AN=142630563&site=ehost-live&scope=site [Accessed 1 February 2024]

REMEMBER!!!!

Use **additional sources/online sources** besides your textbook to assist with the motivation and explanation of selecting sampling methods or data collection- and data analysis methods etc. You can use the **same sources to answer more than one question.**

Have a **minimum of 5 sources** in your REFERENCE LIST

TAKE NOTE!!!!!

You are asked to use multiple examples for your answers to questions. Keep word count in mind.

APPLICATION TO INRS7321

SUMMATIVE: PROJECT 1

+/- 6000 words

COVER PAGE

Elizabeth O'Connor

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PATHWAY: INRS7321

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?? June 2024

[Word count ….]

SUMMATIVE PROJECT: ANALYSES OF THREE RESEARCH ARTICLES

1. INTRODUCTION

EXAMPLE

This project aims to analyse three preselected research articles to explore the research processes and designs that were used in each study.

Each article will be analysed in accordance with a framework of research components through which the research paradigm used will be identified together with the research problem. Thereafter the research question aligned with the identified problem will be reviewed, followed by an investigation into the sampling methods, data collection and data analysis processes used for each study. An alternate paradigm will then be proposed for each article during which a reframing of the analysed research components will be presented.

The three articles will also be reviewed to detect any ethical issues together with a final concluding argument towards the validity or trustworthiness in each study.

BODY OF ASSIGNMENT

- **KEEP your arguments factual and reference sources regularly to substantiate your arguments. AVOID redundancy** i.e. over-explaining

- **DO NOT add information to the articles. Use what you are presented with**

- **AVOID** first person references i.e …I, me, you, us

- Use clear but **formal language** and proper punctuation. Edit and proofread your assignment. Download *Grammarly* to assist you

- **DO NOT use your own opinions to prove a point. Make references to the articles while sufficiently paraphrasing its content. Use additional sources to defend, motivate and explain choices you make when alternate paradigms are presented.**

BODY

- **Use** the correct referencing techniques and punctuation
- **Always add** a date to the author's surname
- **NO** titles, initials or first names of authors in-text, **JUST** surnames
- **Use** *et al.* correctly
- **Paraphrase** properly to avoid high similarity %. Your similarity % will be high **BUT** you can be flagged for plagiarism if similarity goes above 70%

BODY

- **MAKE SURE** the numbering, headings and subheadings in your document reflect your Table of Contents **correctly**.
- **Make sure** your page numbers in the document correlate with the page numbers in your Table of Contents
- **Don't** use URLs as in-text referencing i.e www.research.ac.uk
- Refer to the title of the article, author(s) surnames of the article and the date of the article in section 2. Thereafter refer to Article 1, 2 or 3 **BUT** do so correctly.
- *Do make reference to the article authors, date and pages when using examples from the articles.*
- *NO, Du Plooy-Cilliers et al. (2014) is NOT the source to reference when you use examples from each article*

PLEASE TAKE NOTE!!!!!!

The following discussion of the respective parts of PROJECT 1 is only applied to: *Article 1 -* **Post Graduate Students' Experiences with Research Ethics: A South African Perspective**

YOU have to provide analyses of ALL THREE articles in your SUMMATIVE project. You can use parts of my discussion relating to Article 1 in your own discussion but paraphrase it and improve on my discussion by using more/different examples.

I include suggestions about chapters in your textbook that apply to the various questions which you can study before analysing all of the articles. Use your textbook and an additional 4 or more sources to support your answers in this project.

2. ANALYSIS OF THREE RESEARCH ARTICLES

2.1 The paradigm/tradition

<u>Assignment:</u> *Identify the paradigm/tradition for each article. You will need to* <mark>motivate each choice of paradigm using examples</mark> *from each of the articles as well as a* <mark>critical discussion</mark> *of each of the paradigms chosen.*

In Article 1 by Makola and Ntoyanto-Tyatyantsi (2023) titled *Postgraduate students' experiences with research ethics: A South African perspective*, the interpretivist paradigm is used. The following examples from the article confirm this evaluation:

Article 1 indicates a **qualitative study** was conducted using <u>semi-structured interviews</u> with a **small sample** of 12 respondents to determine the <u>different experiences</u> of postgraduate students with the research ethical process preceding their studies. According to Du Plooy-Cilliers, Davis and Bezuidenhout (2021:34-35) interpretivism aims to gain an **understanding of how a phenomenon can be perceived differently using qualitative research methods**, similar to what has been used in Article 1…. *add more or different examples to lower the similarity %*

Critical justify-cation

In Article 2 by Dlamini en Chinje (2019) titled………*do this analysis yourself etc.*

In Article 3 by Bandaru and Adu (2020) titled …. *do this analysis yourself etc.*

Do the same for Articles 2 and 3. To determine the correct paradigm look for keywords in the articles that can assist like I did with Article 1.

See Chapter 2 in your textbook to find touchpoints in the articles you are analysing as a means to identify and motivate/justify the paradigm for each

2.2 Research methodology

<u>Assignment:</u> *Identify and explain the* <mark>research methodology</mark> *for each article.* <mark>Motivate your answer by using evidence</mark> *from each article as well as* <mark>theory from various sources.</mark>

In Article 1 by Makola and Ntoyanto-Tyatyantsi (2023:208, 210-211) it is indicated that qualitative, exploratory, online, semi-structured interviews on pre-determined deductive themes were used to collect data. Using subjective, interpretive methods enabled the researchers to study social reality by applying an open-ended approach. This approach aligns with Bless, Higson-Smith and Sithole (2013:12-20) who argue that social reality is best measured with interpretivist, qualitative research methods to allow for subjective experiences and descriptions from respondents.

In Article 2 by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In Article 3 by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3. To determine the correct methodology look for keywords in the articles that can assist.

See Chapters 5, 12 and 13 in your textbook to find touchpoints in the articles you are analysing as a means to justify and defend your arguments. Also do additional research using other sources if the methods mentioned in the article do not feature in your textbook.

2.3 Research problem

In Article 1 by Makola and Ntoyanto-Tyatyantsi (2023:208, 210) the purpose of the study is indicated as an investigation into postgraduate students' experiences with research ethics as a means to gain an understanding of the challenges encountered when applying for ethics clearance during their research projects and how they overcame them.

In Article 2 by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In Article 3 by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3. It is important that the way you formulate the article's research problem statement clearly reflects the paradigm. For each article only look at one paragraph starting the problem statement as: *The aim/purpose of the study in this article is/was to...* (add as much relevant detail as you can from each article)

See Chapter 4 in your textbook on the research problem

2.4 Population and population parameters

Assignment: *Using examples from each article, <mark>describe the population and population parameters</mark> used in each article.*

2.4.1 Target-, accessible populations and parameters

In Article 1 by Makola and Ntoyanto-Tyatyantsi (2023:208, 210) the numbers of the <mark>target- and accessible populations</mark> are not clearly stipulated in the article but it can safely be deduced that the target population would have been all alumni who completed their Master and Doctoral studies in all disciplines at all tertiary institutions in South Africa between 2018 and 2021, and who had to go through institutional ethical clearance processes with their projects. The <mark>accessible population</mark> were all interested past students meeting the parameters and who graduated from eight different institutions in five different provinces. They were reached via a pamphlet detailing the project- and contact information posted on a newly created Twitter account's feed and stories. Those that responded to the invitation became the accessible population.

The <mark>population parameters</mark> for this study were:
* People who have completed their postgraduate studies/MA and Doctoral studies between 2018 and 2021
* Who graduated from a South African university or a university of technology
* From different academic disciplines (Chemistry, Entrepreneurship, Environmental Sciences, Human Resource Management, Management Studies, Marketing, Population Studies and |Development, Public Administration and Management, Strategic Management, Supply Chain Management, Zoology), at different educational institutions in South Africa in five provinces (Gauteng, Limpopo, KwaZulu-Natal, North-West and Western Cape)
* Had exposure to research ethics clearance processes
* Using Twitter
* 20 years or older
* Access to MS Teams

In Article 2 by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In Article 3 by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3. To determine the populations and parameters, search for keywords in the articles that can assist.

See Chapter 11 in your textbook to find touchpoints in the articles you are analysing as a means to justify and defend your arguments

2.5 Sampling method in each article and advantage of this method

In Article 1 by Makola and Ntoyanto-Tyatyantsi (2023:210) two sampling methods have been selected namely purposive- and snowball sampling. As per Du Plooy-Cilliers *et al.* (2021:160-162) and Bless *et al.* (2013:172-174) purposive sampling is best suited for selecting a sample based on respondents meeting the population parameters whereas snowball sampling is suitable when it is not clear where the respondents reside or are to be found. Due to the POPI Act implemented in South Africa, tertiary institutions no longer share personal details of any student, past student or employee. As such the snowball sampling method utilised in this study via an invitation on Twitter and a request to students to look for respondents with similar parameters was an acceptable method to find past Master and Doctoral students who graduated between 2018 and 2021. As past students have shown interest in the study the researchers applied purposive sampling ensuring the sample of respondents met all the parameters stipulated early on in the study. In doing this, the researchers were able to select 12 respondents to do interviews with. The two sampling methods selected here are also non-probability sampling methods which is a suitable choice for qualitative studies (Scribbr, 2022).

In Article 2 by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In Article 3 by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3. To discuss the sampling methods in each article, search for references to sampling methods. Remember to add an advantage for each sampling method selected in each article. Use different sources for this purpose.

See Chapter 11 in your textbook to find touchpoints in the articles you are analysing as a means to justify and defend your arguments

2.6 Data collection method used for each study in each article

In Article 1 by Makola and Ntoyanto-Tyatyantsi (2023:208, 211) the data collection method used for this study was online, semi-structured interviews which were conducted on MS Teams. Each interview lasted 50-60 minutes and was audio-recorded. As per Du Plooy-Cilliers *et al.* (2021) semi-structured interviews are suitable instruments to collect information-rich data. Pre-determined open-ended questions, aligned with deductively-selected themes, are asked to all respondents and their answers are recorded with their consent. Follow-up or prompt questions are also allowed during the interview which contribute to more data for analysis. Since this study was conducted amidst the Covid-19 global pandemic, the decision to conduct interviews online was an ethical choice to keep respondents safe. The duration of the interviews allowed for in-depth discussions with respondents. Using the same researcher for all interviews also ensured consistency in questions, prompt questions and allocated time that had been used for each interview.

In Article 2 by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In Article 3 by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3.

See Chapters 12 and 13 in your textbook to find touchpoints in the articles you are analysing as a means to justify and defend your arguments. Also use other sources for this purpose.

2.7 Key findings from data analysis

Assignment: <mark>*Support analysis with evidence from the articles.*</mark>

In Article 1 by Makola and Ntoyanto-Tyatyantsi (2023:211) the findings of the study reflect both the data analysis that were conducted on the transcriptions from the interviews as well as an alignment with the seven themes that were pre-determined deductively from literature and which also emerged from the interviews. These are listed in the Findings section of the article. These themes are all relevant to the goal of the study as reflected in the problem statement and as such answers the question as to what the experiences of past Master and Doctoral students were regarding the ethics clearance processes their projects were subjected to. Key findings of each theme is discussed in sufficient detail (Makola & Ntoyanto-Tyatyantsi, 2023:211-214) and supported with verbatim quotes from respondents as a means to support the discussed findings. The findings were further confirmed by sending a draft to the respondents to ascertain whether their views aligned with the presented findings. One suggestion would be that researchers could have listed and discussed the themes considered from most to least important by respondents in the Findings section. Perceptions of Research Ethics for example rated quite high amongst the majority of respondents compared to Research Ethics in the Curriculum and should therefore have been listed and discussed first. This would have provided an overview of what respondents perceived to be the most to least important themes to them personally.

In Article 2 by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In Article 3 by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3.

See Chapters 15 and 16 in your textbook to find touchpoints in the articles you are analysing as a means to justify and defend your arguments. Also use other sources for this purpose.

2.8 Trustworthiness or Reliability and Validity

*Assignment: **Discuss how the researchers would have ensured trustworthiness and/or reliability and validity when conducting the research. Your answer can be a combination of examples from the articles and theory from various sources.***

In **Article 1** by Makola and Ntoyanto-Tyatyantsi (2023) a qualitative study is discussed and as such trustworthiness applies (Du Plooy-Cilliers *et al.*, 2021:295-297). Four elements of trustworthiness are considered in this article namely credibility, transferability, dependability and confirmability. Makola and Ntoyanto-Tyatyantsi (2023:211) mention in the Data Analysis section that respondents were given the opportunity to review their statements for accuracy and to clarify any misrepresentations (element of dependability). It is also mentioned that the elements of credibility and confirmability were ensured by source triangulation whereby multiple sources of data were used to confirm conclusions of findings. Since past students from various institutions across various qualifications were included in the research, the study also meets the element of transferability where the same study can be repeated with other past students meeting the same parameters with a high probability of similar results.

In **Article 2** by Dlamini en Chinje (2019) ***do this analysis yourself etc.***

In **Article 3** by Bandaru and Adu (2020) ***do this analysis yourself etc.***

Do the same for Articles 2 and 3. Remember that the interpretivist (qualitative) part of a study needs to be discussed from the perspective of trustworthiness and its 4 components whereas the positivist (quantitative) part of a study needs to be discussed from the perspective of validity and reliability. Critical realism will consider both.

See Chapter17 in your textbook to find touchpoints in the articles you are analysing as a means to justify and defend your arguments. Also use other sources for this purpose.

2.9 Ethical issues before, during and after the research process

Assignment: **Discuss what were considered and what could have been considered in addition.**

In **Article 1** by Makola and Ntoyanto-Tyatyantsi (2023:210-211) ethics were applied to the research study. It is mentioned that before the study started the researchers provided interested respondents with an informative letter, a consent form and a convenient interview day and time. The researchers also awaited ethics approval from their institution to conduct the study. During the study respondents were informed of their voluntariness to participate as well as a confirmation of the confidentiality of information provided. Anonymity was ensured by not making the identities of the institutions or the respondents known. After the transcriptions were completed, the researchers shared their transcriptions and findings with the respondents to correct any misrepresentations and to confirm their agreement with the results and findings.

In **Article 2** by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In **Article 3** by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3.

See Chapter18 in your textbook to find touchpoints in the articles you are analysing as a means to justify and defend your arguments. Also use other sources for this purpose.

2.10 Gaps and limitations in each article

Assignment: ==**Highlight the gaps, limitations or unexplored aspects that you believe warranted investigation.**==

In **Article 1** by Makola and Ntoyanto-Tyatyantsi (2023:215) the researchers identify limitations and gaps in this study as follows: future studies should involve students from more institutions and disciplines since the qualitative study with limited generalisability capacity that was conducted only reflect on the institutions that were selected. Researchers also reflect on the small sample that was selected for this study which is not representative of all past postgraduate students who were exposed to the ethical clearance processes. The snowball sampling method that was used has a limited value-add since respondents given the responsibility to find other respondents meeting the same parameters will more often than not come from the same discipline or qualification and as such the results can only be generalised to a small context.

In **Article 2** by Dlamini en Chinje (2019) ***do this analysis yourself etc.***

In **Article 3** by Bandaru and Adu (2020) ***do this analysis yourself etc.***

Do the same for Articles 2 and 3.

This section requires an understanding of research to be able to depict gaps in the study that may have affected the results. You need to justify each choice of a gap or limitation. ==Consider one or more of the following for a discussion on limitations or gaps, if applicable. Also clearly explain why your argument is applicable:==

Sample size, sampling method, data collection instruments or methods, constructs of measurement and how they were analysed, trustworthiness or validity and reliability and also ethics

CHANGE THE PARADIGM IN EACH ARTICLE FOR THIS SECTION

Students. Before we start with this part of the assignment we just need to recap a few things:

If you change the paradigm you need to rewrite **EVERYTHING ELSE**. This will include the…

- Research problem and aim aligned with the alternate paradigm
- Research question aligned with the alternate paradigm
- Research objectives or Hypotheses aligned with the alternate paradigm

Remember a positivist paradigm seeks a definite correlation between two variables whereas an interpretivist paradigm seeks understanding or explanation. Critical realism is a combination of both with an ADDED component of wanting to improve or change the outcome of the phenomenon under investigation. Your wording in each newly selected paradigm has to change in accordance. Follow my examples on the next few slides and do the same for all 3 the articles

NB!!!!!!!!!!!!!! TAKE NOTE

If you follow my example where I change the **interpretivist paradigm** in Article 1 **into an alternate positivist paradigm** you will have **NO CHOICE** but to change…

Article 2 **into an alternate critical realist paradigm** and,

Article 3 **into an alternate interpretivist paradigm**

Each of the three paradigms have to be used as an alternate/alternative paradigm **ONCE**. You **CANNOT** use one paradigm twice as an alternate paradigm.

3. ALTERNATE PARADIGMS APPLIED TO EACH OF THE THREE ARTICLES

3.1 The alternate paradigm selected for each article stipulated clearly

In **Article 1** by Makola and Ntoyanto-Tyatyantsi (2023) titled *Postgraduate students' experiences with research ethics: A South African perspective*, the original paradigm used is interpretivism. For this section of the portfolio the paradigm for this article is **changed to positivism** and all analyses that follow will reflect on this article from a positivist perspective.

In **Article 2** by Dlamini en Chinje (2019) titled… ***do this analysis yourself etc.***

In **Article 3** by Bandaru and Adu (2020) titled …. ***do this analysis yourself etc.***

3.2 Analyses of each article from alternate paradigmatic perspectives

3.2.1 The new research problem for each article

Within a positivist paradigm a correlation need to be established between variables to make a prediction of the end result (Du Plooy-Cilliers *et al.*, 2023). In **Article 1** by Makola and Ntoyanto-Tyatyantsi (2023) the new positivist problem statement could be to investigate or explore the correlation between the introduction of a compulsory research ethics course (as independent variable) for Master and Doctoral students and their ability to apply research ethics correctly (as dependable variable) in their research projects across all qualifications at all South African tertiary institutions. The aim is to determine if there is a positive correlation between the respective variables. *Keep in mind you can also go the route of more positive experiences amongst students of the ethics process..... There are a few correlations that can be considered for your problem statements... but choose only one*

In **Article 2** by Dlamini en Chinje (2019) ***do this yourself etc.***

In **Article 3** by Bandaru and Adu (2020) ***do this yourself etc.***

Do the same for Articles 2 and 3. REMEMBER to phrase the problem statement correctly based on the selected paradigm. Also keep in mind that for the alternate critical realist article your problem statement needs to consider both an interpretivist and positivist problem statement as well as an intention to bring about change or improvement. Phrase carefully.

See Chapter 2 and Chapter 4 in your textbook to find touchpoints in the articles you are analysing as a means to identify the alternate paradigmatic elements to add to the alternate problem statements for each article.

3.2.2 The new research question/s for each article aligned with the alternate paradigm

In **Article 1** a positivist research question to be considered for the study based on the above problem statement can be:

Research Question: **Is there a correlation** between the introduction of a compulsory research ethics course for Master and Doctoral students across all qualifications at all tertiary institutions in South Africa, and their ability to apply research ethics correctly to their research projects?

In **Article 2** by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In **Article 3** by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3. REMEMBER each paradigm will have specific question words to be used. Refrain from wording your RQ using incorrect question words that will reflect the aim of the study differently from what it should be... given the new alternate paradigm you have selected.

See Chapter 4 in your textbook.

3.2.3 The hypotheses and/or research objectives for each article aligned with the alternate paradigm

In **Article 1** a Ha with additional hypotheses should be considered for the study:

Ha = There is a correlation between the introduction of a compulsory research ethics course for Master and Doctoral students across all qualifications at all tertiary institutions in South Africa, and their ability to apply research ethics correctly to their research projects

Hypotheses:

- If a **compulsory research ethics course** is introduced to postgraduate students, fewer cases of unethical conduct will be detected during the data collection phase.

- If all Master and Doctoral students **understand the principles of research ethics** the institution and the population participating in the study will be protected.

- If all Master and Doctoral students across South Africa at all tertiary institutions sufficiently understand the principles of research ethics they will **receive ethical clearance quicker**.

- If all Master and Doctoral students' ability to apply research ethics correctly increase their **research project outcomes will meet the ethical requirements of the respective institutions** they are enrolled at.

In **Article 2** by Dlamini en Chinje (2019)

In **Article 3** by Bandaru and Adu (2020)

When considering objectives start with
To determine if…

Do the same for Articles 2 and 3. REMEMBER a quantitative (positivist) study requires a RQ and a Ha and additional hypotheses.

A qualitative (interpretivist) study requires two research questions and additional objectives.

A mixed method (critical realist) study will require RQs, Ha and objectives

See Chapters 4 and 6 in your textbook.

3.2.4 The target- and accessible populations, parameters and units of analysis for each article aligned with alternate paradigm

In **Article 1** a positivist paradigm is selected as alternate paradigm and as such a quantitative study is required. As per Bless *et al.* (2013) and Du Plooy-Cilliers *et al.* (2021) a quantitative study requires a large sample where each unit of analysis has an equal chance of being selected for the study. To determine the size of the **target population** all Master and Doctoral students who are in the process of applying for ethical clearance at all tertiary institutions in South Africa will be selected.

The accessible population will be all Master and Doctoral students who are in the process of applying for ethical clearance at all tertiary institutions in Gauteng which is where the researcher resides.

From the number of **units of analysis** in the accessible population a **20% sample** will be selected to ensure all participants have been considered equally for the study.

The units of analysis will thus be all selected Master and Doctoral students applying for ethical clearance at tertiary institutions in Gauteng and their answers to the Likert Scale survey they will fill out.

Parameters for this study will be as follows:

- All South African Master students across all qualifications who are applying for ethical clearance
- All South African Doctoral students across all qualifications who are applying for ethical clearance
- All faculties at all South African tertiary institutions catering for Master and Doctoral students will qualify
- Male and female students

In **Article 2** by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In **Article 3** by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3.

See Chapter 11 in your textbook.

3.2.5 Sample, sampling method and motivation for each, aligned with the alternate paradigm

For the study in **Article 1** an **alternate positivist sampling method** that can be considered would be one from the probability sampling category namely **systematic sampling**. According to Du Plooy-Cilliers *et al.* (2021) **each unit of analysis need to be numbered on the sampling frame list when the systematic sampling method is selected.** This requires name lists of all registered Gauteng Master and Doctoral students. in the process of applying for ethical clearance of which **one name will be selected randomly** and the other names to be selected for the sample will be based on a **sampling interval**. This will be the **most suitable sampling method** since the names of the Master and Doctoral students meeting the requirements will be available on all tertiary institutions' postgraduate systems which will make it possible to give each unit of analysis an equal chance of being selected.

Since a sample will be selected from all Gauteng tertiary institutions catering for Master and Doctoral students across all qualifications, a **20% sampling size** will be sufficient to represent the target population across South Africa due to **Gauteng having the most registered Master and Doctoral students of all tertiary institutions in South Africa (Usaf, 2023).**

In **Article 2** by Dlamini en Chinje (2019) ***do this analysis yourself etc.***

In **Article 3** by Bandaru and Adu (2020) ***do this analysis yourself etc.***

Do the same for Articles 2 and 3.

See Chapter 11 in your textbook.

3.2.6 The data collection method with explanation and motivation aligned with the alternate paradigm

For the study in **Article 1** the proposed alternate quantitative data collection method will be the **Likert Scale survey**. According to Voxco (2022) and Du Plooy-Cilliers *et al.* (2021:183) a Likert scale is an ordered scale from which participants choose one option that best aligns with their view. It is often used to measure respondents' attitudes by asking the extent to which they agree or disagree with a particular question or statement. Since the study aims to determine how much Master and Doctoral students in the process of applying for ethical clearance know about research ethics, this survey will be able to provide answers to this question on various scales. This will give the researcher sufficient information on the extent to which students need more training via a compulsory research ethics course, or not.

In **Article 2** by Dlamini en Chinje (2019) *do this analysis yourself etc.*

In **Article 3** by Bandaru and Adu (2020) *do this analysis yourself etc.*

Do the same for Articles 2 and 3.

See Chapters 12 and 13 in your textbook.

3.2.7 The data analysis method with explanation and motivation aligned with the alternate paradigm

For the study in **Article 1** the collected data can be analysed using descriptive statistics. Hypothesis testing will be important to answer the predicted correlation between the independent variable relating to a compulsory research ethics course and the dependent variable of an increased ability to apply research ethics correctly. For Ha testing the following steps can be considered (Du Plooy-Cilliers *et al.,* 2021):

Step 1 = Stating the Ha = There is a correlation between the introduction of a compulsory research ethics course for Master and Doctoral students across all qualifications at all tertiary institutions in South Africa, and their ability to apply research ethics correctly to their research projects. H0 = There is no correlation between the introduction of a compulsory research ethics course for Master and Doctoral students across all qualifications at all tertiary institutions in South Africa, and their ability to apply research ethics correctly to their research projects.

Step 2 = Determine the mean and standard deviation. If a 70% standard comprehension of research ethics is required to apply it correctly, a result of 50% comprehension amongst students would be considered a significant deviation from the standard and this will justify a compulsory research ethics course

Step 3 = Compute the test statistic. Since the majority of Master and Doctoral students applying for research ethics are in Gauteng, a sample size of 20% from the accessible population should provide sufficient normalised values to enable the generalisation of the results to the target population.

Step 4 = Recording the decision. If the results in steps 2 and 3 are accepted it will be possible to indicate whether the Ha or H0 is rejected.

In **Article 2** by Dlamini en Chinje (2019) ***do this analysis yourself etc.***

In **Article 3** by Bandaru and Adu (2020) ***do this analysis yourself etc.***

Do the same for Articles 2 and 3.

See [Chapters 15 and 16](#) in your textbook.

4. CONCLUSION

Add a reflective overview of the analyses performed on the selected articles

REFERENCE LIST

NO numbering of the section

NO numbering of any entry into this list

Alphabetical order

Reference correctly

At least 8 sources (including textbook)