UNIVERSITY OF JOHANNESBURG
FACULTY OF EDUCATION
NOVEMBER EXAMINATION 2014

PROGRAMME: B Ed (Hons)
MODULE: RESEARCH PROJECT: MATHEMATICS EDUCATION
CODE: RPA0027
TIME: 3 hours
MARKS: 100
EXAMINER: Dr ED Spangenberg
MODERATOR: Prof C Vermeulen (CPUT)
(This paper consists of 4 pages)

INSTRUCTIONS

Topic: **Attitudes of learners towards Mathematics/Mathematical Literacy**

This module focuses on the conducting of research in Mathematics Education. This module also introduces you to the planning of research, the identification of a research theme/topic and purpose, literature surveys, research methods/designs, ethical considerations, collecting and analysing data and writing the research report.

The text should be 30-50 pages (9 000 – 15 000 words) and comply with the following:

SECTION 1: TOPIC, RESEARCH QUESTION AND AIM
The issue that is investigated is clearly stated
The issue is narrowed down and focussed
The reason (rationale/motivation) for investigating the issue is argued clearly
The research question is stated explicitly
The research question links to the research issue
The main purpose (aim) of inquiry is clear
The stated aim links with the research issue and question
SECTION 2: LITERATURE REVIEW
The literature review relates to the research issue/question in Mathematics
The literature review is written in such a way that the relevance of the literature to the research question is made clear
The literature is argued in a logical/coherent manner
Relevant sources are used
SECTION 3: THE RESEARCH DESIGN
The following aspects are addressed and explained:
• Why is it a qualitative/quantitative study?
• What type of data collection method is used and why?
• How is the sample selected?
SECTION 4: RESEACH METHODOLOGY
The process of gathering data is described clearly
The data analysis process is described clearly with examples of raw data
The findings (categories/main themes) are (briefly) presented
Measures to ensure ethical conduct

The following rubric will be used to assess the research project:

Name of student: _____ Student number: _____

Assessment focus	**Criteria**	**Marks**	**Max marks**	**Learner marks**
Title page (What?)	• The title page is correct • The title is relevant, clear and unambiguous	1 1	2	
Abstract	The abstract is 125 words or less and presents a concise picture of the proposed research, including: • the problem; • major hypotheses/thesis; • sample and population; • a brief description of the measures; • the name of the design or a short description; • the major results; and • the major conclusions.	 1 1 1 1 1 1 1	7	
Introduction, problem statement and research question (Why?)	• The rationale is clearly stated (general to specific). • The problem statement is specific and focused, ties up with title and is relevant ("so what"?). • The argument/thesis is clear. • The research questions are clear. • The purpose/aim is stated. • Subtopics are in proper order.	1 1 1 1 1 1	6	
Literature overview	• Recent resources are used – not older than 5 years. • Enough resources are consulted – at least 10 sources. • The following questions are addressed: ➢ Why (background) ➢ What (Definitions) ➢ Where, who and when (previous research) • Nice 'big picture' holistic view – clear and logical development of subtopics/ideas. • Arguments and counter arguments are clear and logical and consistent connections are made with literature.	1 1 2 2 2 1 1	10	
Research design (How?)	• The philosophic framework is discussed. • The lens to view and interpret the study is provided. • The research design is explained. • The research methods are clearly explained. • Ethical measures are taken into consideration. • Reliability is addressed • Validity is addressed	2 2 2 2 2 2 2	14	

Data collection (What?) (Why?) (Who?) (When?) (Where?)	• The research methods/instruments (questionnaires/ interviews/documents/field notes) are well planned and included in the appendixes. • Sampling is done satisfactorily and explained (research context, population, sample, method). • The process of data collection is clearly explained.	4 4 4	12	
Data analysis	• Raw data is included in appendixes. • Process of data analyses is clearly explained. • Patterns are identified (codes, themes, categories). • Data is well presented (e.g. graphs and tables). • Data is well analysed and discussed.	2 2 2 2 2	10	
Findings, limitations and recommendations	• Findings are clearly discussed. • Limitations are addressed. • Recommendations for further research are made.	5 2 2	9	
Conclusions	• Summary of topic. • Relevant and appropriate. • Clear concluding ideas. • Signs of creative thought and insight.	2 1 1 1	5	
Reference list	• No plagiarism. • In-text referencing is correct. • At least 10 references are used. • Reference list is in alphabetical order. • Reference list is correct.	1 1 1 1 1	5	
Language editing	• Well edited. • No spelling errors. • No grammar mistakes. • Paragraphs are well planned. • The report is concise and clear.	2 2 2 2 2	10	
Technical requirements	• Well presented. • Neatly typed. • Way of presentation (e.g. ring-bind).	2 2 1	5	
Creativity; standard	• It is of exceptional quality. • It is relevant to needs in South Africa. • It is creative	2 1 2	5	
TOTAL MARK:			**100**	

TOTAL: 100

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