BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE EDUCATION

IMPACT OF OBJECTIVE TESTING ON FORM FOUR PUPILS ACADEMIC PERFORMANCE IN PRINCIPLES OF ACCOUNTS. A CASE OF FOUR SCHOOLS IN HURUNGWE DISTRICT.

BY

GWAYAGWAYA KUFACKWAMI ALBERT

B1543571

A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE POSTGRADUATE DIPLOMA IN EDUCATION AT BINDURA UNIVERSITY OF SCIENCE EDUCATION

APRIL 2019
APPROVAL FORM

The undersigned certify that they have read and recommended to Bindura University of Science Education the acceptance of a project entitled “Impact of objective testing on form four pupils academic performance in Principles of Accounts. A case study of four schools in Hurungwe District” submitted in partial fulfilment of the requirements of the Postgraduate Diploma in Education.

SUPERVISOR DATE
RELEASE FORM

Title of Project  Impact of objective testing on form four pupils’ academic performance in principles of accounts. A case study of four schools in Hurungwe.

Programme  Postgraduate Diploma in Education

Year  2019

Permission is hereby granted to Bindura University of Science Education to produce copies of this project and to lend or sell such copies for private, scholarly or scientific research purposes only. The author does not reserve the publication rights and the project nor may extensive extracts from it be printed or otherwise reproduced without the author’s written permission.

Signed

.................................................................

Gwayagwaya Kufkwami Albert
DEDICATION

I dedicate this piece of work to my two sons Alfred and Wilson as well as my two daughters Albertina and Alberta. They must climb higher than their father.
ABSTRACT

The study investigated the impact of objective testing on students’ academic performance in ordinary level principles of accounts, in Hurungwe District. The sample targeted twenty two teachers from the four high schools who were selected through purposive sampling. Questionnaires and interviews were used as data collection instruments. Final examination pass rates of principles of accounts students from the year 2008 to 2017 were collected upon permission from the four heads of the respective schools used as case studies. SPSS was used for analysis of the pass rates. The pass rates were subjected to correlation, regression and sample paired t-test statistics. The result for correlation was a weak positive correlation, which implied that the pass rates could have either increased or decreased drastically, representing an insignificant improvement in pass rates. Regression analysis also produced same findings, where the alternative hypothesis that multi choice paper (MCP) improved performance was accepted against the null hypothesis. However, sample paired t-test findings indicated that objective testing in the form of multiple choice questions (MCQ) did not bring about any significant improvement in students’ pass rates. The conclusion was that the type of instrument used to test learners does not affect performance, meaning that best performers logically perform well in any form of examination; hence why some schools continue to record increases in pass rates even after the MCP was introduced. The study recommends that a further study be carried out to find out if objective tests really improve learners performance at ordinary level.
ACKNOWLEDGEMENTS

The author would like to extend his gratitude to the people who contributed tremendously for this work to be a success. My special thanks go to my supervisor Professor Denhere for his patience and expert assistance. I would also want to thank my wife Blessing who typed and edited this dissertation. Ms Mutodi Precious a statistician helped with computing correlation, regression and paired t tests. Mary Takawira also helped with advice and unwavering support.
# TABLE OF CONTENTS:

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approval form</td>
<td>i</td>
</tr>
<tr>
<td>Release form</td>
<td>ii</td>
</tr>
<tr>
<td>Dedication</td>
<td>iii</td>
</tr>
<tr>
<td>Abstract</td>
<td>iv</td>
</tr>
<tr>
<td>Acknowledgement</td>
<td>v</td>
</tr>
<tr>
<td>Table of contents</td>
<td>vi</td>
</tr>
<tr>
<td>List of tables</td>
<td>viii</td>
</tr>
<tr>
<td>GENERAL INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.0 Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.1 background to the study</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Problem statement</td>
<td>2</td>
</tr>
<tr>
<td>1.3 Research objectives</td>
<td>3</td>
</tr>
<tr>
<td>1.4 Research questions</td>
<td>3</td>
</tr>
<tr>
<td>1.5 Research hypothesis</td>
<td>3</td>
</tr>
<tr>
<td>1.6 Significance of the study</td>
<td>4</td>
</tr>
<tr>
<td>1.7 Research assumptions</td>
<td>4</td>
</tr>
<tr>
<td>1.8 Delimitation of the study</td>
<td>4</td>
</tr>
<tr>
<td>1.9 Limitation of the study</td>
<td>4</td>
</tr>
<tr>
<td>1.10 Definitions of terms</td>
<td>4</td>
</tr>
<tr>
<td>1.11 Chapter summary</td>
<td>5</td>
</tr>
<tr>
<td>LITERATURE REVIEW</td>
<td>6</td>
</tr>
<tr>
<td>2.0 Introduction</td>
<td>6</td>
</tr>
<tr>
<td>2.1 Conceptual framework of objective testing</td>
<td>6</td>
</tr>
<tr>
<td>2.2 The testing effect</td>
<td>10</td>
</tr>
<tr>
<td>2.3 Types of objective tests</td>
<td>11</td>
</tr>
<tr>
<td>2.4 Relationship between objective tests and learners performance</td>
<td>16</td>
</tr>
<tr>
<td>2.5 Suitability of objective tests</td>
<td>18</td>
</tr>
<tr>
<td>2.6 Chapter summary</td>
<td>19</td>
</tr>
<tr>
<td>RESEARCH METHODOLOGY</td>
<td>20</td>
</tr>
<tr>
<td>3.0 Introduction</td>
<td>20</td>
</tr>
<tr>
<td>3.1 Research design</td>
<td>20</td>
</tr>
<tr>
<td>3.2 Research subjects</td>
<td>21</td>
</tr>
<tr>
<td>3.3 Research instruments</td>
<td>22</td>
</tr>
</tbody>
</table>
3.4 Data collection procedures 25
3.5 Data presentation and analysis procedures 25
3.6 Chapter summary 25
DATA PRESENTATION, ANALYSIS AND DISCUSSION 26
4.0 Introduction 26
4.1 Response rate 26
4.2 Background to the research 27
4.3 Types of objective tests 29
4.4 Relationship between objective tests and performance 30
4.5 Suitability of objective tests 31
4.6 Documentary analysis 33
4.7 Chapter summary 39
SUMMARY, CONCLUSION AND RECOMMENDATIONS 40
5.0 Introduction 40
5.1 Research summary 40
5.2 Research conclusion 41
5.3 Research recommendations 42
5.4 Chapter summary 44
References 45
Appendix 1 50
Appendix 2 51
Appendix 3 55
LIST OF TABLES

Table 4.1 Response Rate ............................................................................................................. 26
Table 4.2 Gender participation rate .......................................................................................... 27
Table 4.3 Experience .................................................................................................................. 28
Table 4.4 Types of Objective Tests .......................................................................................... 29
Table 4.5 Changes on pass rate ............................................................................................... 30
Table 4.6 Suitability of objective tests ..................................................................................... 31
Table 4.7 National Pass Rates .................................................................................................. 33
Table 4.8 Correlation Results ................................................................................................... 35
Table 4.9 Regression Analysis Results ..................................................................................... 36
Table 4.10 Paired sample t-Test Results .................................................................................. 37
CHAPTER I

GENERAL INTRODUCTION

1.0 Introduction

This chapter highlights the background of the study, problem statement, research objectives, research questions, literature review, research methodology, research plan, limitations, and delimitations as well as definition of terms.

1.1 Background to the study

Before November 2013 the Zimbabwe School Examination Council (ZIMSEC) examined the principles of accounts subject with only one paper which consists of two sections A and B over a period of three hours. Section A consisted of about four questions and had seventy four marks. Section B consisted of about three questions which were marked out of twenty six. Students were allowed to answer only two questions out of the three in this section. The paper had one hundred marks. All the questions were tested subjectively, that is they were all structured questions. Three skills were tested. The first skill tested knowledge with understanding of concepts and consisted twenty percent of the exam. The second skill tested the application of concepts and comprised seventy percent of the score. The third skill tested analysis of concepts and had ten percent. The table below shows the skills specification grid:

<table>
<thead>
<tr>
<th>Paper 1</th>
<th>Skill 1</th>
<th>Skill 2</th>
<th>Skill3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledge with understanding</td>
<td>Application</td>
<td>Analysis</td>
</tr>
<tr>
<td>20%</td>
<td>70%</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

In 2013 for November examination, ZIMSEC introduced a second paper which was tested objectively. It consisted of forty multiple choice questions (MCQ). The following table shows the skills weighting specification grid for the new arrangement:
<table>
<thead>
<tr>
<th>Paper</th>
<th>Skill 1</th>
<th>Skill 2</th>
<th>Skill 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Knowledge with understanding</td>
<td>Application</td>
<td>Analysis</td>
</tr>
<tr>
<td>Paper 1</td>
<td>65%</td>
<td>30%</td>
<td>5%</td>
</tr>
<tr>
<td>Paper 2</td>
<td>20%</td>
<td>70%</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>42.5%</td>
<td>50%</td>
<td>7.5%</td>
</tr>
</tbody>
</table>

The use of objective testing has also been adopted by professional bodies. Professional bodies such as the Association of Chartered Certified Accountants (ACCA) and the Chartered Institute of Management Accountants (CIMA) have also adopted the use of objective testing in their examination papers, (CIMA students’ magazine 2014). In the modern times the process of recruiting employees also relies on a widespread use of psychometric objective testing. The use of objective testing as an assessment method is gradually increasing across different academic disciplines such as engineering, nursing, psychology and other natural sciences. The widespread use of objective testing across the world has resulted in a dramatic shift from subjective testing. Objective testing methods like the use of multiple-choice questions are being increasingly used in higher education as a means of supplementing subjective tests or even replacing subjective tests. Some Examiners have moved from the use of subjective testing to full objective testing, whilst other examiners prefer to use a combination of both subjective and objective testing. The roles of educators and learners have been transformed by the advent of objective testing.

The Zimbabwe School Examination Council (ZIMSEC) has employed objective testing in the assessment of various subject areas. ZIMSEC is increasing the number of subjects examined using objective testing. Combined science, commerce, geography, principles of economics, agriculture, heritage studies, commercial studies and business and enterprise studies are some of the subjects where objective testing has been applied to assess the performance of ordinary level students.

The question is why ZIMSEC choose to deviate from its traditional method of examining the subject. Are objective tests (MCQs) a better alternative for assessing knowledge as opposed to traditional methods in Principles of Accounts? There is inconclusive evidence on the usefulness of objective tests from the discussion above, opening the matter to further analysis.

### 1.2 Problem statement

The use of objective testing is mainly normative application which has been adopted from educational theory and pedagogy with little knowledge on how it affects students’ performance. Some Zimbabwean teachers and examiners simply use objective testing because other subjects
make use of it or because it is what they found in educational systems. The question is do teachers and examiners understand the impact of using objective testing on students’ academic performance.

1.3 Research objectives

This research seeks to:
1.3.1 identify the various types of objective tests used in form four principles of accounts.
1.3.2 establish the relationship between objective tests (MCQs) and performance of the form four pupils in principles of accounts.
1.3.3 explore the suitability of objective testing as a method of assessing form four pupils’ performance in principles of accounts.

1.4 Research questions

In order to satisfy the above research objectives, the research study was centred on finding answers to the following questions;

1.4.1 What are the various types of objective tests used in form four pupils’ principles of accounts examinations?
1.4.2 How do objective tests affect performance of form four pupils in principles of accounts?
1.4.3 Are objective tests suitable for assessing form four pupils’ academic performance in principles of accounts?

1.5 Research hypotheses

H0 = There is no improvement on form four pupils academic performance if objective testing is used to examine principles of accounts candidates.

H1 = There is an improvement on form four pupils academic performance if objective testing is used to examine principles of accounts.

1.6 Significance of the study

The study might be of prime importance to curriculum developers, examiners, teachers, academics, pupils, and other researchers.

Curriculum developers are likely to find the recommendations in the study useful for long term strategic decisions concerning the formulation and application of new policies which are related to the use of objective testing. Teachers are implementers of educational polices might find the theories identified in the study helpful in formulating and building sound educational
practices. Moreover, further insight can be added to global and local education profession on matters relating to evaluation and assessments of pupils academic performance using objective testing, thereby enhancing the quality of educational standards. The study will also help in developing local examining standards.

1.7 Research assumptions

- The participants would provide true, accurate, unbiased and relevant information.
- Participants would fully cooperate from the population sample.
- Research instruments to be used in carrying out the research were reliable, effective and valid.
- There were adequate resources to carry out the research project.

1.8 Delimitations of the study

In order to assess the impact of objective testing on form four pupils’ performance, the study will cover four secondary schools in the Hurungwe District ie Nyamakate secondary, Vuti high, Chitindiva high and Mutoranhanga secondary. The study will focus on the impact of objective testing on form four pupils’ performance in principles of accounts on four schools in Hurungwe District by analyzing the pass rates of these schools.

1.9 Limitations of the study

The researcher faced financial and time constraints, but however this was resolved by sticking to the budget and the use of break times, lunch and weekends. Another limitation was attributed to the sampling procedures to be used in the study. The use of purposive sampling to come up with the sample makes it difficult for findings to be generalized. (Saunders, et al., 2009), stressed out that the major weakness with purposive sampling is that findings from the study cannot be easily generalized or inferred. (Cohen, et al., 2007), argue that purposive sampling is biased because the researcher deliberately selects the samples to be used in a study.

Finally, another limitation might emanate from the use of secondary data. Secondary data might contain errors. Having considered that secondary data might contain errors, the researcher will use official data collected from the district offices. Data from the district offices will be compared with data collected from the secondary schools under study.
1.10 Definition of terms

Objective test
An objective test is a highly structured examination in which the pupils are expected to select the correct solution from a given set of alternatives, (Egbule, 2002). Hence it is a test which requires the student to select a single correct answer from a given list of suggested solutions.

Testing
Barrow and McGee (2000), define testing as a technique used to extract information from pupils which is then used to evaluate characteristics such as knowledge or acquisition of certain skills.

Pupils’ performance
Pupils’ performance is a measure of academic achievement which is envisaged by the students score in a given examination, (Igbojinwaekwu, 2015). High scores are presumed to signal good academic achievement or performance and lower scores signal poor performance.

Assessment
It is the process of gathering information to monitor progress and make educational decisions.

1.11 Chapter summary
To sum up, this chapter looked at the background to the study, identified research objectives and questions, research hypothesis was formulated. The significance of the study was outlined as well as the research assumptions. The delimitation and limitation of the project was clearly spelt. The next chapter is therefore going to look at the conceptual framework as well as previous researches done to investigate impact of objective testing on the overall performance of pupils. It is also going to focus on types of objective tests and their suitability.
CHAPTER II

LITERATURE REVIEW

2.0 Introduction

This chapter focused on the review of related literature deemed as being necessary to the research study by the researcher. A review of related literature on objective testing was made. McMillan and Schumacher (1992) suggested that a review of literature serves to illuminate and discuss both the strengths and limitations of the knowledge of the problem. Literature review was done using theoretical and empirical literature. The sources of the information discussed were from books, magazines, journals, thesis, reports and electronic sources. The literature was used as the basis of the research upon which conclusions and recommendations were made.

2.1 Conceptual Framework on Objective Testing

Kasambira (1993) suggested that objective testing permit reliable measurement of an extensive sample of factual information. If objective tests are carefully constructed, they can be adapted to a variety of instructional or behavioural objectives. Kasambira (1993) pointed out that multiple choice tests are the best type of objective tests as they measure a wide range of educational objectives. Farrant (1995) suggested that Multiple choice questions (MCQ) can be used to measure a variety of learning outcomes as propounded by Doctor Benjamin Bloom in 1956.

2.1.1 The Blooms Taxonomy

It is a theoretical framework on educational objectives, developed under the leadership of an educational psychologist Dr Benjamin Bloom in 1956, (Krathwohl, 2002). Withers (2005) reiterated that the framework aims to develop a common language about learning outcomes, define educational objectives and to come up with a method of matching assessment to the types of educational objectives. Dr Bloom identified major domains as cognitive, affective and psychomotor. According to Bloom (1956) the three learning domains have levels of learning
outcomes which are structured in order of increasing complexity. Therefore the learning outcome under each domain ranges from simple to complex thus resulting in a hierarchy of learning outcomes. This research was mainly concerned with the cognitive domain as it can be tested using objective testing by using MCQs.

Mpofu (1991) Bloom (1956) identified six major learning outcomes in the cognitive domain, namely: knowledge, comprehension, application, analysis, synthesis and evaluation. Knowledge focuses on the ability of the learner to recall previously learnt facts, terms and basic concepts. Comprehension exhibits understanding of facts and ideas by organising, comparing, translating and interpreting main ideas in a given task. Application seeks to help learners solve new problems by utilizing concepts previously learnt eg theories, laws, principles, concepts, methods, concepts and rules are used to solve new into a single problems. Analysis involves ability to break concepts so as to gain further insight about those concepts. Synthesis on the other hand relates to the ability of the learners to integrate various parts into a single element. It involves modelling of various relationships. Lastly evaluation is based on judging using specific criteria.

![Blooms Taxonomy](source: Torres et al (2011))
The taxonomy provides a clear guide for teaching and learning. Anderson and Krathwohl (2001) also added that the taxonomy accurately measured students’ ability and matched the ability to the appropriate level of cognitive development. According to them, established learning outcomes help to facilitate interaction between teacher and pupils. The intended learning outcomes help instructors to plan ahead what to teach.

Kasambira (1993) further highlights that the taxonomy prompts teachers to focus on higher order learning without overlooking at the lower order learning by compelling teachers to follow a hierarchy during the teaching and learning process. Krathwohl (2002) added that the hierarchy helps teachers to craft questions which match the intended learning outcomes. This makes it easier for students and teachers to follow a well-defined structure of learning.

However, International Assembly for Collegiate Business Education (2016), criticised the taxonomy in the sense that the use of structured teaching methods results in repetitive ways of doing work which creates monotony during the teaching and learning process. Also, Airasian and Miranda (2002), condemn the framework for treating education as a mechanical process which follows stages in the conveying of instruction. Lack of consensus on what constitutes standards definition of analysis and evaluation was identified. This general lack of consensus creates problems of applicability of the taxonomy.

2.1.2 The Blooms Taxonomy and Objective Testing in Principles of Accounts

In order to fully understand the appropriateness of objective testing in assessing form four pupils performance, it is imperative to discuss the concept of objective testing in the context of the Blooms taxonomy. According to Zimbabwe School Examination Council (ZIMSEC) Principles of Accounting syllabus 2013-2017, the six learning outcomes were grouped into three groups. Skill 1 being the lower level tested knowledge and comprehension questions. Skill 2 being the middle level, test application of learnt concepts, principles and laws. Skill 3 being the higher level, test analysis. Skill 1 contains sixty five per cent of the MCQs. Skill 2 contains thirty per cent while skill 3 five percent. Before 2013 the learning area was tested subjectively with the first skill comprising twenty percent, second skill seventy percent and the third skill ten percent. The learning outcomes identified by the Blooms taxonomy are essential in the teaching of the learning area. If objective tests can be applied to assess the desired
learning outcomes then we can suggest that they are suitable in the assessment of form pupils’ performance.

Knowledge learning outcome can be addressed by the use of simple recall questions like the true or false questions. Comprehension requires more cognitive processing than simply remembering information. Comprehension based questions can be assessed using matching, or labelling as well as explaining. Application, the third level of Blooms taxonomy can be examined using reconciling, preparing of statements and accounts or extraction trial balances. Analysis type questions include questions to do with comparing, distinguishing, preparing or presenting. Synthesis and evaluation learning outcomes are not tested at ordinary level using objective tests.

Moreover, MCQ can be designed to suit all the learning outcomes in the cognitive domain and this makes it more ideal for examining form four pupils’ in principles of accounts. Below are some cognitive learning outcomes questions;

1. An example of a personal account is
   A. Capital account
   B. Machinery account
   C. Purchases account
   D. Stationery account

Source: ZIMSEC O’ Level November 2015 Paper 1
Figure 2: An objective question addressing knowledge learning outcome.

38. A joint stock company had the following issued share capital.
   200 000 10% preference shares at $3 each.
   An interim dividend of $40 000 was paid.
   The final dividend was
   A. $20 000
   B. $40 000
   C. $60 000
   D. $160 000

Source: ZIMSEC O’ Level 2015 Paper 1
Figure 3: An objective question illustrating analysis learning outcome.
The two questions above illustrate the suitability of objective testing to test a variety of learning outcomes as established by the Blooms taxonomy. The first question is a low order question which focuses on the simple recall of facts, whilst the second one is a high order question which requires pupils to recall basic facts and integrate them using a combination of formulae so as to derive the solution.

2.2 The Testing Effect

In order to understand the impact of objective testing on form four pupils’ performance, it is vital to discuss the ‘testing effect’. According to Butler and Roediger (2008), the testing effect is a theoretical concept which signifies that frequent testing has an impact in pupils’ mind-set which can either influence pupils’ performance positively or negatively. If frequent testing influences the future performance of pupils in a positive way then it is known as positive testing effect. Negative testing effect arises if routine testing results in poor student performance in the future.

Tabek et al (2014) identified the positive testing effect as the improvement in students’ performance which occurs as a result of repeated exposure to learning material through routine administering of tests. The concept of positive testing effect is based on the principle that frequent testing increases the probability of pupils to pass in their final examinations because tests build large memorial benefits, (Marsh et al 2007). Similarly, Roedgier et.al (2005) maintain that information retrieved from the memory leads to a better performance in a future tests, hence their famous concept, retrieval aids later retention. Likewise, the frequent testing of form four pupils in principles of accounts using objective tests (MCQ) is likely to improve their chances of passing the final examination.

Igbojinwaekwu (2015) asserts that objective tests can be frequently administered because of the relative ease marking. Objective tests in the form of MCQ boost performance of pupils because of memorial consequences that are created by the testing effect (Marsh et al. Al 2007). MCQ tests forces students to use marginal knowledge, knowledge which one will not use unless compelled to do so by an activity.
Kasambira (1993) added that MCQs as a tool for assessment is well recognized due to its validity, reliability, ability to be used for large numbers of students and easy marking using a scanner or a computer. He also added that MCQs can assess knowledge, cognition and can cover many topics in the curriculum. Similarly, Mpofu (1991) revealed that MCQs further improve the performance of pupils by giving them additional material for study, offering retrieval practice and by providing retrieval cues in the form of alternative solutions.

On the contrary, critics of the testing effect concept argue that the use of objective tests like MCQs have negative effects on students’ performance. Amongst them are Butler, Marsh and Goode (2006) who cited that MCQs have negative effects on students’ performance because such objective tests misinform pupils. They also added that the use of MCQ exposes pupils to three incorrect responses each time they take the test, continuous repetition MCQ will influence pupils negatively and force pupils to take some incorrect responses as true. Gwarinda (1995) revealed that attributing pupils improved performance to the testing effect tends to ignore the fact that different learners have different learning styles and perceive learning material in different ways. Carpenter and DeLosh (2006) found out that the positive testing effect takes place within a short timeframe, and that it may not apply in extended time future. Salih et al (2007) also criticized MCQs in that they need of experts to construct them, encouragement of superficial reading by students and the misleading of some clever students who might go in more than the needed depth for answering.

Therefore, the debate is inconclusive as to whether the use of objective testing to assess form four pupils performance has negative or positive impact. This research is an attempt to also find out the impact.

2.3 Types of objective tests

Kasambira (1991) suggested that objective tests permit reliable measurement of an extensive sample of factual information. Mpofu (1995) added that if objective tests are carefully constructed they can be adapted to a variety of instructional or behavioural objectives. Kasambira (1991) concluded that MCQs are the best type of objective tests as they measure a wide range of educational objectives. Mpofu (1991) defined objective tests as tests which
require learners to choose or provide a correct solution from a set of predetermined responses. Kasambira (1991) Mpofu (1995) and Gwarinda (1995) identified multiple choices, true-false, matching and fill-in-the blanks as common types of objective tests. The types are discussed below;

2.3.1 Multiple Choice Questions
Mpofu (1991) defined a MCQ as a direct question or incomplete statement referred to as a stem followed by two or more possible answers called the responses from which one is selected. Learners are instructed to select either the correct or the best answer. He further added that MCQs can be used to measure a variety of learning such as knowledge, comprehension, application, analysis, synthesis and evaluation.

Torres et al (2011:1) define MCQ ‘as a question in which students are asked to select one alternative from a given set of alternatives in response to a question stem’. The stem is the problem which is in the form of a question and the alternative is the list of suggested solutions, (Haladyna, 2006). Similarly, Igbojinwaekwu (2015) revealed that MCQs comprises of three or more alternatives with one of the alternatives being the correct answer to a stated question.

The figure below illustrates a sample MCQ:

![Fig 4: MCQ Sample](source: Burton et al (1991) as cited in Torres et al (2011))

MCQs the most popular of the short-answer objective formats come in different ways. According to Torres et al (2011) the stem in MCQs can be constructed in different varieties
depending on the intended learning outcomes. Stems can be stated in question form or completion format. The stem clearly states the problem in a complete way. In this case, questions are asked directly to expose problem which requires a solution to be found. Question formats try to eliminate possible cues and force pupils to direct their efforts to thinking so that they come up with a correct solution. Torres et al (2011:5) pointed out that a good distractor should be selected by low achievers and ignored by high achievers.

An alternative to the question format is the completion type of a stem which expresses the question in the form of an incomplete statement. In this case, the student gains grammatical cues from the question and thereby aiding pupils in the recalling of previously learnt content. (Withers, 2005).

MCQs are widely used because of some advantages associated with their use to both learners and instructors. Kasambira (1991), postulate that MCQs are a fast way of evaluating performance in large classes. Multiple Choice scripts make use of a standardised template of answers, such that the instructor can easily mark as compared to marking tests with subjective solutions. Moreover, the advent of electronic marking in MCQs has made it more efficient to handle marking, by eliminating human error and fatigue which I prevalent when scripts are marked manually (Farrant, 1995). Instructor bias is also eliminated by the use of electronic marking. It is also easier for instructors to follow up any queries if any, as answer scripts are verified electronically. Haladyna (2006) further added that electronic marking saves the markers from the laborious task of manually grading the outcomes from essay tests.

In addition, Gronlund (1985) explains that MCQs are an ideal way of testing whether pupils have grasped essential concepts taught and learnt in any given subjects. Subjects which make use of principles and rules are easily accessed by administering a multiple choice test. The distractors placed in under the suggested solutions assist instructors to diagnose and identify areas understood by students. Igbojinwaekwu (2015) also added that MCQs are suitable for testing various stages of domain as they can be adjusted to match the level of learners or skill being tested. Peuker et.al also alluded that MCQ enable teachers to test a wide range of concepts and learning outcomes using a single question paper within a short space of time. Burton et al (1991) as cited in Torres et al (2011) also support the use of MCQ as they are less susceptible to guessing compared to true-false questions. Torres et al (2011) were also of the same view.
when they revealed that statistically, random guessing alone is very unlikely to produce a high test score.

On the contrary, several authors criticise the use of MCQ. Igbojinwaekwu (2015), mentions that the teaching methods applied by teachers in preparing learners for multiple choice questions are monotonous and uninspiring for teachers. He further asserts that these repetitive teaching approaches eventually lead to demotivation of teachers. Roediger et al (2011) is also of the same view, he alluded that the construction of a good MCQ is a tedious task which requires considerable time in coming up with a plausible relationship between stem and correct answer. Edmund (2006) and Peuker et al (2012) have different views from that of Burton et al (1991) as cited in Torres et al (2011) as they describe that MCQs distort the overall assessment and evaluation process by giving room for guessing. Edmund (2006) and Egbule (2002) further added that teachers with experience in teaching multiple choices can spot some exam questions thereby contributing to rote learning practices.

Moreover, Brown et al (1999) argue that the use of MCQ exposes students to several wrong answers and eventually pupils are deceived to view the wrong answers as true. Also, Butler and Roediger (2007) revealed that the overall effect is the misinformation of pupils, a process which is difficult to reverse once synchronised in pupils mind-sets. Marsh et al (2007) confirms that teachers who are aware that their pupils will take multiple choice test in their final exam are likely to teach for the test. According to them, all instructional activities will be directed towards the answering of expected exam questions. Sardar (2013) also added that teachers usually force pupils to memorise facts which they think will assist pupils tackle MCQ. Eventually, memorisation leads to rote learning which is not useful in solving real life problems.

Furthermore, Wolf et al (2012) criticised MCQs citing that the suggested solutions contain clues to the correct answer and that correct solution is significantly longer than the suggested solutions. Torres et al (2011) in their analysis for use of MCQs in mathematics revealed that MCQs are difficult to construct particularly at the higher cognitive level. They further alluded that MCQs cannot measure certain learning outcomes such as the ability to communicate and articulate explanations, organisation of the information and creativity. They also indicated that learners cannot justify their choices and that it is very difficult to come up with good distracters.
From the discussion above, it can be noted that MCQ is a widely used technique in most subject areas in assessment and evaluation of learners. No any solid conclusion has yet been made by several mentioned authors as to whether MCQs is the best method to use on summative assessment. This research seeks to find out if MCQs are effective enough to measure pupils’ performance at form four in Principles of Accounts.

2.3.2 True-False
In this type of question testing, learners are given a statement to read and then required to comment whether the statement is true or false after some form of logical reasoning, (Peuker et al, 2009). The student is expected to pick only one choice from the two provided. True-false questions tend to be short, such that more material can be covered as compared to any other format. The scoring is also easier. Adebule (2009) stipulates that True-False questions are an efficient way of testing learners in large classes.

On the contrary, Davis (2009) and Igbojinwaekwu (2015) criticised the use of this type of testing. The former argues that they are less reliable because they allow and encourage a high degree of guessing as half the time random guesses provide correct answers. The latter is in support of the view adding that they strongly tempt learners to guess and also tend to promote rote memorization of knowledge although complex questions can be used at times.

2.3.3 Matching
Matching item tests are used to test the ability of pupils to model relationships between various items. According to Clay (2001), they consists of two columns, one column of stems or problems to be answered, and another column of responses from which the answers are to be chosen. Clay (2001) further added that matching test items are ideal for testing a wide variety of subjects especially those with dates, events, numbers and places. However, Elif et al (2014) criticised them as being time consuming to set and also not appropriate for higher order learning outcomes. Clay further added that they are simple and easy to construct, ideal for measuring association between facts, reduce the effect of guessing and can be more efficient than MCQs because they avoid repetition of options in measuring association.

However, critics argue that they tend to ask trivial information and emphasize on memorisation just like MCQs.
2.3.4 Fill in the Blanks

Johnstone (2003) defines them as questions consisting of statements or piece of continuous writing with gaps left for the students to fill in a word or short phrase. Students have to at least provide the answer rather than select from a menu, though there is another type where a menu is provided and students will be required to choose an answer from that respective menu. Withers (2005) assert that the use of fill in the blank spaces reduces the guessing factor in pupils and also helps to test a wide range of factual knowledge.

Though instructors find them easy to mark, the main challenge of fill in the blanks test is that they make it difficult to measure higher order skills. Johnstone (2003) is also of the same view when he concluded that the gap filling questions largely test recall or recognition and they do not test the range of skills in the Bloom levels.

2.4 Relationship between Objective Tests and Pupils’ Academic Performance.

Educators frequently administer tests for a number of reasons such as to diagnose pupils, to enable grading, to encourage and give pupils’ feedback. All these reasons behind the administering of tests aim to improve the overall performance of pupils. Edmund (2006) asserts that objective tests can be used as a diagnostic measure to find out what pupils’ know. In principles of accounts, teachers can make use of objective tests like MCQs to find out what pupils know in relation to what they have been taught. Once teachers gain an insight of pupils’ knowledge, they can divert their efforts to areas which need more emphasis. This gives both learners’ and the instructor time to prepare for the final exams thereby contributing to improved performance.

However, Marsh et.al (2007) notes that the use of objective tests such as MCQs can provide misleading diagnosis if pupils guess the correct answers. The teacher is also misled into concluding that pupils are familiar with certain concepts. The overall result is the pupils will not be successful in their final examinations. Several studies were also carried out by different researchers, with the aim of establishing learners’ performance in different subjects and courses. Peuker et.al (2012) carried out a study to find out the effect of multiple choice testing on student performance. The study targeted first year students in Engineering at the University Cof Alaska Anchorage College. The researchers aimed at establishing whether students performed well in objective tests or in constructed response questions. They designed two papers testing the same concept. The first exam comprised MCQs and the second one
constructed response questions. The researchers used a sample of 75 students. Correlation was used and the results were that there was no significant difference between the results obtained by pupils in MCQs and in the constructed response questions. Their conclusion was therefore the testing method had no effect on students’ performance.

Similarly, Adebule (2009) embarked on a research study aimed at assessing whether the testing method affect pupils performance or not. The study took place in Nigeria and was aimed at mathematics. Two set of papers were designed, the first one consisted 50 MCQs and the second one 50 true or false questions. Pupils took the papers at different times. After a lengthy comparison of the results, the researcher concluded that there was no difference between assessing pupils using MCQs and true-false questions.

In addition, Igbojinwaekwu (2015), carried out a study aimed at finding the effectiveness of using guided MCCQs on the academic achievement of form four pupils in Nigerian Secondary Schools. The research targeted mathematics students only and aimed at finding out whether the use of guided MCQs improved pass rates in mathematics. The researcher made use of a sample of 640 students from an overall population of 2240. Three papers were designed which consisted of 20 MCQs. The first two papers taken by each student comprised of unguided MCQs and the last paper comprised of guided MCQs. The z-score statistical analysis was used to find out if there were significant differences between the pre-test results and the post test results. Findings from this research revealed that guided MCQs improved academic performance of form four pupils.

Also, Salih et al (2016) in their investigation on students’ performance in MCQs and MEQS found out that good performance in one type paper is not necessarily related correlated with good performance in another. They argued that a higher score in MCQs could be as a result of guessing, indicating that it is possible for a student to score higher in MCQs and very low in MEQs. They however added that bias in MEQS can either lead to high scores or low scores. Their general conclusion was however, students who usually score high in MCQs also do well in MEQs, citing that the instrument used to test students does not affect performance. This view, contradicts with the critics of MCQs who argue that MCQs are not effective as they are affected by the testing effect, guessing and the instructors who tend to teach for the exam. Also the typical preparation for this type of exam is memorising answers from hundreds’ upon hundreds of past exam papers making it difficult to justify the performance of pupils in objective tests.
This lack of consensus amongst several researchers’ gives room for this study to find out if there is any relationship between performance and tools used in testing. Hence the researcher will compare results in Principles of Accounts summative assessment before and after the introduction of the Multiple Choice Paper. The results will also add to the existing body of knowledge.

2.5 The Suitability of Objective Testing

Cornachione Jr. E. B., (2005) in his study at University of Sao Paulo in Brazil which was aimed at finding out students’ performance to different test items, concluded that students performance in the final exam may be influenced by subject matter, attendance, study time, motivation, method and pressure as well as the quality and type of instrument used for testing. His study focused on an accountancy course at the university. He carried out two experiments aimed at finding significant differences between students’ performances and specific assessment instruments. In the first experiment there was no significant difference between performance and distinct assessments (tests 1 and 2). However, in experiment 2 significant differences were found between students grades from test 1 and test 2. He then concluded that the differences in the results pave way for further researches. This however questions the suitability of objective tests in final assessment.

Farrant (1995), recommended MCQs citing that they also assess higher order thinking. He blamed other teachers who view MCQs as an instrument for assessing how well students memorize facts. Torres et al (2011), concluded that MCQs plays a key role is mathematics as far as self-evaluation to foundational materials such as definitions and basic rules, citing MCQs as testing only recall. Kasambira (1993) argued that MCQs are suitable instruments where there are larger classes where grading of written answers consume considerable time and effort. His conclusion make it seem as if examiners tend to use MCQs to save time and effort, though it may not be the most suitable instrument.
This discussion above gives more room for further research to be done as revealed in the lack of solid conclusions by quoted authors. Most researches were done at tertiary level though a few were done in secondary schools. The studies however focused on mathematics, engineering and medical studies. This also gives room for a study to be done in commercial subjects to determine the suitability of objective tests in summative assessment.

2.6 Chapter summary

The chapter discussed theoretical and empirical literature with much emphasis being on MCQs. Types of objective tests were identified, emphasizing on the strengths and weaknesses of each type. An empirical literature was also carried out to review work done by other researchers. Gaps in each empirical study were clearly identified. Having looked at the relevant literature on objective testing, it is now essential to design how data is to be collected from the targeted respondents. The next chapter will focus on the research methodology.
CHAPTER III

RESEARCH METHODOLOGY

3.0 Introduction
This chapter focused on various tools and instruments used for gathering data for this research. It outlined steps followed in sampling, collecting, gathering and analysing data. Research design, information sources, and research instruments were discussed as well as how the data was collected, analysed and presented so as to answer the research questions. In short it outlined the research design, target population sampling techniques, data collection (research instrument) reliability and validity of data. Research methodology focused on how research should be undertaken, including the theoretical and philosophical assumptions upon which research is based and the implications of these for the method or methods adopted.

3.1 Research Design
Research design is a framework that stipulates what type of information is to be collected, from which sources and by what procedures. Saunders et al (2009), stipulated that a research design is a general plan of how one will go about answering the research questions. MacMillan (1992) takes the same view and added that a research design indicates how the research was set up, what happens to the subject and what methods of data collection were used.

In this study, the researcher applied a quantitative research design. Since it is a case study, the researcher therefore applied descriptive research design. Zikmund (2003) stated that the major purpose of descriptive design is to describe characteristics of a population or phenomenon. Descriptive research enabled the researcher to condense large volumes of data obtained from the respondents into few summaries. Explanatory design was also used to get a clearer view of the relationship between objective testing and candidates’ academic performance. According to Saunders, Lewis and Thornhill (2009) explanatory studies establish causal relationships between variables.

3.2 Subjects
3.2.1 Population
According to Kwesu et al. (2002) a population is all objects of interest in a study. Best and Khan (1993) define research population as any group of individuals that have one or more characteristics that the researcher is interested in. Zikmund (2003) also defines population as a complete group of entities sharing some common set of characteristics. This therefore means that the population is the whole group about which certain information is required by the researcher. In this research, the population was made up of two high schools and two secondary schools as population of the case study. The four schools chosen were very close to each other and are easily accessible. The population is made up of Principles of Accounts teachers, HODs, Deputies and Heads of schools.

3.2.2 Sampling
Kwesu et al (2003), suggested that sampling is the process of using a small number of items or parts of a larger population to make conclusions about the whole population. A sample is a subset of the population under consideration. Criswell (2014) described purposive sampling as a method that enables one to select cases that best suits research questions and that best meet the research objectives.

In this research a sample survey was undertaken. Purposive sampling was used to study four schools. Since the sample under study was small, purposive sampling was relevant.

3.2.3 Sample Size
It is the number of observations or cases under study. Twenty two participants were chosen. They were ten teachers who teach Principles of Accounts, four Heads of Accounting/commerce department, four deputy heads and four heads of the four schools.

3.2.4 Sampling Techniques
This refers to the procedure for selecting participants in the research project. The researcher used non-probability sampling technique. This uses judgement of the researcher in selecting respondents and population as propounded by Criswell (2014) that judgmental sampling is not popular with mean statistician. It involves the sampler deciding subjects to be included in the sample subjectively. This technique was used because the researcher wanted subjects which are only involved in teaching the accounting subject. Purposive sampling was preferred.
because is feasible, time constraints, cheap and pragmatic and taking into account the researcher’s other commitments.

3.3 Research Instruments
The researcher used three main data collection instruments. The researcher used documentary analysis to extract the required data. Data was collected from results analysis sheets from the schools data bases. ZIMSEC past exam papers were used to provide data on the types of objective tests. Secondly, questionnaires were used and these targeted teachers of principles of accounts. Interviews were also scheduled specifically with the HODs, deputy heads and heads of schools so as to extract their views.

3.3.1 Documentary Analysis
Creswell (2014) defines documentary analysis as a research tool used to collect data by scanning through data material in records that already exist. In the same view Marinai (2008), identifies documentary analysis as the extraction of information from written records. Bowen (2009) went further on to incorporating coding content into themes when analysing documents. The purpose of triangulating is to provide a confluence of evidence which breeds credibility. Documentary analysis is commonly used in a desk research designs. The main advantage associated with documentary analysis is that it is a quick way of collecting data because the data will be in published form. It is an efficient and effective way of gathering data because documents are manageable and are practical resources. The effectiveness of documentary analysis relies on the quality of the published information. If the data used in documentary analysis is inaccurate these errors will be carried forward into one research and this often leads to misleading researches. Apart from the pitfalls of documentary analysis, the method remains useful because published data is often verified by independent experts such as auditors.

3.3.2 Questionnaires
A questionnaire is a research instrument consisting of a series of questions for the purpose of gathering information from respondents Creswell (2014). The questions are written and the respective respondents complete this questionnaire. Sekaran (2003) and Leedy (1993) define a questionnaire as a pre-formulated list of questions used to solicit information from respondents. The questionnaire was designed with the aim of collecting information to be used when collecting data.
Self-administered questionnaires were formulated with close ended and open ended questions. Closed questions made it easier and faster for respondents to reply whilst open-ended questions enable respondents to fully explain their views. In the first section contained close ended questions that were considered easy to fill in order to motivate respondents to answer the questions. Embarrassing questions were avoided. This helped in collecting relevant information on opinion, behaviour and attributes from the respondent. All answers were treated as anonymous.

Making use of the questionnaire enabled the researcher to obtain data which could be easily quantified and analysed. Questionnaires proved to be cheap and fast in obtaining quantitative data. They also gave the respondents anonymity hence the respondents were free to express their opinions at the same time giving respondents ample time to answer the questions.

3.3.3 Interviews

An interview is a conversation with purpose of gathering information Creswell (2014). In this research the researcher made use of a list of specific questions to be asked drafted in an interview guide. This prompted the researcher a chance to ask questions that were not included in the questionnaire and make a follow up to some vague answers. An interview guide was efficient as more specific issues were addressed.

Interviews were done with the head of departments (HODs), deputy heads as well as heads of the four schools. Interviews were based on a list of questions that were asked by the interviewer to the interviewees. Results were more accurate due to interviewer control as questions were asked in sequential order. This method proved to be faster since responses were got there and then other than leaving the respondent with questionnaires which usually takes time for them to be answered. Interviews assisted the respondent to explore their thoughts. Clarification of some questions was sought. The interviewer was in total control though it was time consuming and needed appointments with interviewees.

3.4 Data Collection Procedure

According to Kwesu et al (2003) data collection procedures are fundamental steps taken by the researcher in administering instruments and the collection of data from the respondents.
The researcher administered questionnaires himself to the respondents and explained to them the importance of the research and assured them that the information collected was for academic purposes only. He encouraged respondents to voluntarily participate in the study. Assurance was given that results collected were confidential.

Before conducting interviews with selected respondents, an interview guide was constructed with all the relevant questions. The researcher then made appointments to respondents using cell phone before the interview date. Copies of the interview guides were also sent to the respondents personally to ensure that these guides reached the intended respondents. This was done to give respective respondents enough time to prepare and familiarise with the questions so that unbiased information would not be provided and thereby increasing the reliability of data.

As for questionnaires, the researcher distributed them personally to the respective respondents. Upon distribution, the researcher

3.5 Data Presentation and Analysis Procedures

Criswell (2008) define it as ‘editing and reducing accumulated data to a manageable size, developing summaries, looking for patterns and applying statistical techniques’. Descriptive and Inferential statistics were used to present, analyze and interpret the data.

After collecting all the information required, the researcher analyzed the data to establish the trends and solutions to the research problem. Completed questionnaires were scrutinized for completeness, accuracy and uniformity. The data collected was summarized and compared with a view of drawing conclusion and make recommendations. Statistical graphs, charts and tables were used to present and analyze gathered information.

Data analysis and interpretation were carried out using descriptive statistics and inferential statistics. Data computations from selected schools were used to test the hypothesis. The hypothesis was tested using SPSS statistical package.
3.6 Chapter Summary

The chapter outlined the research design, subjects to be used in this research, and the various types of research instruments used for gathering data. Data collection, presentation and analysis procedures were clearly discussed. The data collection procedures were also clearly outlined and justified. The next chapter focuses on presentation, analysis and discussion of the findings.
CHAPTER IV

DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction
This chapter presented data collected by research instruments from respondents. The data was presented in various tables, charts and graphs. Discussion of presented information will precede and explanation of results collected will be made. Lastly conclusion will be drawn from the findings.

4.1 Response Rate
The table below shows the response rate of questionnaires and interviews

<table>
<thead>
<tr>
<th>Levels</th>
<th>Questionnaires distributed</th>
<th>Questionnaires returned</th>
<th>Response rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers</td>
<td>10</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Head of Departments (H.O.D’S)</td>
<td>4</td>
<td>4</td>
<td>100%</td>
</tr>
<tr>
<td>Deputy Heads</td>
<td>4</td>
<td>4</td>
<td>100%</td>
</tr>
<tr>
<td>Heads of schools</td>
<td>4</td>
<td>4</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>22</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4.1 above shows the response rate for the questionnaires that were distributed for the collection of data in this research study. All questionnaires distributed to all participants were responded to. A hundred percent response rate was achieved. This was an excellent response rate. This was prompted because this was a research which was conducted in a long period of time. All interviews which were scheduled with heads of departments (HOD) were successfully conducted, giving a 100% response rate.
4.2 Background of the Subjects

The research was conducted on Principles of Accounts teachers, heads of departments for the subject, deputy heads and heads of the four schools. Here are the findings from the respondents.

4.2.1 Findings on Gender Distribution

Table 4.2 Gender distribution ratio

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>14</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
</tr>
</tbody>
</table>

The table 4.2 and chart 4.1 above shows that males were more than the female respondents. Males constituted sixty four percent of the respondents while females were thirty six percent. This is because all Heads of schools were male and there were more male Principles of Accounting teachers than their female counterparts.
4.2.2 Findings on Respondents’ Ordinary Level Teaching Experience

Table 4.3 Participants Ordinary Level Teaching Experiences

<table>
<thead>
<tr>
<th>No. of years</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;5 years</td>
<td>2</td>
<td>09</td>
</tr>
<tr>
<td>6-10 years</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>11-15 years</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>16-20 years</td>
<td>6</td>
<td>27</td>
</tr>
<tr>
<td>Above 20 years</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>22</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Chart 4.2 Participants Ordinary Level Teaching Experiences

Table 4.3 and chart 4.2 above show number of years of respondents working in the teaching field. The majority had more than six years working as teachers. This means that the respondents were employed as teachers prior and after the multiple choice paper (MCP) was introduced. The targeted respondents had enough knowledge of the matter being investigated since there is six years now since the MCP was introduced.
4.3 Types of objective tests being frequently administered

Table 4.4 Types of objective tests being administered at the four schools under research.

<table>
<thead>
<tr>
<th>Type of test</th>
<th>Frequency</th>
<th>Percentage %</th>
</tr>
</thead>
<tbody>
<tr>
<td>MCQ</td>
<td>13</td>
<td>59</td>
</tr>
<tr>
<td>True-False</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Matching</td>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>Fill in the blanks</td>
<td>4</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>100</td>
</tr>
</tbody>
</table>

Chart 4.3 Types of objective tests.

The table 4.4 above show that fifty nine percent of the respondents preferred testing learners objectively using MCQ. The first objective was aimed at identifying the types of objective tests commonly used by teachers during formative assessment. Responses indicated that MCQs are highly used as shown by the highest modal score of fifty nine percent. Nine percent prefer using true or false while fourteen percent preferred using matching and eighteen percent fill in the blank spaces. The majority of participants under study used the MCQ as the most method of objective testing as was propounded by Kasambira (1993), Farrant (1992), Gronulund (1995) and Mpofu (1991) that MCQs are widely being used by examiners because they permits reliable measurement of extensive samples of factual information and if carefully constructed can be adapted to a variety of instructional and behavioural objectives. It measures a wide variety of educational objectives.
4.4 Relationship between Objective Tests and Performance

The second objective was aimed at finding out whether the introduction of the MCQs has contributed to changes in pass rates at ordinary level.

From the interviews conducted respondents gave different views concerning whether the pass rate had changed or not since the introduction of the MCP. A significant number of respondents indicated that the pass rate changed positively or negatively in their schools. They cited that the MCP is easy to score and that even slow learners can pass as a result of guessing. They also highlighted that the ZIMSEC repeatedly set same questions over and again and hence learners can be well prepared by the teachers.

In some schools, a significant number of respondents highlighted that the trend in pass rates was constantly fluctuating. They concluded that the type of testing of learners did not change the performance of students in summative assessment. Hard work, commitment, discipline and dedication determined good pass rate than a type of testing.

The questionnaires showed that twelve out of twenty two indicated that the pass rate had significantly changed in their schools. The table and graph below shows responses on whether the pass rate has changed since the introduction of the MCP.

Table 4.5 Responses on whether MCQs has changed pass rate

<table>
<thead>
<tr>
<th>Response</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>12</td>
</tr>
<tr>
<td>No</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
</tr>
</tbody>
</table>
Table 4.5 above showed that most respondents indicated that the MCP had brought changes in performance of learners as pass rates had increased or decreased.

### 4.5 Suitability of Objective Testing

The research was also aimed at finding out if objective tests were suitable for assessing performance in principles of accounts. In order to address this objective respondents were asked in the questionnaires if objective tests were suitable for summative assessment. The responses are shown below:

Table 4.6: Suitability of objective tests

<table>
<thead>
<tr>
<th>Comment</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly agree</td>
<td>10</td>
</tr>
<tr>
<td>Agree</td>
<td>7</td>
</tr>
<tr>
<td>Disagree</td>
<td>3</td>
</tr>
<tr>
<td>Strongly disagree</td>
<td>1</td>
</tr>
<tr>
<td>Neutral</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
</tr>
</tbody>
</table>
Table 4.6 above shows that ten of the respondents strongly agreed that the multiple choice paper is suitable for summative assessment. Those who strongly agreed cited that objective tests covers more topics if not the whole syllabus and also that they test for all the cognitive abilities from simple recall to analysis questions. This is in line with the views of Kasambira (1993) who asserted that MCQs are suitable for testing various stages of domain. Mpofu (1991) also alluded that MCQs enable teachers to test a wide range of concepts and learning outcomes using a single question paper within a short space of time. Seven of the respondents also agreed that MCQs are suitable for summative assessment. These widely added that MCQs only contribute 40% of the total mark and hence are suitable.

However, four of the respondents indicated that MCQs were not suitable for summative assessment by disagreeing. They indicated that they are susceptible to guess work and promotes drilling by teachers who teach for the exam. This is in line with the views of Edmund (2006) and Egbule (2002) respectively, who argued that MCQs are susceptible to guess work and that teachers with experience can spot exam questions.

The interviews held also revealed that H.O.Ds from the four schools supported the use of the multiple choice paper as a summative assessment tool. The reasons being wide syllabus coverage and those they include all the cognitive domains of the Blooms Taxonomy.
4.6 Documentary Analysis

The researcher also compared the national pass rates of candidates in the four schools before and after the use of the multiple choice paper. The research covered a period of ten years from 2008 to 2017. The aim was to unleash the trend in pass rates five years before the Multiple Choice Paper was introduced (BMCP) and five years after the multiple choice paper was introduced (AMCP). The table 4.7 below clearly shows the pass rates of the four schools under study.

Table 4.7: Principles of Accounts Average Pass Rates from 2008 to 2017

<table>
<thead>
<tr>
<th>YEAR</th>
<th>VHS %</th>
<th>CHS %</th>
<th>MSS %</th>
<th>NSS %</th>
<th>TIME FRAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>50</td>
<td>42</td>
<td>47</td>
<td>38</td>
<td>Before objective testing in the form of multiple choice testing</td>
</tr>
<tr>
<td>2009</td>
<td>28</td>
<td>57</td>
<td>43</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>19</td>
<td>76</td>
<td>45</td>
<td>31</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>30</td>
<td>95</td>
<td>46</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>43</td>
<td>65</td>
<td>48</td>
<td>41</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>42</td>
<td>64</td>
<td>40</td>
<td>50</td>
<td>After objective testing in the form of multiple choice testing</td>
</tr>
<tr>
<td>2014</td>
<td>52</td>
<td>56</td>
<td>20</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>90</td>
<td>89</td>
<td>48</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>92</td>
<td>50</td>
<td>21</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>93</td>
<td>62</td>
<td>46</td>
<td>42</td>
<td></td>
</tr>
</tbody>
</table>

Source: Zimsec November – December results 2008-2017
The table 4.7 above showed that there was only improvement in results of VHS AMCP the pass rate had improved drastically. The results can be the reason that VHS became a boarding school in 2014. It started recruiting learners whose IQ was better than the other three schools which were day schools. The pass rates of CHS, MSS, and NSS had been fluctuating since 2008 to 2017. From the chart above it can be concluded that the pass rate neither improved nor declined AMCP but fluctuated. It is however difficult to conclude that the multiple choice paper has led to significant improvements in pass rates of form four pupils in principles of accounts.

**Quantitative Analysis**

The null hypothesis that there was no positive relationship between the pass rates of pupils before and after the use of the MCP to examine principles of accounts was tested against the alternative hypothesis that there is a positive relationship between the pass rates of pupils before and after the use of the MCP to examine principles of accounts at a significance level of 5% using SPSS. The following results were obtained for correlation.

Table 4.8: Correlation results for the four schools
Kwesu and Zhanje (2001) stipulated that a correlation value closer to 1 indicates a stronger relationship and that which is closer to zero a very weak relationship. Values which are less than 0.5 reflect a weak relationship between given variables. From table 4.8 above, the correlation value is 0.044 and this implies a weak relationship between the pass rates before and after the use of the MCP. The weak relationship signifies that there are significant differences between the two categories of pass rates. In this case, we do not support H1 and accept H0, which asserted that there was no relationship between the two categories of pass rates. A weak relationship implies that the pass rates could have increased or decreased drastically, the weak correlation therefore represent a significant improvement in passes following the introduction of the MCP.

Regression analysis was also carried out using SPSS. The results are tabulated below.

Table 4.9: Regression Analysis Results
Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>49.686</td>
<td>15.089</td>
</tr>
<tr>
<td>Before Multiple Choice</td>
<td>0.043</td>
<td>.318</td>
</tr>
</tbody>
</table>

a. Dependent Variable: After Multiple Choice

Table 4.9 above shows a p-value of 0.043 which is less than the 5% significance level. We therefore conclude that there is no significant difference in the two methods of instruction. The null hypothesis of no correlation is therefore rejected in favour of the alternative of improved performance by students in the MCP method. Thus therefore means that the MCP has brought insignificant changes to the pass rates.

The second test in table 4.7 paired t-test results for the four schools was as shown below;

Hypothesis 2

H0 = There is no improvement in academic performance if MCP is used to examine principles of accounts.

H1 = There is an improvement in academic performance if MCP is used to examine principles of accounts.
Table 4.10: Paired Samples t-test results

Paired Samples Test

<table>
<thead>
<tr>
<th>Paired Differences</th>
<th>Mean Paired Differences</th>
<th>Std. Deviation of the Differences</th>
<th>Std. Error of the Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pair 1 Before Multiple Choice – After Multiple Choice</td>
<td>8.30</td>
<td>29.232</td>
<td>7.308</td>
<td>-23.883</td>
<td>7.270</td>
<td>-1.137</td>
<td>1</td>
</tr>
</tbody>
</table>

Testing the hypothesis using a two tailed sample paired t-test at a 5% significance level gives us a p value of 0.274. From the table above, p>0.05, hence the null hypothesis is not rejected. Therefore we can conclude that there is no significant improvement in students’ pass rates following the use of objective testing in the form of multiple choice testing MCQs.

4.6 Discussion of Findings

The purpose of this study was to find out the impact of objective tests in the form of MCQ on academic performance of students in principles of accounts. The findings shown in Table 4.8, 4.9 and 4.10 contradicted. Whilst correlation and regression analysis findings showed significant improvements’ in the pass rates, sample paired t-test findings indicated that the MCP did not improve pass rates at ordinary level in principles of accounts. This however agrees with the findings of Torres et al (2016) who argued that students who perform better in objective tests also do perform better in constructed response question, meaning that it is not the type of instrument that improves pass rates but the students’ ability or intelligence. The argument is also similar to the views of Ory (2009) who reiterated that students respond identically to item types (i.e. MCQ and constructed response questions).
In addition, some students perform better in objective tests yet in constructed response questions, performance changes. This could be as a result that students’ strength differs depending on the type of instrument used. This kind of trend is shown in the pass rates of one of the VHS in which pass rates were very high after the MCP. This is in line with the findings of Salih et al in which MEQ and MCQs were given to learners to attempt. The results were a weak negative correlation which indicated that some students may do well in one type of test than the other, meaning that performance varies.

On the other contrary, some schools have shown significant improvements in pass rates. This could however be as a result of the fact that students are passing because the exam is made up of questions which have been previously tested. This agrees with the views of Roediger and Marsh (2005) who asserted that objective tests (MCQs) are difficult to construct and hence same questions are asked over and over. Torres et al (2016) also alluded that objective tests (MCQs) needs special care and ability and are therefore time consuming, hence teachers or item writers tend to repeat questions. Therefore, students who go over past exam papers have the highest probability of passing in the final exam.

The other findings were that MCQs are undoubtedly the most common used type of objective tests. This goes along with the views of Torres et al (2011) who reiterated that multiple choice questions are widely used as compared to other types of objective tests. The other finding had to do with the suitability of MCQs as a tool for summative assessment. About 67% of the respondents strongly agreed and agreed that MCQs are suitable for summative assessment. Their argument for was that they cover a wide range of topics and that they are easy to administer compared to other type of tests as propounded by Kasambira (1991) and Gronuland (1995). Some also indicated that they test for all levels of cognitive ability. This goes along with the contributions of Torres et al (2016), who indicated that multiple choice items also require more complex intellectual abilities indicating that multiple choice also tests for higher level objectives such as comprehension, application and analysis.

To sum up, objective tests have brought up improvements in academic performance. They are easy to grade and score and also cover wide variety of topics. In light of this, it can also be further concluded that objective tests are suitable for assessment if the item writers and teachers
dedicate their time and effort in constructing good questions and observing all the rules necessary.

4.7 Chapter Summary

This chapter presented, analysed and discussed the research findings from the study. Descriptive statistics in the form of tables and charts was used to present the findings in logical form. Inferential statistics was also applied in testing hypotheses formulated by the researcher. Data was presented in respect of respondents’ demographic characteristics that is gender and teaching experience, suitability and the impact of objective tests on students’ performance by comparing pass rates. It was found that objective tests in the form of multiple choice questions improved the performance of learners. The overall response was that the MCP is strongly suitable for summative assessment.
CHAPTER V

RESEARCH SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction
This chapter provided a brief summary of the research. It will also outline the major research conclusions and these are summed up answers to the research sub problems obtained from research findings. Finally the chapter will outlines recommendations to various stakeholders like teachers, administrators and examining authority. Recommendations will be based on the researcher’s findings and areas which need further research and improvement.

5.1 Research Summary
The study assessed the impact of objective testing on form four pupils’ in principles of accounts for four schools in Hurungwe District. The researcher wanted to find out whether using objective testing to examine pupils’ improved academic performance envisaged by the pass rates. The researcher also aimed at finding out types of objective tests commonly used in schools in preparation for summative assessment. The suitability of objective tests as a summative assessment tool was also discussed. Knowledge was constructed by making use of a mixed quantitative research design made up of descriptive research and explanatory research. Descriptive research design provided a clear and accurate picture of the problem, whilst the explanatory research design was used to establish causal relationship between variables. Data was collected by means of interviews, questionnaires and ZIMSEC published principles of accounts results. Purposive sampling was used as the research targeted principles of accounts teachers and school administrators. Data was analysed using descriptive statistics and inferential statistics. Findings from questionnaires and interviews were tabulated and interpreted accordingly. Pass rates form the four schools were compared before and after the introduction of multiple choice questions. The results were analysed using correlation, regression and paired t-test analysis. Research findings revealed that use of objective testing contributed to a significant improvement in pass rates of form four pupils in principles of accounts in some schools as shown by increase in pass rates but in some schools no improvement was noted. The researcher also identified that multiple choice questions are widely used as well as by filling in the blanks by most teachers in principles of accounts during...
formative assessment. The findings indicated that multiple choice questions were ideal for testing both lower order and higher order cognitive questions.

5.2 Research Conclusion

After the study it was concluded that:

5.2.1 Types of objective tests used in principles of accounts

- The study found out that the commonly used objective tests are multiple choice tests and fill in the blanks because multiple choice questions tests a wide range of topics for all levels of cognitive ability from simple recall to complex evaluation questions. Findings also revealed that MCQ and fill in the blanks are easy to mark and cover more topics and can be administered to a large group in a short space of time.

5.2.2 Impact of objective tests on students’ performance

- The study established that objective tests in principles of accounts contributes to better student performance in some schools as evidenced by significant increases in pass rates but in some schools there is no improvement in performance. Learners who did best in subjective tests also did the same in objective tests.

- Objective tests are an essential instrument which can be applied in the teaching and learning process in order to improve chances of passing the final examinations.

- Objective tests equip students with skills which are essential in comprehending analysing, evaluating and synthesising, leading to better student performance on summative assessment.

5.2.3 Suitability of objective tests

- Objective tests were considered appropriate in testing principles of accounts learning area. MCQ contributes 40% of the final mark whilst the structured paper contributes 60%.
• MCQs cover the whole syllabus and also involve questions covering all the levels of cognitive domain.

5.3 Research recommendations
The researcher came up with a number of recommendations for different stakeholders from the study. They are discussed below.

5.3.1 Recommendations to teachers
- Teachers must equip students with critical thinking skills to attempt questions from the constructed response paper as well as the multiple choice paper.
- Teachers should nurture learners through the use of various lesson delivery techniques as well as good motivation and classroom management.
- Teachers must use a variety of objective testing methods so that benefits can be drawn from the merits of the different methods of objective testing.
- Instructors are also encouraged to vary MCQs and avoid setting same questions over and over and to also desist from picking past exam papers.

5.3.2 Recommendations to the education administrators
- They must staff develop teachers on how to construct and administer objective tests effectively?

5.3.3 Recommendations to ZIMSEC
- Examining authorities must adjust the overall weight of the principles of accounts paper by giving constructed response questions and objective tests an equal contribution towards the final mark obtained, since objective tests are capable of testing in-depth knowledge by assessing high order needs as well.

- Should desist from repeating questions, to such an extent that experienced teachers can ‘spot’ the exam, making the essence of assessment valueless.
5.3.4 Recommendations for further study

The study recommends a further research be conducted on whether objective tests were introduced by ZIMSEC in examining the principles of accounts paper just because it is being used in some learning areas and the examining authorities want to follow suit.

5.4 chapter summary

This chapter gave a brief summary and conclusion of the whole research. It also suggested recommendations to various stakeholders.
REFERENCES


Haladyna, T., 2006. Developing and Validating Test Items, Jones and Bartlelt Learning.


International Assembly for Collegiate Business Education, 2006. *Bloom’s Taxonomy of Educational Objectives and Writing Intended Learning Outcomes Statements*, USA.


56


Withers, G., 2005. Item writing for tests and examinations. Quantitative Research Methods in Educational Planning. 23-95


APPENDIX 1
REQUEST FOR PERMISSION

To whom it may concern
Ref: Request for permission to carry out a research project using your school as a case study

My name is Albert Gwayagwaya and I am a final year student at Bindura University of Science Education, studying for a Postgraduate Diploma in Education. I am carrying out a research project entitled “impact of objective testing on form four pupils academic performance in principles of accounts”.

I am therefore seeking for permission to use your school as a case study to represent the entire schools offering principles of accounts at ordinary level in Zimbabwe. The research mainly focuses on how the introduction of the multiple choice paper have affected the academic performance of form four pupils at ordinary level.

As a student, I also anticipate that this project will be of much significance to your school through the findings that will be deduced from the study. The information shall be used for academic purposes only.

Yours Faithfully

..............................
Gwayagwaya Al

APPENDIX 2

QUESTIONNAIRE
Dear Respondent

I am a student from Bindura University of Science Education currently studying for a Postgraduate Diploma in Education. I am carrying out a research project entitled “impact of objective testing on form four pupils academic performance in principles of accounts”.

I am therefore requesting for your assistance to participate in the study by answering the questionnaire provided, all responses will be treated with confidentiality and there shall be no direct quotations made without your consent. Information you provide shall be used for academic purposes only. Please tick in the boxes and fill in the spaces provided.

SECTION A

1. Indicate your gender.
   - Female □
   - Male □

2. Indicate your position in the school.
   - Teacher □
   - Senior Teacher □
   - H.O.D □
3. How long have you been teaching principles of accounts at ordinary level?
Less than 5 years [ ] 6-10 years [ ]
11-15 years [ ] 16-20 years [ ]
Above 20 years [ ]

SECTION B

5a. Which type of objective tests do you prefer to give form four pupils in principles of accounts during formative assignment? Tick where appropriate.

<table>
<thead>
<tr>
<th>Type of Objective Test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple Choice</td>
<td></td>
</tr>
<tr>
<td>True-False</td>
<td></td>
</tr>
<tr>
<td>Matching</td>
<td></td>
</tr>
<tr>
<td>Fill in the blanks</td>
<td></td>
</tr>
</tbody>
</table>

b. Give reasons why you prefer the type of objective test (s) you have identified above.

..............................................................................................................................................................
..............................................................................................................................................................
..............................................................................................................................................................
..............................................................................................................................................................
..............................................................................................................................................................
..............................................................................................................................................................
..............................................................................................................................................................

6. Do you think there are some disadvantages of using objective tests in principles of accounts?
7. Which level of cognitive ability is addressed by objective tests?

Higher order □  Lower order □  Both □

b. Explain your answer.

SECTION C

8a. Are there any changes in academic performance of pupils at ordinary level since the introduction of the Multiple Choice Paper in 2012?

Yes □  No □

b. The pass rate has

Increased □  Decreased □  No change □
9a. The multiple choice paper is suitable for summative assessment.

Strongly Agree □  Disagree □  Neutral □
Agree □  Strongly Disagree □

b. Justify your answer above

................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................
................................................................................................................................................

Thank you so much for your cooperation.

APPENDIX 3

INTERVIEW GUIDE FOR HEAD OF DEPARTMENTS (H.O.Ds), DEPUTY HEADS AND HEADS OF SCHOOLS
1. How long have you been an H.O.D. Deputy Head or Head?
2. Which type of objective test (s) is commonly used by teachers in your department?
3. Why do you think teachers in your department prefer the above mentioned type of tests to assess the performance of form four pupils in your school?
4. a. Which type of objective test would you recommend?
   b. Why?
5. Are there changes in the pass rates as a result of the Multiple Choice Paper?
6. What do you think caused the changes in 5 above? (If any).
7a. Are objective tests suitable for summative assessment of learners in Principles of Accounts?
   b. Justify.

Thank you for your co-operation.