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**DEPARTMENT OF EDUCATIONAL FOUNDATIONS, MANAGEMENT AND
CURRICULUM STUDIES.**

The impact of high teacher pupil ratio in rural and peri-urban government schools in Goromonzi District in Mashonaland East Province.

BY

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A research submitted in partial fulfilment of the requirements of Master of Education Degree in Educational Management.

Gweru

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ABSTRACT

The main purpose of this study was to assess the impact of high teacher pupil ratio in rural and peri urban government schools in Goromonzi district in Mashonaland province. The objectives of this study were (a) to establish if the recommended teacher pupil ratio exists in rural and peri urban government schools,(b)to determine whether high teacher pupil ratio influences performance of pupils in rural and peri urban government primary schools,(c)to identify the major challenges faced in the maintaining of the recommended teacher pupil ratio in rural ad peri urban government primary schools,(d)to suggest measures that can be put in place to attain the ideal teacher pupil ratio in primary schools,(e)to assess the impact of high teacher pupil ratio on performance in national examinations. The study targeted 70 public primary schools in the District, in which a total of 2 peri urban and 3 rural schools were sampled for the study. Purposive sampling design was used as the research design for the study. The questionnaires were administered to all heads, grade 7 teachers of sampled school and district personnel. Piloting of the research instruments was conducted prior to the actual data collection to determine the validity and reliability of the tools. Research permit was obtained from the Ministry of Primary and Secondary Education Mashonaland East Provincial office and Goromonzi District office .The data collected was processed and analysed using descriptive and inferential statistics. The relationship between teacher pupil ratio and performance was worked using Pearson's product moment correlation coefficient, the value r calculated was $-0,53$.this negative correlation between teacher pupil ratio and performance indicated that as teacher pupil ratio increases performance decreases and vice vesa. The study recommended to the government to employ more teachers to schools with lower pupil teacher ratio and ease workload. It also recommended to the government to fund schools adequately and to ensure equity distribution of teachers where teacher pupil ratio is high.

Acknowledgement

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Abbreviations and Acronyms

CRS -	Zimbabwe schools examination council
EFA-	Education for all
FPE-	Free primary education
M.D.G –	Millennium development goals
MOEST –	Ministry of education science and technology
SAQMEC –	Student achievement guarantee in education
SADC –	Southern Africa development cooperation
SAGE –	Student achievement guarantee in education
STAR –	Student teacher achievement ratio
T.I.C -	Teacher in charge
TIMSS -	Trends in mathematics and science study
T.P.R –	Teacher pupil ratio
ZIMSEC –	Zimbabwe schools examination council
ZINTEC –	Zimbabwe intergrated teacher education
UPE –	Universal primary education
ZOU –	Zimbabwe open university

APPROVAL FORM

The undersigned certify that they have read and recommend to the Midlands State University for acceptance, a dissertation entitled.

The Impact of High Teacher Pupil Ratio in Rural and Peri-Urban Government Schools in Goromonzi District in Mashonaland East Province.

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RELEASE FORM

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DECLARATION

I, Dube Egenes declare that the dissertation titled **The Impact of High Teacher Pupil Ratio in Rural and Peri-Urban Government Schools in Goromonzi District in Mashonaland East Province** is my own work and it has not been submitted before for any degree or examination in any other University. I declare that all the sources I have quoted have been indicated and acknowledged as references. I authorise Midlands State University to lend this dissertation to other institutions or individuals for purposes or scholarly research only.

Dube Egenes

Signature.....Date.....

DEDICATION

I dedicate this study to my late daughter who had the ambition to read and study beyond the Bachelor's level.

Chapter 1

THE PROBLEM AND ITS CONTEXT

1.0 Introduction.

Over the years, ZIMSEC has been ranking schools pass rates on a top 100 table, a development that attracted mixed reactions from parents, school authorities and other stakeholders over the criteria used by the national examinations body to rank the schools. While schools that dominated the ranking hailed ZIMSEC, those that failed to make it criticised the criteria for failing to consider variables such as inter-alia the school type and enrolment in terms of teacher-pupil ratio,. Daily News 12/12/15

The Education Act mandates a teacher pupil ratio of 1:40(in government schools) to ensure that the children learn better in the classroom. Does a lower teacher pupil ratio of less than 1:30 enable students to learn better and help classroom interaction? This chapter will present the background to the study, statement of the problem, purpose of the study, objectives of the study, assumptions of the study, limitations of the study, delimitations of the study, significance of the study, and operational definition of terms.

1.1 Background of the study.

Provision of quality basic education to all schoolgoing children poses a fundamental challenge to education and training systems in most countries, Zimbabwe included. Despite the major strides achieved particularly in access to primary education, by declaring Free Primary Education (FPE) soon after independence, major challenges still remain. Among the challenges are the issue of improving quality education and increasing quality learning achievement especially in rural schools and some schools in high density suburbs. Since the 1990 World conference on Education for All (EFA) in Jomtien, there has been a five to seven percent increase in school enrolments in primary education

(UNESCO, 2005). At the World Education Forum in Dakar in April 2000, the international community pledged that "no countries seriously committed to Education for All will be thwarted in their achievement of this goal by a lack of resources" (Article 10, Dakar Framework for Action). The Zimbabwean government is a signatory to various international conventions, for instance the 2000 Dakar Declarations (MOEST, 2004). Just over a quarter century ago, the Education for All (EFA) movement was born in Jomtien, Thailand. Delegates from around the world signed the Declaration on Education for All, a historic commitment to meet the basic learning needs of all by universalizing primary education and slashing illiteracy rates. The Dakar goals included expanded access for early childhood, free and compulsory education. Of the set goals, the Zimbabwean government made educational access central to their national development strategy. The government has made notable advances in the quest for Universal Primary Education (UPE) as a means of attaining the global target for Education for All (EFA).

However, the road towards full attainment of Universal Primary Education has been marked by increasingly complex internal inefficiencies in the form of congested classrooms and severe shortage of teachers. Considering that we are now in 2016, the issue of Education for All and its implications on quality of education is a matter of serious concern for the international community. Many developing countries, Zimbabwe included, have made tangible achievements in the provision of free primary education and subsequent increase in enrolments. The average net enrolments for primary education in developing countries increased from 78% in 1990 to 83% in 2000 (Vander, 2003). Between 1990 and 2000, the World's primary school age population grew from 600 million to 648 million (World Education Forum, 2000). Sub-Saharan Africa has recorded the largest increases in primary school age group up from 84 million in 1990 to 106 million in 2000, producing an average growth of 2.6% per year (World Education Forum, 2000).

While increased enrolments may suggest school systems have increased their capacity to accommodate more children, this did not necessarily translate into

improved educational quality. The Free Primary Education was a noble idea, but the intended gains were eroded by lack of effective teaching-learning process. Though developing countries have been able to improve the percentage of literacy to impress the international community, the quality of education provided has been a major concern due to the congested classrooms resulting from high enrolments. One of the major indicators of quality is the teacher-pupil- ratio. The primary school teacher-pupil ratio did not keep pace with rapid increase in enrolments. The greatest challenge facing developing countries in their efforts to attain the international goals of E.F.A and the M.D.G have therefore been provision of quality education.

The teacher-pupil ratio in most developing countries is in a worrying state. (UNESCO, 2006), estimated that over 84% of classrooms had over 40 pupils per teacher. The majority of the countries that have T.P.R exceeding 40:1 are in Sub-Saharan Africa and Asia. Sub-Saharan Africa has the largest Teacher-Pupil Ratio (TPR) with Congo having a TPR of 54:1, Mali 55:1, Mozambique 67:1, Rwanda 65:1, Ethiopia and Malawi hovering around 70:1, South Asian countries such as Afghanistan with 83:1, Cambodia 50;1 and Bangladesh 50:1 (UNESCO, Institute of statistics, 2008). The high teacher-pupil ratio in many developing countries is as a result of large enrolments following the quest for universal primary education and the increasing teacher shortages. With such enrolments and reduced numbers of teachers, the available teachers face serious obstacles in an attempt to deal with over-crowded classes. These high enrolments have caused low efficiency in the schools which is one of the main reasons for the poor quality of education offered in many primary schools in the developing countries (UNESCO, 2006).

With Zimbabwean independence, there was a record growth of between 300 to 600 percent growth at all levels of the education system, that is, primary enrolments ballooned and soared tremendously due to the influx of Zimbabwean masses quest for education at all levels. Mashingaidze et al (1988) say, primary school enrolments increased significantly in Zimbabwe from 1235815 in 1980 to

2476595 to 1991 an increase of 100,4%. The number of primary schools also increased from 3162 to 4633 during the same period. Critics of this expansion have argued that quality education was sacrificed for quantity. It is against this background that this study attempted to assess the high teacher- pupil- ratio and its impact on academic performance of pupils in national examinations, in rural and peri urban schools in the District of Goromonzi in Mashonaland East Province.

1.2 Statement of the Problem

The quest for free primary education in Zimbabwe has been a considerable success with regard to increased enrolments. This euphoric response of the primary education witnessed massive enrolments and was a positive move but of particular concern is the issue of quality education which was compromised. Researches have been made in this regard, recommendations have been made but still the problem of high teacher pupil ratio in primary schools especially in rural and government peri-urban schools still prevails. After independence the government made an attempt to invest in the construction of primary and secondary schools. The announced policy was to construct a secondary school for every five primary schools. Primary schools were built within a walking distance of each village. This policy led to one of the fastest educational expansion programmes in Africa, by late 1988, it became clear the government financial resources had been stretched to the limit and the construction of the school buildings had to slow down. . The fact that construction of classrooms ceased whilst enrolment of students sky rocketed at an alarming rate, fuelled high teacher pupil ratio in rural and government peri-urban schools. This problem has become perennial and concern has now been over poor performance posted by pupils each year in national examinations. The overburdened teachers due to high enrolments are no doubt a concern as the number of learning infrastructure has not matched the increased pupils' population. Even though the F.P.E programme was a noble idea, its intended gains were eroded by poor performance due to lack of observance on the ideal number of pupils, per

teacher resulting from high enrolments and slow infrastructural development. In light of this statement this study assessed the high teacher pupil ratio and its impact on academic performance in rural and peri urban government schools in the district of Goromonzi in Mashonaland East Province.

1.3 Purpose of the Study

Quality education is a product of a vibrant economy and it is a tool that enables the educational planners to assess the external efficiency of their products. The study assessed the impact of high teacher pupil ratio in rural and peri-urban government schools in Goromonzi District in Mashonaland East Province.

1.4 Objectives of the study

The study focused on the following objectives.

- 1.4.1 To establish if the recommended teacher pupil ratio exists in rural and peri urban government primary schools
- 1.4.2 . To determine whether high teacher pupil ratio influences performance of pupils in rural and peri-urban government primary schools.
- 1.4.3 To identify the major challenges faced in the maintaining of the recommended teacher pupil ratio in rural and peri urban government primary schools.
- 1.4.4 To suggest measures that can be put in place to attain the ideal teacher pupil ratio in primary schools.

1.4.5 To assess the impact of high teacher pupil ratio on performance in national examinations.

1.5 Main research question

What is the impact of high teacher pupil ratio on academic performance of pupils, in national examinations, in rural and peri urban government schools in the district of Goromonzi in Mashonaland East Province?

1.6 Sub-questions

The research tried to answer the following

1.6.1 How does the existing high teacher pupil ratio hinder the teacher from producing quality results?

1.6.2 What is the current workload of teachers in terms of number of pupil teacher contact hours?

1.6.3 What major challenges do schools face in trying to maintain the recommended teacher pupil ratio?

1.6.4 What is the attrition rate of the students in comparison to the external efficiency?

1.6.5 What measures need to be put in place in order to attain the required teacher pupil ratio in primary schools?

1.7 Significance of the study

The findings of the study have practical, theoretical and policy implications

1.7.1 Practical implications

Practically the study has the following immediate benefits for

- I. The Ministry of primary and secondary education will be able to clarify whether teacher pupil ratio influences pupils' performance. This clarification will allow education personnel to take appropriate action and improve the schooling condition for pupils by implementing the ideal teacher pupil ratio.
- II. The Ministry of Education and other sector stakeholders in the country will be able to mobilize resources (i.e. material and financial) in order to attain the ideal teacher pupilratio.
- III. The Donor Agencies through the Ministry of Education will assist in the development of physical infrastructure in order to decongest the classes that have high enrolments.
- IV. The recommendations of the study will inform players in the education sector on various ways of improving quality of education in the primary sector.

1.7.2 Theoretical Implications

Theoretically the study has significance:

- I. In the advancement of knowledge it will add to the existing body of literature on matters of teacher pupil ratio and performance.
- II. The study will provide an understanding of the relationship between teacher pupil ratio and academic performance.
- III. The study will give a clear picture of the ideal teacher pupil ratio.
- IV. Through the in-depth questionnaires the study will uncover the challenges facing performance in primary schools especially on matters relating to number of pupils per teacher.
- V. The recommendations of the study will form a base on which other researchers will develop their studies on the same problem.

1.7.3 Policy implications

The study has the following policy implications:

- I. The Ministry of Education will formulate policies and put measures to ensure that the ideal teacher pupil ratio is maintained.
- II. The government will allocate funds for training and employing more teachers.
- III. The Education Policy makers and administrators will provide guidance on how to implement small classes in order to improve teacher pupil interaction.
- IV. The Ministry of Primary and Secondary Education will formulate policies aimed at improving equity and quality education through even distribution of teachers in order to attain the ideal teacher-pupil ratio countrywide. The teacher – pupil ratio has serious financial implications.

1.8 Limitations

The district is made up of 70 rural and peri-urban schools. Due to scarcity of time, funds and harsh economic environment bedevilling the economy, the research was conducted in five rural and peri urban government primary schools in the district of Goromonzi. Notwithstanding these constraints, the study remained valued owing to the generalization of the interaction of the scenario between schools.

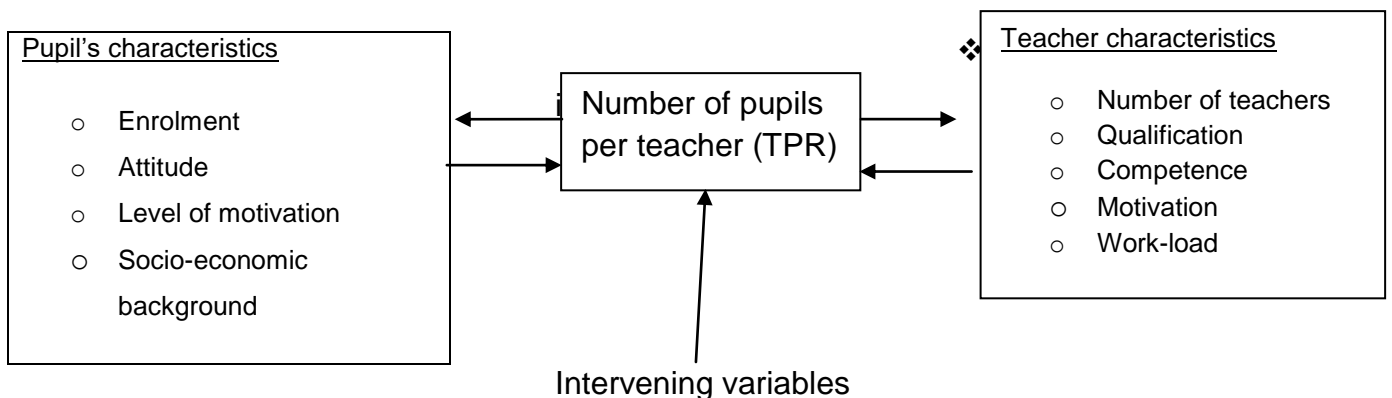
1.9 Delimitations

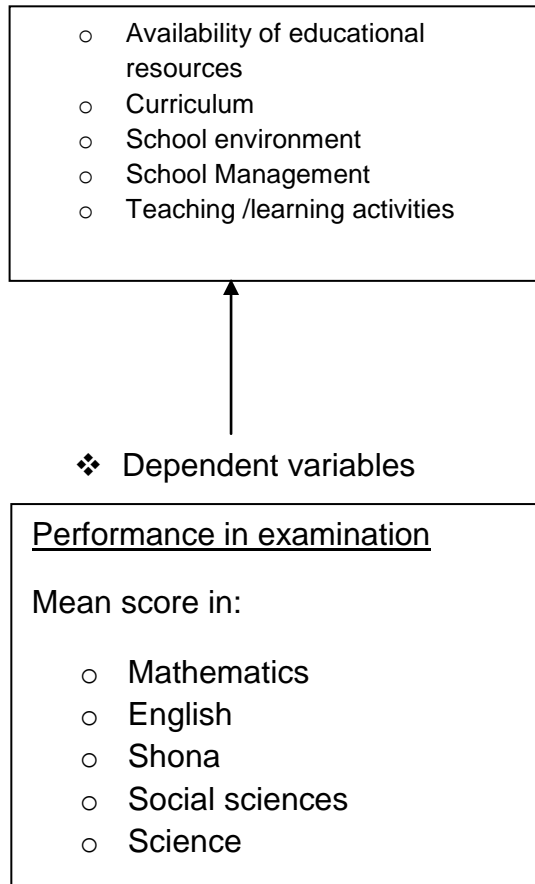
- 1.9.1 The study was confined to five rural and peri-urban government schools in the district of Goromonzi in Mashonaland East.
- 1.9.2 This was representative of other rural and peri urban government primary schools in Mashonaland East.
- 1.9.3 The study relied on data collected from the five rural and peri-urban government primary schools in Mashonaland East province which was representative of the rural and peri-urban government primary schools in the country.

1.9.4 The study analysed only performance in national examinations which eliminated biasness brought about by different internal examinations undertaken in each school.

1.10 Conceptual Framework

1.1 Conceptual framework of the study for the interrelationship between teacher pupil ratio and academic outcome of pupils.





Source: Waita K.(2012)

The conceptual framework shows the relationship among the variables of the problem of the study. The independent variable in this study is the TPR which influences the dependent variable, performance in the national examinations. Output variables are indicated by scores in national and internal examinations. Evidently for any education system to be productive and yield good results there must be appropriate and adequate number of pupils per teacher in addition to

instructional resources. The level of interaction between pupils and teachers holding other factors constant is therefore a strong determinant of academic performance. This depends on the number of pupils per teacher in a class that is, teacher pupil ratio. The educational output will be measured by the level of learning achievement that is standardized scores in national examinations. Pupils and teachers characteristics contribute to pupils` achievement but the nature of the output is determined by the degree of interaction.

In the conceptual framework, the independent variable that is, TP R determines the dependent variable that is, pupils academic performance. There are other variables that also take part in the educational output but even though they are important determinants of the performance they are held constant in this study. These intervening variables are the variables other than independent variables that also take part in determining the outcome of the education process. This includes instructional materials, school management, curriculum, school environment, teaching and learning activities etc. The educational output is given by the scores of pupils in national examinations which is quantitative and behaviour change of pupils which is qualitative.

In the framework pupils and teachers are inputs into the education system and therefore the number of pupils per teacher entails the independent variables which determine the outcome inform of academic results in the national examinations which are the dependent variables.

1.11 Operational definition of terms

Quality education	Good quality education is one that provides all learners with capabilities they require to become economically productive.
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External efficiency	At the completion of primary education the children should move forward and must all get vacancies for form one. If all the products are absorbed in the next level it means external efficiency is very high.
Teacher pupil ratio	Is the number of pupils enrolled in primary school divided by the number of teachers registered at the school.
Enrolment	Number of pupils who have officially joined the school.
Free primary education	Education offered without cost to the recipients in primary schools.
National examination	Examination that is taken by all pupils in the same level of education country wide.
Internal efficiency	It is an important dimension of the concepts of success and quality of education. It is usually measured by indicators such as student Input/output ratios or survival/attrition rates, teacher utilisation retention and teacher effectiveness.
Performance	The main score of pupils in a national examination as a measure of educational outcome.
Teacher work load	Amount of time spent teaching and interacting with pupils in and outside the classroom per teacher per week

1.12 Summary

The first chapter outlined the background of the study which clarified the circumstances that led to the school's high teacher pupil ratio. The government of Zimbabwe made notable advances in the quest for Universal Primary Education (UPE) as a means of attaining the global target for Education for All (EFA). The chapter proceeded to state the problem, sub problems, objectives of the study, the research questions sub questions, the significance of the study, limitations, delimitations, the conceptual framework and operational definition of terms. Literature related to the study was reviewed in the next chapter

CHAPTER 2

REVIEW OF RELATED LITERATURE

2.0 Introduction

The chapter attempted to review the available literature which was related to the study .The review focused on the publications by some accredited scholars and researchers .The literature reviewed to ascertain whether tangible relevant conclusions to the study emerged and find out the missing gaps to be filled in the study.The review of related literature adopted the top -down approach by illuminating the studies that were carried from abroad and finally bringing the ideas right home.

The impact of class and -teacher pupil ratio on education outcomes is among the most researched areas in education .By the 1940s, more than 200 studies had appeared on this topic (Hanushek,1995).Some of the studies which have been conducted in different parts of the world that relate to this study include the following .

- I. Class size reduction studies and the Meta-Analysis research in far West Laboratory, in the United States.
- II. Large scale studies on class size and student achievement in America
- III. Impact of large classes on the students' academic achievement and engagement
- IV. Lessons learnt from South Africa Consortium for Monitoring Education Quality (SACMEQ).
- V. Studies on impact of large classes after implementation of the expansionist policy in Zimbabwe.

Some early studies did not establish a connection between smaller class sizes and students achievement, but mainly attempted to weigh the value of small classes against larger classes. Most acceptable studies, however, supported the importance of small classes in promoting students success. In a review of early studies, Educational Research Service concluded that reducing class size in the primary grades to 22 or

fewer appeared to have a beneficial effect on reading and mathematics' scores especially for economically disadvantaged pupils. Since that time, more sophisticated experiments have confirmed and extended this conclusion (Hanushek, 1995).

2.1 Class Size Reduction Studies and the Meta-Analysis Research in Far West Laboratory in United States

The first refined analysis to connect reduced class size to academic achievement was the 1978 Meta-analysis by Glass and Smith for the Far West Laboratory for Educational Research and Development. Their study, "Meta-Analysis of Research on the Relationship of Class size and Achievement" remains to be one of the most comprehensive on this issue. Unique in their approach, the two researchers examined and analysed 77 empirical research studies, yielding more than 700 comparisons based upon data spanning 70 years of research performed in more than a dozen different countries (Glass and Smith, 1979).

Altogether, achievement test results of more than 900 000 pupils were incorporated into the study to yield statistical synthesis revealing general trends (Glass and Smith, 1979). This analysis found that not only did small classes improve the chances for academic achievement, but that small classes could also be used as a predictor of student's success. Glass and Smith (1978) showed that "as class size increases, achievement decreases". The results of their investigation suggested that a class of 15 or fewer would be needed to make a noticeable improvement in classroom performance. Repeated studies provided evidence of important relationships between the number of students in the classrooms and students achievement. This research demonstrated that an appropriate class was fewer than 20 students, and that the greatest benefits of small classes are obtained in the early grades.

The findings of the Meta-analysis study pointed out evidence between reduced class size and pupils achievement. More specifically, the results showed that as class size

decreased, student achievement increased. The achievement of pupils in instructional groups of 15 and fewer scored several percentile ranks above that of pupils in classes of 20 and 30 (Glass and Smith, 1979). The strength of the relationship varied according to the level of the reduction. Reductions in class size below 20 students resulted in larger improvements in student achievement than for reductions in the 20 and 30 range. Basing on their findings, Glass and Smith (1978) concluded that “there is evidence that more is gained in smaller classes”.

From the study undertaken by Glass and Smith, there is need for further study in different environments and situations to confirm whether smaller classes have any relationship with student’s achievement.

In another companion study, Glass and Smith (1978), provided further insight about whether decreasing the size of class produces improvements on non-achievement outcomes such as teaching processes, student and teacher effects in affective domain.

Their findings answered the question in the affirmative with the following statement “on all measures, reduction in class size was associated with higher quality schooling and more positive attitudes”.

It is in line with their findings that this study intends to confirm their conclusions on the relationship between class size and student achievement and students behaviour.

2.2 Large Scale Studies on Class Size and Student Outcome in America

Based on this early work, beginning in the mid-1980s some large-scale projections and an actual experiment in class size and student outcomes were started. Among them were, the Tennessee Student-Teacher Achievement Ratio (STAR) experiment, the Student Achievement Guarantee in Education (SAGE) program in Wisconsin, the California’s Massive Class-size Reduction (CSR) effort, the Project Prime Time in Indiana, the Burke county project in North Carolina and Federal Initiatives on Reducing Class-size

2.2.1 The Tennessee Student-Teacher Ratio (STAR) experiment

The STAR project, conducted in Tennessee in 1985-1989, provided the most convincing case for class size project (Bain, Johnson and Word, 1989). This gigantic study found that smaller class size and the lower -teacher pupil ratio had impact on student achievement (Bain, Johnson and Word, 1989). The findings of the study revealed that academic achievement increased significantly in the smaller class size (lower -teacher pupil ratio) than in the regular classes. This large-scale (n=11,600) longitudinal study provided the legislature and administrators with convincing data to support small class size and lower -teacher pupil ratio for students. (Bain, Johnson and Word (1989)

The project was implemented in 79 schools for 7,000 grade 3 students. At each grade 3 level, a strictly controlled study was set up to examine whether small (13-17) classes made a difference in student accomplishments in the early years, when compared to regular (22-25) classes, or regular classes with full time teacher aide. Children and teachers were randomly assigned to one of the three types of classes: small (13-17) students, regular (22-25 students with one teacher) and regular with teaching aide (22-25 students with one teacher and one teaching aide). In evaluating the impact of these three scenarios, they concluded that small classes (i.e. 13-17 students with one teacher) produced better student achievement in both reading and mathematics. Bain, Johnson and Word (1989) analysed 50 of the most successful teachers (i.e. those whose students showed the greatest academic achievement) involved in the STAR study and revealed a core of common features of these classrooms. Perhaps the more revealing feature, however was that, of the 50 successful teachers exhibiting these qualities, all had small classes (i.e. not greater than 20 pupils).

Because of its magnitude and scientific rigor, the results of STAR carried more weight than earlier studies. The most important findings of the study were;

- The benefits of small classes were greater for minority students and students attending inner city schools than schools for white students or those in non-urban schools.
- In every grade 3 level students, small classes outperformed students in larger classes on every achievement test administered in all subject areas and on both norm-referenced and criterion-referenced achievements tests.
- Pupils who attended small classes in grade 3 performed significantly better in all academic subjects in all subsequent grades 4, 6 and 8).

Additional strength was added to STAR results by secondary analysts at the University of London, the University of Chicago and Princeton University who examined the STAR data using different statistical approaches. All approaches yield the same conclusions (Bain, Johnson and Word, 1989). The STAR project revealed that:

- Teachers of small classes spend more time on active teaching and less on classroom management, a finding substantiated in other research in addition to STAR.
- Teachers' morale is increased in small classes, this concurs with all prior research.
- There are fewer disruptions in small classes and fewer discipline problems, a finding replicated in other studies.

Alderman, Orazem and Paterno (2001) contributed to this discussion, their study concluded that higher student-teacher ratio had a consistent negative effect on student achievement particularly on language skills. However, Gladdy and Stevens (2003) in their study concluded that teacher pupil ratio was an important determinant of fees and parents choose schools with lower student teacher ratio. Levacic (2005) concluded a study on Grade 3 and found that reduction in the student teacher ratio had significant positive effect on mathematics achievement.

While the STAR project is often cited as best evidence to reduce size, there is equal evidence to the contrary. Ehrenberg (2001) conducted a Meta – analysis of class size studies examining its impact on student achievement. In contrast to the STAR evaluation, Ehrenberg concluded that there was no significant evidence that variations in class explains improvements in student achievement. Even if some correlation did exist, Ehrenberg suggested that the benefits are too modest to warrant the high costs of class size reduction implementation.

The conclusions reached by Ehrenberg contradict earlier findings of the STAR project that small classes contribute positively to students` achievement. This contradiction therefore places the position of small classes and students achievements at a doubt whether there exist any significant relationship. This study will therefore seek to find whether any relationship exist between low student teacher ratio and students achievement.

2.2.2 The SAGE Programme in Wisconsin

Another large study conducted in this area was the Student Achievement Guarantee in Education (SAGE) program in Wisconsin. The programme began as a five year project in 1996- 97 school years and tested the hypothesis that smaller classes in Elementary schools raised academic achievement. School districts in Wisconsin that had at least one with 50% of children or more living below the poverty level were eligible to become a SAGE school. The program required participating schools to implement four interventions among them being to reduce the teacher pupil ratio within a classroom of 15 students per teacher. The longitudinal evaluation of the SAGE program produced substantial scientific data on the effects of small classes in Grades 3 (Molnar, Smith and Zahorik, 1999).

The positive impact of small classes on student achievement in SAGE classes was the same for four years and confirmed the earlier findings of the STAR. The greatest

achievement gains were made in the first grade with second and third grade students maintaining their gains. Perhaps of greater significance, SAGE provided guidance for policy makers and Administrators about how best to implement small classes at the district and local level through extensive non- experimental data collection (Monlar at el 1999) Even though the SAGE programme reveals similar findings of the STAR project, the contradiction raised by the Ehrenberg findings in 2001 require further research and clarification. Based on this argument the findings of the study will provide clarifications that small number of students per teacher are significant in improving performance.

2.2.3 California Massive Class Size Reduction

In California a class size reduction programme began in 1996. Within a period of several months, new teachers were hired and placed in grade 3 classroom across the state, reducing class size to 20 pupils or fewer. In three years of operation, this largest class size reduction initiative resulted in 28, 000 new teachers being deployed and virtually every class in grade 1-2 being reduced in size. Since the program was implemented so quickly, very few large classes were available to serve as a comparison group for evaluators. The evaluation focused on Grade 3, in which small but statistically significant achievement gains were reported in reading, language and mathematics. The benefits of small classes were in the range of 0.05 to 0.10 standard deviations (Bohrnstedt, Stecher and Wiley, 2000).

Although these were considered small effects, the results replicated those of the STAR pupils who entered small classes at grade 3. InSTAR, the largest effects were obtained for students who entered small classes in earlier years (Bohrnstedt, Stecher and Wiley, 2000).

California's experience provided important insight into the types of planning needed before implementing a large –scale reduction initiative, the current clarify such were worthwhile or not.

2.2.4 Project Prime Time Indiana

The Indiana legislature instituted class size reduction (CSR) in 1981 with its project Prime Time. According to Chase, Muller and Walden (1986), the state provided funds in 1984 for school corporations to “reduce first grade classes to an average of 18 students (or 24 with an instructional assistant)”. The fall of 1985 saw second grade added to Prime Time, and the final addition came in the fall of 1986 with Indiana Schools Corporations given choice of adding third – grade. The result from Project Prime Time demonstrated modest gains. The largest gains come in the first reading with 50% of Indiana school reporting higher student achievement outcomes. Secondly with reduced classes the Indiana school project revealed that teachers were more quickly able to diagnose students` needs in small classes than large (Chase, Muller and Walden 1986). The findings of this study will be important in revealing and supporting the conclusions reached by the Indiana initiative concerning diagnosis of students` needs in small classes.

2.2.5 The Burke Country Project in North Carolina

Studies of the effects of small classes in the Burke County, North Carolina, reinforced SAGE and STAR findings while addressing questions about financial and educational policy implications of class size reductions. With the goal of improving education in relatively poor Burke County, a pilot programme (1991-1992) reduced class size to 18 in grade 1 in four schools, and in grades 2 and 3 in subsequent years (Egelson & Harmon, 2000). Pilot programme results were highly positive. On the strength of these findings, the programme was extended in 1995-1996 to all elementary schools, grades 1-3, providing the same positive findings. By 2000, classes of about 17 were in all 17 schools with grades 1-3. By comparing the class size reductions with control classes, researchers reported higher rates of time on task for students and more emphasis on student interaction. The smaller classes significantly outperformed regular classes in Maths and reading at the end of grades 1, 2 and 3. (Sharp, 2002)

The Burke County programme emphasized the importance of student interaction and revealed that performance was higher when interaction was intensive.

2.2.6 Federal Initiatives Class-Size Reduction Programme

In its first –year report, the class-size reduction programme “Boosting Student Achievement in schools across the nation”, the U.S Department of Education highlighted the expected benefit of class-size reduction(Hanushek,1999).Federal class size reduction funds were aimed at helping to make classrooms more manageable so that teachers could focus on teaching and learning .The Federal class-size reduction programme permitted schools to implement several models of classes, including some that were not small at all. The Federal included large classes (e.g., 32-40 pupils) that were team taught by two full time teachers and pairs or triplets of larger classes (e.g., 30 pupils) that shared a” rotating “teacher who would spend part of the day in each classroom. Both of these models reduced the teacher pupil ratio in classrooms. In its first year of operation, approximately 29 000teachers were hired under federal class-size reduction initiative.

However, the ensuing calendar year saw a change in administration in Washington. President Bush`s education plan, “No child left behind” targeted federal class-size reduction thus disregarding class size reduction. But nevertheless it was noted from the initiative that small classes were becoming standard practice in many states across U.S and were producing noticeable benefits to both teachers and pupils,(Hanushek,1999)

2. 3 Impact of Large Classes on Students Academic Achievement

Reducing class size has been found to have academic benefit in all subject areas. Studies published since the mid-1980s showed that classroom behaviour and test scores improve while students were in small classes (Bain, Johnson Word, 1989).The advantages of small classes have been touted by educators throughout modern history. Only in recent years however, has there been a significant impetus for reducing class sizes in American schools. This is due to the fact that teachers, parents and policy makers understand the importance of small classes for teaching and learning .This understanding has made education to rise to the top of state and national agenda since

high quality research has demonstrated the academic and behavioural benefits of small classes (Vander, 2003)

Within the literature on large classes in North America and Western Europe, there is equivocation about the point at which classes become too large and negatively impact education quality. In Western countries, class sizes of 30 are considered large and in need of reduction. To complicate the issue further, there are examples of very large classes with excellent student learning outcomes. South Korea, who placed second on the 1996 Third International Mathematics and Science Study (TIMSS), has an average of 56, 9 students per class in mathematics and 48, 8 in science. Similar conditions have been observed in both Japan and Singapore, where students are excelling in larger classes. Numerous analysis of class data many of which are documented have been unsuccessful in making definitive statements about the effect of large classes on learning outcomes. Some have argued that, intuitively smaller classes have a positive impact on student achievement, while others conclude that there is no significant impact (Vander, 2003)

In Europe and North America contexts there is agreement that small benefits occur due to a number of factors, including increased teacher pupil contact, differentiated instruction, improved classroom management and improved teacher morale (Vander Ark, 2003). Researchers have also noted that the academic gain seen in young children from smaller classes tends to persist into higher grades. Where research on large classrooms in developing countries does exist it is just as inconclusive. Hanushek, (1995) reviewed 96 studies that attempted to link various educational inputs to student performance in developing countries. Nearly a third of the reviewed studies (n=31) specifically investigated the effect of teacher pupil ratio. Of these, only eight studies found reductions in class significantly explain improved academic achievement. In another study Hanushek (1999) noted that smaller class size i.e. Low teacher pupil ratio had a stronger positive effect in secondary schools as compared to elementary schools. Of the 277 estimates attempting to capture the effects of teacher pupil ratio on

student performance, only 15% of the estimates were significant and positive .Virtually the percent, 13%were negative and significant suggesting that lowering the teacher pupil ratio resulted in poorer student performance.

Table 2.1: Percentage distribution of estimated influence of teacher-pupil ratio on

Statistically significant			statistically insignificant		
School level	Positive%	Negative%	Positive%	Negative%	Unknown%
All school	15	13	27	25	20
Elementary schools	13	20	25	20	23
Secondary schools	17	7	28	31	17

student performance by level of schooling

Source: Hanushek 1999

From table 2.1, it appears that low teacher pupil ratio (small class size) has stronger positive effects in secondary schools as compared to elementary schools (17% to 14% respectively). These results are evidence against the widely held belief that smaller classes are effective during the early years of the education process. Most of the studies carried out on small classes favoured them on the basis of discipline and class management. The arguments that small classes enhance performance received little attention from earlier studies. Studies on teaching large classes noted that it was easy to ignore the importance of human interaction when instructing large classes (Hanushek, 1999)

Michael Lowe, (2001), carried out studies in five Franco Sub-Saharan African countries (Cameroon, Cote d'Ivoire, Burkina Faso, Madagascar and Senegal). From her analysis she concluded that there was an inverse relationship between class size and learning outcome. She further noted that 62 students per teacher was a threshold number. The study therefore found that academic achievement was increasingly high in smaller class. Class size has many effects on students' engagements, behaviour and retention. Finn, (2003), reviewed studies that examined the link between student engagement and class size. He conceptualized student engagement into two forms: social and academic engagements. He concluded that when students are placed in smaller classes they become more engaged, both socially and academically. With strong social and academic engagement, he argued that academic achievement increased. Pupil attention is a particular area that affects academic engagement. Researchers have shown that students tend to spend less time on class assignments when in large classes, (Blatchford & Mortimore, 1994, Cahen, 1989). They further went on to confirm that, smaller classes allow teachers to engage their students in a differentiated fashion in which teachers can cater for individual differences of their students.

2.4 Lessons learnt from South Africa Consortium for Monitoring Education Quality (SACMEQ)

Lessons learnt from South Africa Consortium for Monitoring Education Quality indicated that despite the intuitive importance of school related factors for student performance, finding empirical support has been difficult. In the South African case, (Case & Deaton, 1999), side stepped this problem by conducting their analysis shortly before the end of apartheid. At that time, teacher pupil ratios were on average much higher in black schools than in white schools, and also substantially more variable. The authors found that the teacher pupil ratio had a significant negative relationship with educational attainment for black students ,while there were no similar findings for whites .Following political transition , the department of education in South Africa moved to equalize personnel provision norms across the reunified schooling system ,implying a norm of teacher pupil ratio levels of about 34 for primary schools and 37 for secondary schools .As a result ,the teacher pupil ratio fell in the historically black school and remained high in historically white schools. Unfortunately, having a favourable teacher pupil ratio and well qualified teachers in black school did not translate South Africa among the best in South and Eastern Africa, (Case & Deaton, 1999).

This study resulted to doubt the relationship between teacher pupil ratio and students achievements as advocated in other studies by the proponents of small classes. SACMEQ research noted that schools in South Africa transformed inputs into outputs with a large degree of variation, and that some low socio-economic status schools performed well above their predicted levels in spite of being at a resource disadvantage(Crouch&Mabogoane,1998) This suggests that managing the available resources well rather than benefiting from a greater stock of resources may be the most critical school level determinant of student performance. This therefore refuted the studies linking small class sizes and student performance.

2.5 The impact of large classes after implementation of the expansionist policy in Zimbabwe

The ZANU PF government promised the disadvantaged masses access to education and they used it as their campaigning strategy which led to the landslide victory into power. Through its election manifesto, the adopted egalitarian system of education following the Marxist Leninist Ideology meant to address the imbalances that were created by whiteracism. Since independence in 1980 a wide range of educational reforms were introduced in education. Zvobgo, (1986), stated that, the government believes that education is a basic human right and not a privilege for a few. As a result everything possible was done to ensure that education was brought to the door step of every child. The ZANU PF election manifesto on education stated:

- The abolition of racial education and this resulted in all schools being de-racialised
- The establishment of free and compulsory primary education regardless of race, colour, creed or sex resulting in Education for All policy in 1991
- Orientation of education to national goals

The announced policy was to construct a secondary school for every five primary schools. Primary schools were built within walking distance of each village in order to make education accessible to every child. This policy led to one of the fastest educational expansion programmes in Africa. The government had to ensure that education was inclusive and non-discriminatory. The government opted for inclusive education as a policy that would lead to the avoidance of discrimination in schools when it accepted the provision of The Convention of the Rights of the Child, The Copenhagen Declaration on Social Development, Salamanca Statement and framework for action and The Dakar Framework for Action. These conventions enforced that all children must

be able to go to school nearest them or schools of their choice without impediments being put in their way.

The educational policies adopted by the ZANU PF government in 1980 planning machinery it created led to the phenomenal growth of the educational system at all levels. Free primary education, increased access to secondary and post-secondary as well as political mobilization and encouragement, led to increases in enrolment over such a short period of time probably unparalleled in the history of educational development. Exhortations by politicians and government ministers at political rallies, to parents to assist government to build schools and send their children to school were heeded .The parents accepted the challenge and sent their children to school in large numbers

The response to the challenge went far beyond simply sending their children to school. They contributed generously to the construction of the much needed educational facilities in the form of classrooms,workshops,librariesand other specialist rooms.The phenomenal increase in primary enrolment in so short a time created stress and strain, within the education system.There was an acute shortage of trained teachers as well as chronic shortages of textbooks for use by pupils. The shortage of teachers was exacerbated by the transfer of some primary teachers to secondary schools where even more serious shortages were being experienced.

The quantitative expansion that took place in the first six years of independence at primary school level is summarised in table 2.2 below

Table 2.2: Expansion at primary level 1979-1991

Year	Number of schools	Cumulative Growthindex	Total enrolment	Cumulative Growth	

				index	
1979	2401	100	819 586	100	341
1980	3161	132	1 235 151	151	391
1981	3698	154	1 715 169	209	464
1982	3880	162	1 907 225	233	492
1983	3960	165	2 044 487	249	516
1984	4161	173	2132 304	260	512
1985	4234	176	2216 878	270	524
1986	4297	179	2265 053	276	527
1987	4439	185	2251 319	275	507
1988	4471	186	2212 103	270	495
1989	4507	188	2233340	272	496
1990	4539	189	2119 865	259	497
1991	4549	190	2294 934	280	504

Source: calculated from statistics in Secretary's 1991 Annual Report

The statistics in Table 1 indicate that there was a three sided expansion in the post-independence education system at the primary level. Firstly there was an increase in the number of primary schools from 2401 in 1979 to 4549 in 1991. The greatest increase was experienced between 1979 and 1980 when 760 schools were opened, an increase of 32% in virtually six months. This was the result of the reopening or the reconstruction of already existing schools which had been either closed or partially destroyed during the war. Most of these 760 schools were reopened in the course of the

second term of 1980 since the new government assumed office on Independence Day on 18 April 1980. Since all the schools that had either been closed or destroyed were in rural areas and were non-government the successful re-opening of so many schools bear testimony of the spirit of goodwill that existed between the government and the people.

Secondly, there was an increase in the number of pupils enrolled in school. This was due to the enrolment of pupils who had dropped out of school during the liberation struggle and also to the natural increase in the number of children seeking school places. Thirdly, there was an increase in the average size of school by enrolment up to 1986. From 1987, there was a decline in average school enrolment, though the number of schools continued to increase. This indicates that there was a greater countrywide coverage of primary schools every year.

During the post-colonial period the massive construction of schools was followed by assistance to train teachers since the schools lacked teaching personnel. As a rigorous move to counter large numbers of children, temporary teachers were roped in to manage the increase in primary schools. The ZINTEC programme was conceived as an emergency teacher training programme to alleviate the severe teacher shortages in primary schools. This was a low cost teacher training scheme, whereby only two terms of the four year course were spent in college and the remainder in teaching at schools. The programme was entirely funded by the United Nations Children Education Fund. At its peak it had the capacity to produce 3000 teachers annually. The programme was so successful that it became a model in the SADC region, (Nziramasango Comm Report, (1999).

The issue of teacher shortage was addressed but practising teachers in urban and rural government schools are still overwhelmed by the number of students they had to handle in one classroom (Parliamentary Portfolio Committee report on Education, June 11 2012). The report noted that government had failed to maintain the 1:40 ratio as most teachers, especially in the rural areas had to handle very huge classes. The committee was informed that the teacher-pupil ratio has reached unacceptable levels and that

most rural teachers are being forced to attend a class with an average of 60 students, which is unrealistic as the teacher cannot monitor all the students. " Sunday mail 17 January 2016, open letter to minister of education. The key issues that need to be addressed before embarking on ambitious and costly curriculum changes include an analysis of schools available in relation to numbers. We have a hot seat system which has been a norm since the adoption of the EFA policy at independence. This policy resulted in a higher demand for school places when the schools were few, hence the introduction of the hot seat system to absorb as many students as possible. Thirty five years on, the system is still in place.

Subsequently, this leads to poor performance of both the student and the teacher and in addition most school heads are full time class teachers who are also responsible for administrative duties. The report by the committee also noted that a decade of economic meltdown had caused school infrastructure to deteriorate in value. Rural schools face high staff turnover to well better equipped schools in terms of infrastructure.

According to the Newsday of 2015, former Minister of Education David Coltart urged his successor Dr Lazarus Dokora to shelve some of his ambitious changes he has proposed under the new curriculum review saying the changes were an extra burden on the collapsing economy and may trigger massive pupils `dropouts. He urged him to direct his energies to ensuring that all pupils had access to basic education and aim to reduce the teacher pupil ratio.

1 teacher-pupil ratio is a variable that is of great concern globally and locally hence the close monitoring by the international communities of the teacher pupil ratio of different countries. Below is 2.3 table teacher pupil ratio in primary education of few selected countries (based on head counts).

Table 2.3: Teacher –pupil ratio of few selected countries

country	2011	2012	2013
Algeria	23	23	23
Austria	11	11	11
Benin	44	44	44
Burkina Faso	53	48	46
Central Africa Republic	81	80	80
Chad	63	61	62
China	17	18	17
Mozambique	55	55	55
Zambia	56	49	48
Zimbabwe	36	36	37

Source: World Bank (2013)

The method of calculating the teacher pupil ratio of a given country, by dividing the total number of students in a given country by the total number of teachers, may not truly reflect the actual teacher pupil ratio that prevails at a particular school. In Zimbabwe the majority of rural and urban government schools, have classes that have students as many as 50 or 60 in a class.

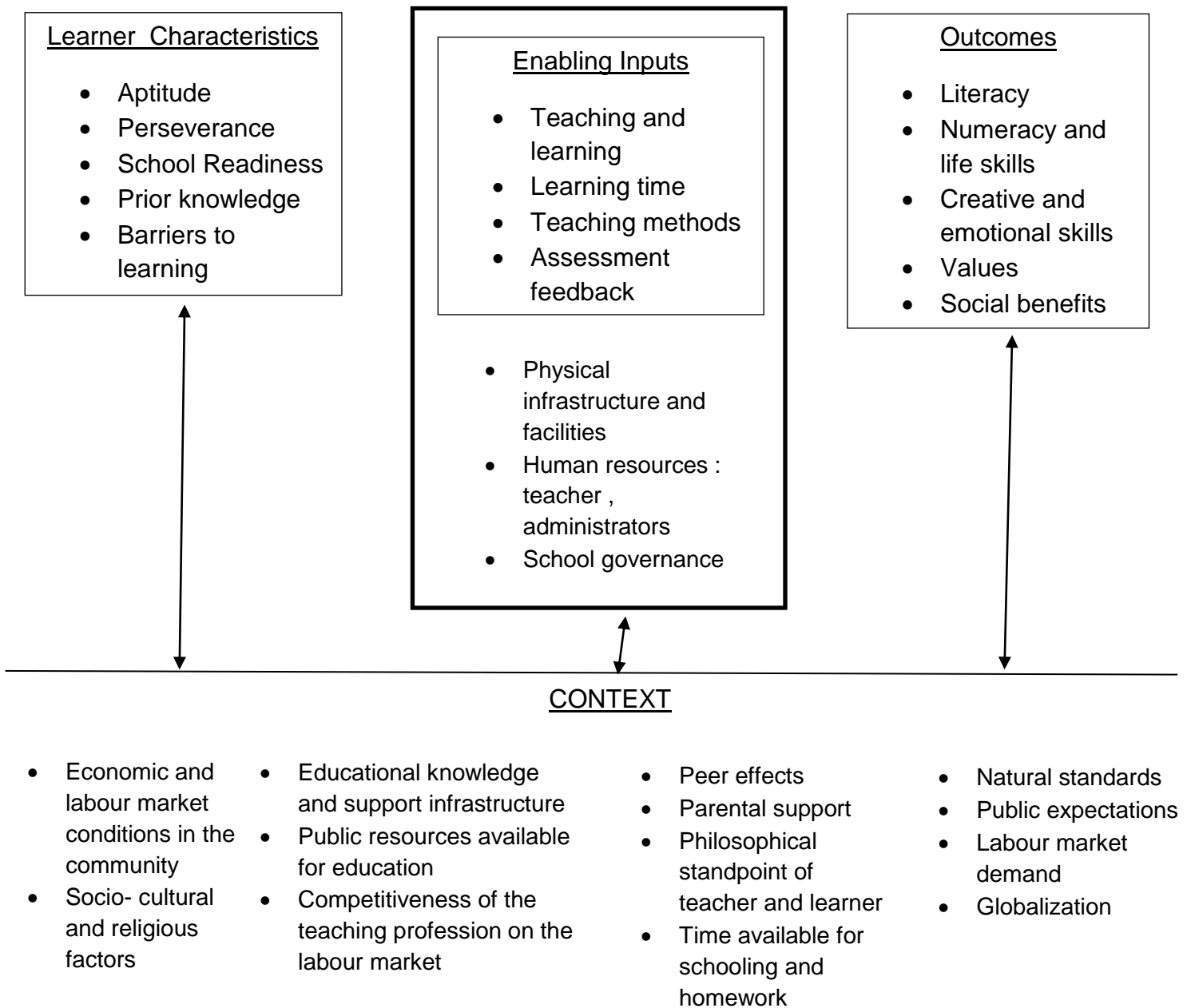
2.6 Quality of Education

A research by Mafa and Tarusikwa M.C (ZOU)

In Zimbabwe, 'O' level education is embraced in the concept of basic education. The concept entails that primary school graduates automatically progress into form one, notwithstanding their grade seven results. Findings were that basic education adversely affected the quality of education by the creation of large wide ability classes which most teachers found difficult to teach, overstretching teaching, learning resources and congesting infrastructure, created uncondusive learning environment.

The different major alternative traditions of educational thought view quality of education differently. However, this study adopts the UNESCO's 2005 definition of quality. UNESCO views quality at the individual level, quality education is one which allows children to reach their fullest potential in terms of cognitive, emotional and creative capabilities. At the societal level, the education received by children should allow them to meet societal expectations. Three principles that are broadly shared and are thought to influence quality of education can be summarized as the need for more relevance, for greater equity of access and outcome and for proper observance of individual rights (UNESCO, 2005)

Figure 2.4 presents a framework for understanding quality education



Source UNESCO (2005)

The Republic of Zimbabwe (2005) as quoted in Mafu 2013 states that quality in education embraces several dimensions that include resource inputs like financial, material and human resources. It also embraces curriculum relevance, breadth, depth and content which influences the output in terms of the number of children who successfully complete various levels of education. Other dimensions of quality include appropriateness of teaching, level of children participation in the system, survival, coverage and performance of pupils in public examinations. This is made possible if the teacher-pupil contact hours are meaningful.

2.7 Summary of literature review

From the previous studies that were conducted in different parts of the world on the impact of class size and the teacher pupil ratio on students' achievement, they do not seem to agree on the relationship between the two variables. Glass & Smith for the Far West Laboratory for Educational Research and Development found out that not only did small classes improve the chances for academic achievement but that small classes could be used as predictors of students' success.

The Tennessee Student Teacher Ratio (STAR) experiment found out that pupils who attended small classes in k-3 performed significantly better in all academic subjects in all grades. To complicate the issue there are examples of very large classes with excellent student learning outcomes. South Korea who was placed second on the 1996

Third International Mathematics and Science Study, had an average of 56, 9 students per class in mathematics and 48, 8 in science. Similar conditions have been observed in Japan and Singapore, where students excelled in larger classes. SACMEQ research noted that schools in South Africa transformed inputs into outputs with a large degree of variation and that some low socio-economic status schools performed well above their predicted levels in spite of being at a resource disadvantage (Crouch&Mabogoane 1998).These studies were across the board i.e. from grade 1 to high school. Many studies have been done to compare the performance of pupils in particular subjects especially in mathematics ,science and accounts, but the studies on the impact of teacher pupil ratio on pupils` performance at grade 7 level has not reached definite conclusions. Nationally the grade 7 students have been performing below average. The percentage pass rate in 1993 was 23.1%, in 1994 was 22.9%, in 1995 was 23%, in 1996 was 21.2%, in 1997 was 20%, in 1998 was 14.58%, in 1999 was 15.69%, in 2000 was 13.8% and in 2001 was 13.6%. (Zimbabwe Schools Examination Council ZIMSEC,(2001)

Based on this argument there is need for a study in a different region to fill the gap and clarify the impact of high teacher pupil ratio on national exams.

CHAPTER 3

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presented the research design, target population, sampling design and sample size, research instruments, key items in the questionnaire, piloting of research instruments, validity of research instruments, data collection procedure, data analysis, plan and ethical considerations in data management.

3.1 Research Design

This study was guided by the positivist paradigm. This theoretical framework is also called the objective, quantitative, deductive, normative, empirical analytic theory. The positivist paradigm of exploring social reality is based on the philosophical ideas of the French Philosopher August Comte. According to him, observation and reason are the best means of understanding human behaviour. True knowledge is based on the

experience of senses and can be obtained by observation and experiment. The ontological assumption of the positivism framework assumes that the reality is objectively given and is measurable using properties which are independent of the researcher and his or her instruments. In other words, knowledge is objective and quantifiable. The ontological assumptions of the positivist framework asserts that reality is real because the real aspects are produced after carrying out the experiments. The paradigm brings out the causes and effects of what the researcher tried to find out.

Positivistic thinkers adopt scientific methods and systematize the knowledge generation process with the help of quantification to enhance precision in the description of parameters and the relationship among them. Positivism is concerned, with uncovering the truth and presenting it by empirical means (Henning, Van Reinsburg and Smits 2004:17). According to Welshman (1995), the positivist position maintains that scientific knowledge consists of facts while its ontology considers the reality as independent of social construction. If the research study consists of a stable and unchanging reality, then the researcher can adopt an (objectivist)perspective, a realist ontology, a belief in an objective real world and detached epistemological stance based on a belief that people's perceptions and statements are either true or false, right or wrong, a belief based on a view of knowledge as hard, real and acquirable. They can employ methodologies that rely on control and manipulation of reality.

Positivists maintain that reality is not abstract, it is something tangible for use. For instance the use of tests and experiments, they are quite clear and can be proved or tested. Generalisation about reality can be made free of context i.e. reality is not affected by existing environmental factors. The epistemological assumption of the positivist theory assumes that knowledge is based on facts or rather decisions are made based on facts rather than one's feelings or beliefs. Value and other factors can produce some bias if not regulated or controlled. For instance in the use of standardised questionnaire, the researcher is responsible for controlling and regulating the values that are in line with his findings. This theory is relevant in this study because the researcher used facts derived from the scientific methods in order to come up with legitimate knowledge claims. The study employed descriptive / no experimental survey

which is valuable especially to education authorities. This is because the researcher does not have control over the independent variable i.e. teacher-pupil ratio.

According to Creswell (2009), such a design intends to present facts about the nature and the status of a situation as it exists at the time of the study. He further defines a survey as a quantitative or numerical description of trends, attitudes or opinions of a population. By studying a sample of that population from the sample results, the researcher generalises or makes claims about the population .Chiromo (2006), propounds that a survey entails a study of a limited number of cases with the view to drawing up conclusions that cover the generality of the whole group under review. The researcher drew conclusions about a population basing on the target group .Both qualitative and quantitative data was gathered for the study, therefore both statistical and non-statistical analysis was used in order to support the findings of the results of the study.

3.2 Target Population

Gall (2006), defines population as the group from which the researcher would generate results in a study. It is a group which consists of all the subjects that have same characteristics. Creswell(2012), says a sample is a sub-group of the target population that the researcher plans to study for generalizing about the whole population. It is a subset of the population which must have properties which make it a representation of the population from which it is drawn. The district is made up of 70 rural and peri urban schools from which the sample of 5 schools was drawn. Due to scarcity of time and financial resources, the researcher handpicked rural and peri urban schools that are close to her place of work not withstanding these constraints the study would remain valid owing to the general ability of the study

3.3 Sampling design and sample size

The study employed purposive sampling technique in selecting the schools to be included in the study. According to Cohen & Manion (2007),” in purposive sampling, researchers handpick the subjects to be included in the sample on the basis of their judgement of their typicality or possession of a particular characteristic being sought”. The head teachers and the grade seven teachers of the sampled schools became informant’s the study. This included 5 head teachers, 15 grade seven teachers (i.e. three teachers drawn from each school), the district personnel were other informants of the study.

3.4 Research Instruments

The study collected both primary and secondary data .Primary data was collected using questionnaires. The questionnaire contained both closed and open questions. Secondary data was collected from different sources i e examination results, enrolment records and policy documents

3.4.1 Questionnaire

Laws et al (2003) define a questionnaire as a written instrument used to obtain information from subjects. Johnson et al (2012) view a questionnaire as self-report data collection tool that each research subject fills out as part of a research study. This in essence is a document with questions that solicit data appropriate for analysis ‘The questionnaires of this study had the following key items

(a) Teachers

- I. Number of pupils per class
- II. Number of lessons taught per week
- III. The opinion on the performance of students
- IV. Challenges faced in giving individual help

(b) Heads of Schools

- (i) Enrolment of the school for the past 10 years
- (ii) Teacher establishment for the past 10 years
- (iii) Grade 7 percentage past rate for the past 10 years
- (iv) Measures to improve performance in national examinations
- (v) Possible solutions of improving performance

(c) District Personnel

- (i) District staff establishment
- (ii) District student enrolment
- (iii) District percentage pass rate for the past 10 years
- (iv) Effect of teacher pupil ratio on the provision of quality education
- (v) Possible solutions of improving performance

3.4.2 Pilot Study

The questionnaire was tried in the field before the actual data collection .This provided assurance to the researcher to verify whether the questionnaire will be understood by the respondents and detect ambiguous questions.

3.5Data Collection Procedures

The researcher obtained permission from the Ministry of Primary and Secondary Education, the Mashonaland East Provincial office and Goromonzi District Office before proceeding to collect data from the respective schools. Permission to administer questionnaires to various teachers were sought from the school heads. The questionnaires for the head teachers and teachers was administered in their respective schools. The questionnaire was handed out to the respondents and was personally administered by the researcher during tea or lunch breaks. The researcher collected the completed questionnaire at the end of the day 'This way the researcher avoided non-responses, filling by people not originally intended as well as misinterpretation of some questions if any. The questionnaire for the staffing officer, examination officers and

quality assurance standards officer was administered by the researcher after making an arrangement in advance by booking an appointment.

3.6 Reliability and Validity

3.6.1 Validity of the research

Content validity was used to assess the validity of the research tools .Content validity refers to the degree to which the sample of the test represents the content that the test is designed to measure, Orodho (2009), this assisted to establish whether the questionnaire actually measured what it was supposed to measure.

3.6.2 Reliability of the research instruments

A test re-test technique was used to determine the reliability of the research instruments .Test re-test technique involves administering the same instrument twice to the same group of subjects, Orodho (2009).

3.7 Data Analysis

The data was presented in form of tables and graphical presentations such as graphs and pie charts. The collected data was processed and analysed using descriptive and inferential statistics.

3.8 Data Management

Data was stored on the laptop and external drive. The data was also stored in the flush. Cloud storage was also used, where information was stored in the researcher's email.

3.9 Ethical Considerations

All researchers should protect and consider the rights of respondents, especially in the acquisition, collection and presentation of data while ensuring truthful communications and facilitation of informal decision making .Where human rights exist, there must also be a duty or responsibility to recognize, support and acknowledge that right. John Lock

(1978), was one philosopher who emphasised and elaborated on ethics based upon human rights. He argued that it is not so much application of reason to acts that is important morality, but appreciation of the fair and equal treatment of all people enshrined in the recognition of basic human rights. In light of the above, the researcher considered the following ethical issues when collecting data

3.9.1 Informed Consent

Sanderson (2010), defined informed consent as an individual's voluntary decision to participate or not in research after learning about the study i.e. the possible risks or benefits that are associated with the study. Participants were not be coerced directly or indirectly to participate in the study. Hogg (2014), postulates that they should first get full information about what they are consenting to take part in .Participants should be advised on the purpose and procedures to be followed and assurance that subjects are free to decline or withdraw their consent without prejudice. Subjects will fill consent forms as evidence that they have consented to the study.

3.9.2 Confidentiality and Anonymity

The researcher protected the anonymity of the participants and the confidentiality of their resources unless they consented to the release of their personal information. Hogg (2014), suggests the use of code numbers instead of peoples' names and storing data in securely locked rooms with restricted access .All the information gathered and the results of the study will not be released without the permission of the participants .The respondents were assured that their responses would be treated with strict confidence so as to give the freedom to participate and provide reliable information in the process.

3.10 Summary

In this chapter the researcher highlighted that the study was guided by the positivist paradigm. The paradigm provided the researcher with the requisite knowledge in the quest of uncovering the truth and presenting it by empirical means. This study employed

descriptive/non- experimental survey which is of paramount importance to educational authorities. The study employed purposive sampling technique in selecting the schools to be included in the study. Primary and secondary data was both collected in the study. Also of note was the collection of qualitative and quantitative data in aiding this study. In addition the researcher protected the anonymity of the participants and the confidentiality of their resources and managed to reach all the respondents and collected data. The next chapter focused on data presentations analysis and interpretation.

CHAPTER FOUR

RESULTS/PRESENTATION, ANALYSIS AND DISCUSSION

4.0 Introduction

The chapter is going to focus on data presentation, analysis and discussion. The chapter will discuss the findings in respect of the gap that the research intends to address. The data analysis will confirm whether high teacher-pupil ratio has any relationship with student achievement in national examinations. The star experiment revealed that pupils who were placed in small classes performed significantly better than students in large classes. On the other hand there are examples of very large classes with excellent student learning outcomes. The case of South Korea, who were placed second on the 1996 third international mathematics and science study TIMSS, but had average of 56.9 students per class in mathematics and 48.8 in science. This chapter will enable the researcher to confirm the relationship between high teacher pupil ratio and national examinations in the district of Goromonzi in Mashonaland East province.

4.1 Data presentation

Data for the study was presented in form of tables and figures in line with the research objective and sub questions. The researcher distributed a total 25 questionnaires. these questionnaires were distributed to 7 teachers, 5 to school heads and 5 to district personnel. Of all the distributed questionnaires only 2 were not answered which entells that 92% of the distributed questionnaires were returned and 8% were not returned.

4.2The first objective 1.5.1 was to establish if the recommended teacher pupil ratio of 1:40 existed in rural and peri-urban government primary schools. The data was collected from the sampled schools for the period between 2006 and 2015

Table 4.1: Summary of teacher-pupil ratio in school A

Year	Enrolment	No of trs	<u>enrolment</u> no of trs
2015	1510	39	38.7
2014	1498	39	38,4
2013	1575	39	40.3
2012	1587	39	41.7
2011	1548	38	40.7
2010	1594	38	44.2
2009	1696	36	47.1
2008	1768	36	50.5
2007	1766	34	53.5
2006	1806	34	53.6

Source: researched data

Table 4.2 .Summary of teacher –pupil ratio in school B

Year	Enrolment	No of teachers	<u>Enrolment</u> No of trs
2015	384	11	34.9
2014	375	11	34
2013	365	11	33.1
2012	354	10	35.4
2011	345	10	34.5
2010	350	9	38.8
2009	330	9	36.6
2008	300	6	50
2007	270	6	45.6
2006	230	5	46

Source: researched data

Table 4.3 Summary of teacher-pupil ratio of school C

Year	Enrolment	No of trs	<u>Enrolment</u> No of trs
2015	620	17	36.4
2014	615	17	36.1
2013	630	17	37
2012	655	15	43.6
2011	655	15	43.6
2010	640	15	42.6
2009	645	13	49.6
2008	645	13	49.6
2007	639	12	53.2
2006	640	12	53

Source: researched data

Table 4.4 summary of teacher pupil ratio of school D

Year	Enrolment	No of trs	<u>Enrolment</u> No of trs
2015	738	18	41
2014	601	15	40
2013	560	14	40
2012	300	7	42.8
2011	302	7	43.1
2010	280	7	40
2009	270	7	38.5
2008	273	6	45.5
2007	266	6	44.3
2006	260	6	43.3

Source: researched data

Table 4.5: Summary of teacher –pupil ratio for school E

Year	Enrolment	No of trs	<u>Enrolment</u> No of trs
2015	1666	39	42.7
2014	1648	38	43.3
2013	1652	38	43.4
2012	1664	38	43.7
2011	1648	36	45.7
2010	1566	35	44.7
2009	1538	33	46.6
2008	1532	32	47.8
2007	1536	32	48
2006	1534	32	47.9

Source: researched data

Zimbabwean participation from 1998 to 2002 in the war of democratic Republic of Congo set the stage for an economic meltdown when millions of dollars were channelled towards the war. Hyperinflation in Zimbabwe was the major problem from 2003 to April 2009, when the country suspended its own currency, Zimbabwe faced 231 million percent peak hyperinflation in 2008. (world bank database.(2008).it is against this background that during that period was mass exodus of skilled manpower to other countries .this had a serious negative impact on our schools, especially those in rural areas. From the tables presented above the schools experienced high teacher-pupil ratio especially during 2006-2009 because of movement of teachers to other countries in search of greener pastures. From 2010 to 2015, the teacher pupil ratio was manageable, though it was slightly high in some schools. The teacher –pupil ratio was

slightly low may be due to the increase of private schools that were constructed throughout the district.

4.2.2 The second objective was to determine whether high teacher pupil ratio influenced performance of pupils in rural and peri urban government schools in Goromonzi district. The teacher-pupil ratio was obtained by dividing pupil's enrolment in the school by the available number of teachers during that year. The teacher –pupil ratio indicates the number of pupils per teacher in a school. The findings of this objective are shown in the table 4.6 below.

4.6: A summary of performance of pupils in sampled schools from 2006 to 2015

Sampled Schools										
Year	A		B		C		D		E	
	Tr-ppl ratio	%pass rate	Tr-ppl ratio	%pass rate	Tr-ppl ratio	%pass rate	Tr-ppl ratio	%pass rate	Tr-ppl ratio	%pass rate
2015	38.7	84	34.9	58	36.4	53	41	51	42.7	77
2014	38,4	78	34	54	36.1	60	40	50	43.3	67
2015	40.3	73	33.1	32	37	48	40	43	43.4	65
2012	41.7	60	35.4	53	43.6	48	42.8	48	43.7	62
2011	40.7	53	34.5	52	43.6	48	43.1	44	45.7	59
2010	44.2	48	38.8	40	42.6	41	40	41	44.7	50
2009	47.1	53	36.6	41	49.6	43	38.5	40	46.6	57
2008	50.5	50	50	40	49.6	42	45.5	40	47.8	56
2007	53.5	68	45.6	51	53.2	41	44.3	39	48	58
2006	53.6	73	46	50	53	39	43.3	38	47.9	57

The research sought to find out if high teacher pupil ratio influenced the performance of the pupils. The table above shows that schools a and e performed well despite high teacher pupil ratio that it experienced especially from 2006 to 2010. This is supported by the findings made by (Vander, 2003) who cited examples of large classes with excellent student learning outcomes. He cited the example of South Korea, which was placed second on the 1996 third international mathematics and science study (TIMSS), had an average of 56.9 students per class in mathematics and 48.8 in science. Similar conditions were observed in both Japan and Singapore, where students excelled large numbers.

Schools B, C, D did not perform well, despite the fact that their teacher pupil ratio were relatively low. These low-socio-economic schools have challenges in acquiring resources both material and financial which contributed to the schools not performing well. From the literature gathered by the researcher, after independence in 1980, the Zanu PF government in an effort to address the imbalances that were created by the white racism, constructed many schools in the rural areas to ensure that education was brought to the door of every child. Zvobgo (1986). The issue of educational resources was overlooked which made the delivery of lessons difficult. A close scrutiny of the results which were posted in 2010 by all sampled schools, were relatively low. School A: 48%, school B: 40%, school C: 41% school D: 41% school E 50%.

According to the (World Bank database, (2008), Zimbabwe faced 231 million percent peak hyperinflation in 2008, which resulted in a mass exodus of teachers to different neighbouring countries in search of greener pastures. The affected 2008 students were in grade 5 which means that they sat for their grade 7 national examinations in 2010, so that is the reason why all the sampled schools posted, low results in 2010. This is a clear indication that in 2008, the teachers who remained in schools were overwhelmed by large enrolments and as a result this affected the performance of the students.

4.2 Statistical analysis

Descriptive statistics indicates the average score and the standard deviation of the scores from the mean scores of the sample. The study employed Pearson's correlation to find out the degree of relationship between T.P.R and performance, Pearson's product moment co-efficient(r) is one of the measures of relationship between two or more variables in any study. The degree of correlation between T.P.R and performance was found over the 10 sampled years (2006-2015).this indicated how the two variables related to one another.

Table 4.7: A summary of teacher –pupil ratio and performance over the 10 sampled years

years	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Mean of pass rate	51	51	46	47	44	51	54	52	62	65
Mean of tr-ppl ratio	47	49	47	44	42	42	42	39	38	39

4.8 Pearson's product moment correlation co-efficient

year		Tr-ppl ratio x	% pass rate y	Xy	X ²	Y ²
2015		47	51	2397	2209	2601
2014		49	51	2499	2401	2601
2013		47	46	2162	2209	2116

2012		44	47	2068	1936	2162
2011		42	44	1848	1764	2068
2010		42	51	2142	1764	2601
2009		42	54	2268	1764	2916
2008		39	52	2028	1521	2704
2007		38	62	2356	1444	3844
2007		39	65	2535	1521	4225
		$\sum x$ 429	$\sum x$ 523	$\sum xy$ 22303	$\sum x^2$ 18533	$\sum y$ 227838

Key: n = no of years

Σ = sum

X = mean of tr – ppl ratio

Y = mean of pass rate

r = Pearson's correlation co-efficient

$$r = \frac{n\sum xy - \sum x \sum y}{\sqrt{[n\sum x^2 - (\sum x)^2] [n\sum y^2 - (\sum y)^2]}}$$

$$r = \frac{10 \times 22303 - 429 \times 523}{\sqrt{[10 \times 18533 - (429)^2] [10 \times 27838 - (523)^2]}}$$

$$r = \frac{10 \times 22303 - 429 \times 523}{\sqrt{[10 \times 18533 - (429)^2] [10 \times 27838 - (523)^2]}}$$

$$r = \frac{223030 - 224367}{\sqrt{[10 \times 18533 - (429)^2] [10 \times 27838 - (523)^2]}}$$

$$r = \frac{223030 - 224367}{\sqrt{[10 \times 18533 - (429)^2] [10 \times 27838 - (523)^2]}}$$

[185330 -184041] [278380 -273529]

$$r = \frac{-1337}{\sqrt{1289 \times 4851}}$$

$$r = \frac{-1337}{\sqrt{6252939}}$$

$$r = \frac{-1337}{2500,587731}$$

$$r = -0, 53$$

The results show that r is -0.53, this indicates that there is a negative correlation between teacher –pupil ratio and performance of students. Therefore from this analysis it can be deduced that, other than high teacher – pupil ratio, there are other intervening factors such as over loaded curriculum, lack of resources that can affect the performance of the students.

4.2.3 The third objective was to identify the major challenges faced in the maintaining of the recommended teacher-pupil ratio in the rural and peri urban government primary schools. Qualitative data was collected in order to identify the major challenges faced.

Table 4.9: The teacher work load in the sampled schools

No of lessons	No of teachers	Percentage
30 lessons per week	1	6.7%
35 lessons per week	0	–
45 lessons per week	8	53.3%
45-50 lessons per week	6	40%

According to the ministry of primary and secondary education primary school teachers are expected to teach a maximum of 45 lessons a week. The findings revealed that 53.3% of the sampled teachers comply with the ministry of education requirements while 40% create more time per week to enable them to complete the syllabus and assist the students outside the normal classroom hours.

Table 4.10: Are you satisfied with the current work load

Responses	No of trs	Percentage
Very satisfied	2	13.3%
Fairly satisfied	7	46.7%
Not satisfied	6	40%

Table 4.11: Do you manage to give individual attention to your students

Responses	No of trs	percentage
Very much	4	26.7%
Rarely	8	53.3%
Not at all	3	20%

It is undisputable that the majority of sampled teachers are not satisfied with the work load which they have. Furthermore the majority of sampled teachers revealed that they

rarely give individual attention to their students, which means most lessons are delivered to cover the syllabus at the expense of the child's mastery of concepts

Table 4.12: Challenges of implementing the ideal teacher –pupil ratio (responses in ranking order)

Challenges	Responses	rank	percentage
Pupils enrolment	12	1	60%
Transfer of teachers	4	2	20%
Recruitment of teachers	3	3	15%
Retirement of teachers	1	4	5%
Death of teachers	0	5	0%
Total no of responses	20		

It can be deduced from table 4.5.4 that most of the respondents ranked pupils enrolment as no 1 challenge in attaining the ideal teacher pupil-ratio. This can be attributed to the introduction of the free primary education in primary schools as one of the government's commitment in meting education for all, the role of heads of schools is to implement the goals and policies of the government, hence they do not have the mandate to deny students access to education. This is evidenced by the actual teacher pupil ratio which was collected in schools as shown below.

Table 4.13: The actual teacher-pupil ratio in schools

Sampled schools	Actual tr-pupil ratio	<u>Enrolment</u> No of trs
A	1:50	1:38.7
B	1:45	1:34.9

C	1:40	1:36.4
D	1:40	1:41
E	1:50	1:42.7

There is a great difference between the actual teacher-pupil ratio and the teacher –pupil ratio that is obtained after dividing the total enrolment and the no of teachers (inclusive of Head, Deputy, T.I.C and specialist teachers).

4.2.4: The fourth objective was to suggest measures that can be put in place in order to attain the ideal teacher pupil ratio in primary schools. Qualitative data was

gathered and summarised the tables below.

Table 4.14: Measures to attain the ideal T.P.R (responses in ranking order)

Suggested measures	Rank	No of respondents	Percentage
Introduce subject teachers in schools	1	13	65%
Mass recruitment of teachers	2	4	20%
Each school to have specialist technical subject teachers	3	3	10%
Allow voluntary teachers	4	1	5%
Total		20	100%

From the above table, introduction of subject teachers in primary schools was ranked first as a measure that can be implemented in order to guarantee quality education in primary schools.

4.3 Discussion

The research was set up to find out whether the performance of students in national examinations was influenced by high teacher –pupil ratio, the findings in tables 4:1 to 4:5 reveal that sampled schools with high teacher-pupil ratio performed better than the sampled schools with teacher-pupil ratio which was slightly low. The result of the sampled schools with high teacher-pupil ratio were slightly above average. The study revealed that free primary education created high enrolments. This was the period the government introduced the expansionist policy in the country as a commitment to the implementation of the international goals of M.D.G and EFA.This made many

households who could not afford primary education fees to send children to school. This factor resulted in the creation of large class sizes, congested classrooms, teacher shortage and huge teacher work load. The findings of this study concur with the conclusions drawn in earlier studies conducted in various parts of the world on the impact of class size and student academic achievement. The STAR and the SAGE programme indicated that small class-size matters in determining student achievement.

The study carried by Michael Lova(2001) concluded that there was an inverse relationship between class size and learning outcome. He noted that academic achievement was increasingly high in smaller class size. This finding coincides with the results of this study that low TPR has positive effect on pupils' performance.

The statistical analysis revealed that there was a negative correlation between teacher –pupil ratio and performance of students. The statistical analysis revealed that T.P.R accounted for a certain percentage in the performance of students while other variables such as syllabus coverage, teacher workload, availability of educational resources, socio-economic background intervene in the academic achievement of students.

The findings and the analysis of the data related to T.P.R and performance revealed that T.P.R is a determinant of pupils' performance in primary schools. These findings concur with the study undertaken by Cahen (1989) who revealed that smaller classes allow teachers to engage their students in a differentiated fashion in which teachers can give individual assistance to their students, from the data which were obtained (table 4:10) attaining the ideal teacher –pupil ration could be one of the major steps in improving performance of pupils in primary schools.

From the findings on the research question 1.7.1 which sought to find out how the existing teacher pupil ratio hinders the teacher from producing quality results, 65%of the respondents indicated that they rarely gave individual attention to the students and 70% indicated that they rarely gave homework on regular basis. This shows that the teachers have the ability to give individual attention and individual homework but the variable of high T.P.R prevented the respondents from helping each child. This is supported by the findings that were made in the parliament portfolio committee report on education

(2012), when they reported on how practising teachers in urban and rural government schools were overwhelmed by numbers of students they had to handle in one classroom. The committee was informed that the T.P.R had reached unacceptable levels that most rural teachers were compelled a class were an average of 60 students, which was unrealistic as the teacher cannot monitor all the students.

The response on the current work load of teachers in terms of number of pupil-teacher contact hours shows that 46.7% were fairly satisfied 40% were not satisfied. The reason for not administering individual work is reflected in the responses that the researcher gathered. This also shows that most teachers do not have the passion to teach, hence the dissatisfaction on the current work load which they have. The majority are just teaching for the sake of earning a living not to produce quality education. This also explains the reason why 2008 country lost a lot of skilled manpower to other countries.

The study also sought to find out the major challenges faced by schools in trying to maintain the recommended T.P.R. Pupils' enrolment was ranked first with 60%, followed by transfer of teachers which was ranked 2nd with 20%.this shows that most head teachers do not have the mandate to turn away students even when the classes are full. Schools must run effectively without a lot of red tape, schools would do much better with more. The study in trying to compose the attrition rate of students in comparison to the external efficiency of students found out that all the children who sat for their grade 7 examination were all absorbed in secondary schools despite their poor performance. This was supported by president Bush's education plan, "no child left behind" policy which targeted federal class size reduction.Hamushek(1999).the Zanu Pf election manifesto on education crafted policies to ensure that education was brought to the door step of every child. Zvobgo (1986).this move compromised the quality of education because schools did not have adequate material and financial resources. This shows that there is need to come up with a policy to allow grade 7 students to repeat the grade they did not perform well.

Furthermore, the study sought to find out the measures to be out the measures to be put in place in place in order to attain the required T.P.R in primary schools. The study came up with following varying measures from the respondents. Most respondents

recommended the reduction of T.P.R. This shows that the high T.P.R is the biggest challenge in trying to improve the quality of education in schools. The respondents' recommended that the T.P.R should be reduced from 1:40 to 1:25 in primary schools. The introduction of subject teachers in primary schools was another measure which was raised in order, to attain the ideal T.P.R in primary schools. This shows that if primary school teachers are allocated to specific subjects and specific number of students, this would improve the efficiency of the teacher and produce quality results.

4.4 Summary

The major findings of this chapter were that high teacher pupil ratio had a negative impact on the performance of students. This was supported by the responses that the teachers gave the respondents agreed that they were not satisfied with the current work load and as a result they rarely give individual attention to their students. Most respondents ranked pupils' enrolment as a no one challenge in implementing the ideal teacher – pupil ratio.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter concludes the entire research by briefly summarising the whole study, conclude on the objectives and its sub-problems as well as proper recommendations for further studies.

5.1 Summary

The study in essence was prompted by low pass rates which was continually posted by most rural and peri urban government primary schools in the country. Samples of 15 grade 7 teachers, 5 heads of schools and 5 members from the district personnel were used. The researcher personally distributed the questionnaires, which is the only research instrument that was used. The results were analysed and interpreted using tables and where necessary appropriate statistics. The presented data demonstrated the degree to which TPR predicts performance of pupils in most rural and peri –urban government schools. The results of the findings from the analysis showed that TPR is significant indicator that can be used to predict pupils' performance in primary schools. Basing on the relationship between the two variables (i.e. TPR and the performance of students), the correlational co-efficient using the Pearson's' product moment indicated (-0, 53) a negative relationship between P.T.R and performance.

The study revealed that T.P.R affects performance of pupils since it determines the degree of interaction between the teacher and the student. in schools where the T.P.R is high above the set standards, teachers find it difficult to give personalised attention to all pupil, assign daily individual homework and take full control of their classes. Based on the study of findings and the statistical

analysis, there is strong evidence to show that T.P.R has an impact on the performance of pupils in schools.

5.2 Conclusions

The following conclusions were reached from the analysis of the data from previous chapter. The study found out that T.P.R has quite a significant effect on pupils' performance in primary school. Results derived from the analysis of table 4.6 indicate there existed enough evidence to conclude that T.P.R is a significant predictor of pupils' performance. This research study demonstrated that a decline in T.P.R increases overall performance of pupils in most rural and peri urban government primary schools. The analysis therefore partially supported by the findings regarding T.P.R and performance indicate that there is a relationship between two variables of the study. The study showed that as T.P.R increases, the percentage pass rate in most rural schools decreases.

The impact of T.P.R also gives beyond its effects on performance also on pupils' discipline and teacher motivation. With low T.P.R, teachers can devote more attention to each pupil's needs.

5.3 Recommendations

In the light of the identified major findings this study has made recommendations that if implemented may have positive results on pupils' performance in primary schools.

- i. There is need for the government to employ more primary school teachers. This will enable attainment of recommended TPR in schools which currently is far above the required standards. It will also help alleviate the problem of unemployed qualified teachers who are roaming the streets.

- ii. There is need to review the Education Act to empower head teachers to admit pupils on the basis of TPR in their respective schools.
- iii. There is need for the government to fund the schools adequately and to ensure equity distribution of teachers where TPR is high
- iv. There is need for the government to improve the salary scale of teachers. This will prevent teachers from leaving the teaching profession to join other sectors
- v. Future studies can also be tried with other rural government schools in other provinces. If this is done generalizability of the findings over larger population would then be possible
- vi. Schools must run efficiently without a lot of red tape, schools would do much better with autonomy to monitor their T.P.R.
- vii. There is need to introduce subject teachers in primary schools in order to improve the quality of education.
- viii. There is need to come up with a policy to allow grade 7 students to repeat the grade if they do not perform well.
- ix. It is therefore important that the number of pupils per teacher should be taken into serious consideration by the government and other education stakeholders in formulating policies in schools.
- x. For better academic performance, great attention should be placed on T.P.R especially in rural and peri urban schools.

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QUESTIONNAIRE FOR THE TEACHERS

My name is Egenes Dube, a student in Educational Management at the Midlands State University. I am carrying out a research in partial fulfilment for the requirement of the degree in Master of Education in Education Management. The topic of the study is; "The impact of high teacher pupil ratio in rural and peri-urban government schools in Goromonzi District in Mashonaland East Province". All data collected will be treated with strict confidence and will only be used for statistical purposes of the study.

- 1 May you complete all the questions.
- 2.All the information that you provide will be treated with strict confidentiality.
- 3.You should not write your name.
- 4.Please tick (√) in the box or fill your responses in spaces provided.

SECTION A: DEMOGRAPHIC DATA

A 1. Location of the school:

Rural []

Peri-urban []

(Tick the applicable)

2. Sex:

Male []

Female []

3. Age - 20 – 25 years []

25 – 30 years []

30 – 40 years []

40 – 50 years []

4 Teaching experience as grade 7 teacher.....

.....

5 Any other responsibility (specify.....

.....

SECTION B

1.How many pupils are there in your class?

Less than 20 []

Between 20 and 30 []

Between 30 and 40 []

Between 40 and 50 []

Above 50 []

2. If above 50 specify how many?

3 .How many lessons do you teach per week.....

4 .How often do you give homework to your students

Daily basis []

Once a week []

After a fortnight []

Once a month []

Never []

5. How often do you give classwork exercises

Daily basis []

Once a week []

After a fortnight []

Once a month []

Never []

6. Do you manage to give individual attention to your pupils

Very much []

Rarely []

Not at all []

7. Are you satisfied with the current work load?

Very satisfied []

Fairly satisfied []

Not satisfied []

8. In your opinion how would you rate the performance of your pupils in the class?

Very good []

Good []

Average []

Poor []

Very poor []

9. If poor, give the reason for the poor performance of your pupils.

High teacher pupil ratio []

Lack of learning and teaching resources []

Lack of conducive environment []

Any other (specify)

.....

.....

10. In your opinion what should be done to improve performance of pupils (Rank your responses, by ticking in the boxes according to necessity of action.)

1 2 3 4

Workshops on syllabus interpretation [] [] [] []

Reduce teacher workload [] [] [] []

Lower teacher – pupil ratio [] [] [] []

Test children on reading and spellings [] [] [] []

QUESTIONNAIRE FOR THE SCHOOL HEADS

My name is Egenes Dube, a student in Educational Management at the Midlands State University. I am carrying out a research in partial fulfilment for the requirement of the degree in Master of Education in Education Management.

The topic of the study is; “The impact of high teacher pupil ratio in rural and peri-urban government schools in Goromonzi District in Mashonaland East Province”. All data collected will be treated with strict confidence and will only be used for statistical purposes of the study.

1. May you complete all the questions
2. All the information that you provide will be treated with strict confidentiality
3. You should not write your name
4. Please tick(√) in the box or fill your responses in spaces provided

SECTION A: DEMOGRAPHIC DATA

A 1. Location of School:

RURAL Peri-urban

(Tick the applicable)

2. Sex:

Male Female

3. Grade:

Teacher Deputy Head

School head

4. Administrative Experience (in completed years).....

SECTION B – PUPILS AND TEACHER`S DATA

B 1. Give the enrolment of the school for the past 10 years: -

2015 2010
2014 2009
2013 2008.....
2012 2007
2011 2006

2. How many members of the teaching staff are there in the school?

Less than 10

- Between 10 and 15
- Between 15 and 20
- Between 20 and 25
- Over 25

3. Give the number of teachers in the school for the past 10 years

2015	2010
.....	
2014	2009
.....	
2013	2008
.....	
2011.....	2007.....
2011	2006
.....	

4. What is the current teacher pupil ratio in the school?

- | | | | |
|-------|--------------------------|-------|--------------------------|
| 1: 20 | <input type="checkbox"/> | 1: 40 | <input type="checkbox"/> |
| 1: 25 | <input type="checkbox"/> | 1: 45 | <input type="checkbox"/> |
| 1: 30 | <input type="checkbox"/> | 1: 50 | <input type="checkbox"/> |
| 1: 35 | <input type="checkbox"/> | 1: 55 | <input type="checkbox"/> |

5. How do you find the current teacher – pupil ration in the school.

- Excellent
- Good
- Satisfactory
- Unsatisfactory

6. If unsatisfactory what do you think should be done to improve the teacher – pupil ratio?

.....

.....

.....

.....

.....

7. What is the current teacher deficit in the school, if any?

- Less than 5 []
- Between 5 and 10 []
- Between 10 and 15 []
- Over 15 []

8. What is the average teacher work load in the school?

- 30 lessons per week []
- 35 lessons per week []
- 40 lessons per week []
- 45 lessons per week []
- Over 45 lessons per week []

9. In your opinion what should be done to attain the ideal teacher – pupil ratio that can guarantee quality education in primary schools (Rank your answers in order of Necessity)

- | | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | |
| | | | | Mass recruitment of teachers [] [] [] [] |
| | | | | -Introduce subject teachers in primary schools [] [] [] [] |
| | | | | Each school to have specialist technical subjects e.g. (ICT)[] [] [] [] |
| | | | | -Allow voluntary teachers [] [] [] [] |

10. What factor mostly influences teacher – pupil ratio in your school (Rank your response

Starting with the most influential factor to the least)

1 2 3 4 5

-Recruitment of teachers		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
-Retirement of teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Transfer of teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-Pupils enrolment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-Death of teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

PART C: EXAMINATION PERFORMANCE

1 Give the percentage pass rate of the grade 7 students in the past 10 years :

2015.....	2010
2014.....	2009
2013.....	2008
2012.....	2007
2011.....	2006

2 Comment on the academic performance for the past 10 years :

Improving	<input type="checkbox"/>
Remained the same	<input type="checkbox"/>
Unsure	<input type="checkbox"/>
Declining	<input type="checkbox"/>

3 The teacher pupil ratio is one of the factors that influence performance of pupils in

Examinations:

Strongly agree	<input type="checkbox"/>
Agree	<input type="checkbox"/>
Uncertain	<input type="checkbox"/>
Disagree	<input type="checkbox"/>
Strongly disagree	<input type="checkbox"/>

4 Increasing the number of teachers can positively improve performance on national exams

- Agree
- Uncertain
- Disagree
- Strongly disagree

5 What measures should be put in place to improve performance in national exams?(please rank the measures in the order of necessity using numbers 1, 2, 3 and 4)

1 2 3 4

- Employ more teachers
- Improve school facilities
- Review the curriculum
- Reduce teacher pupil ratio

Any other specify.....
.....
.....

6 What are some of the challenges that the school is facing in its effort to improve performance in national exams :

- 1.....
.....
.....
- 2.....
.....
.....

3.....
.....
.....

4.....
.....
.....

7 What recommendations may you give to the ministry of education on how to attain the Ideal teacher – pupil ratio in the country so as to improve teaching – learning process.

1.....
.....
.....

2.....
.....
.....

3.....
.....
.....

4.....
.....
.....

QUESTIONNAIRE

My name is Eginés Dube, a student in Educational Management at the Midlands State University. I am carrying out a research in partial fulfilment for the requirement of the degree in Master of Education in Education Management. The topic of the study is; “The impact of high teacher pupil ratio in rural and peri-urban government schools in Goromonzi District in Mashonaland East Province”. All data collected will be treated with strict confidence and will only be used for statistical purposes of the study.

1. May you please complete all the questions?
2. All the information that you provide will be treated with strict confidentiality.
3. Please tick (√) in the box or fill your responses in spaces provided.

1. The current teacher - pupil ratio is satisfactory to provide individual attention of pupils in primary schools in the province.

Strongly agree		[]
Agree	[]	
Disagree	[]	
Strongly disagree		[]

2. What is the ideal teacher – pupil ratio that can guarantee effective teaching – learning process and performance of pupils in primary schools?

1: 20	[]	1: 25	[]
1: 30	[]	1: 35	[]
1: 40	[]	1: 45	[]
1: 50	[]	1: 55	[]

3. In your opinion how would you rate the overall performance of primary pupils in the province?

- Very poor []
- Poor []
- Average []
- Good []
- Very good []

4. Is the number of primary school teachers in the province satisfying to guarantee good Performance?

- Very satisfying []
- Strong effect []
- Fairly satisfying []
- Dissatisfying []

If not satisfying proceed to question 4(b) below

4 (b) Give reasons why the current number of teachers is not satisfying?

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

5. Does teacher – pupil ratio has any effect on the provision of quality education in primary schools.

- Very strong effect []
- Strong effect []
- Slight effect []

No effect []

6. What is your comment on the quality and standards of primary education in the province?

Very low []

Low []

high []

Very high []

If very low proceed to question (6 b) below.

6(b) What challenges do schools face in the province in their effort to attain high standards of Performance.

	1	2	3	4	5	6
Understaffing	[]	[]	[]	[]	[]	[]
High teacher – pupil ratio	[]	[]	[]	[]	[]	[]
Hot seating	[]	[]	[]	[]	[]	[]
Composite classes	[]	[]	[]	[]	[]	[]
Lack of resources	[]	[]	[]	[]	[]	[]
Inability to interpret the syllabus	[]	[]	[]	[]	[]	[]

7. What measures should be put in place to improve performance in the primary schools in the province.

1.....
.....
.....

2.....
.....
.....

3.....
.....
.....

8. The teacher – pupil ratio of 1: 40 needs to be reduced to ensure close teacher – pupil conduct which can enhance individualised attention in classes and improve quality.

- | | |
|-------------------|-----|
| Strongly disagree | [] |
| Disagree | [] |
| Agree | [] |
| Strongly agree | [] |

9. What possible measures can the Ministry of primary and secondary Education need to undertake to attain the ideal teacher – pupil ratio that can guarantee good performance and quality education?

1.....
.....
.....

2.....
.....
.....

3.....
.....
.....

Reference: PI Dube E

E. C. No.: 0334319 P

All communications should be addressed to
"The Provincial Education Director
Mashonaland East Province"
Telephone: 0279-24811/4 and 24792
Telex:
Fax: 079-24791



Ministry of Primary & Secondary Education
Mashonaland East Province
P.O. Box 752
Marondera
Zimbabwe

9 March 2016

~~Mr./Mrs./Miss~~ DUBE E
Windview Primary School
Ruwa

PERMISSION TO CARRY OUT RESEARCH IN SCHOOL FOR EDUCATIONAL PURPOSES: ~~MR/MRS/MISS~~ DUBE E E. C. NO. 0334319 P
STUDENT I. D. HEAD/TEACHER AT Windview SCHOOL

Reference is made to your minute dated 9 March 2016
Please be advised that permission has been granted that you carry out research work in our schools. You are accordingly being asked to furnish the Ministry with information about your findings so that we share the knowledge for the benefit of the system as well as our nation at large.

We wish you all the best and hope to hear from you after completing your project work.

HUMAN RESOURCES OFFICER – DISCIPLINE
FOR PROVINCIAL EDUCATION DIRECTOR
MASHONALAND EAST PROVINCE
/mm





MIDLANDS STATE UNIVERSITY

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FACULTY OF EDUCATION

DEPARTMENT OF EDUCATIONAL FOUNDATIONS, MANAGEMENT &
CURRICULUM STUDIES


08 JANUARY 2016

Ministry of Primary and Secondary Education
P. O. Box 8022
CAUSEWAY

RE: SPECIAL PERMIT TO CONDUCT RESEARCH IN THE MINISTRY

The Faculty of Education's Department of Educational Foundations, Management and Curriculum Studies at Midlands State University is seeking your permission to allow Mr./Mrs/Ms. DUBE EGHES a Master of Education Degree student in the department, to conduct his/her research in your ministry. The research will be conducted in GOROMONZI DISTRICT / MASH EAST District/Province.

May I take this opportunity to thank you for the cooperation you have always given this Department in this respect.


E.P. Mangwaya, Ph.D.

Chair, Educational Foundations, Management & Curriculum Studies



Budget for the Research Project for the period from January to May 2016

Project Activity	Estimated Cost US\$
Literature Review	125
Finalise Objectives	75
Draft Literature Review	100
Review Methodology	110
Choosing Research Strategy	35
Seeking Final Access to data collection	185
Data Collection	350
Data Analysis	50
Data findings Chapter	50
Writing first Draft	450
Writing Final Project	100
Miscellaneous Expenses	450
Total Estimated Cost	2080

WORK PLAN FOR THE RESEARCH PROJECT COVERING PERIOD FROM JANUARY

TO MAY 2016

MONTH	FEBRUARY	MARCH	APRIL	MAY
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WEEK NUMBER	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4	w1	w2	w3	w4
REVIEW LITERATURE	█	█														
FINALISE OBJECTIVES			█													
DRAFT LITERATURE REVIEW			█													
REVIEW METHODOLOGY				█												
CHOOSE RESEARCH STRATEGY					█											
ACCESS TO DATA COLLECTION					█											
COLLECTING DATA						█	█	█								
DATA ANALYSIS									█	█						
WRITING FIRST DRAFT											█	█	█			
WRITING FINAL DRAFT														█	█	█