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BACHELOR OF SCIENCE EDUCATION HONORS DEGREE IN CHEMISTRY**



**PROJECT**

**FACTORS CONTRIBUTING TO POOR PERFORMANCE OF RURAL GIRL  
LEARNERS IN SCIENCE SUBJECTS. A CASE OF MVURACHENA SECONDARY  
SCHOOL IN MHONDORO –NGEZI DISTRICT.**

**BY**

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**RELEASE FORM**

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## **DEDICATION**

This research project is dedicated to my family, that is my husband baba Tinotendaishe, Tinotendaishe. They are very important people in my life. May God grant them strength, wisdom and blessings to conquer the world.

## **ABBREVIATIONS AND ACRONOMYS**

BEAM -	Basic Education Assistance Module
UNICEF -	United Nations Children's Fund
SADC -	Southern Africa Development Committee
CAMFED-	Campaign for Female Education
EFA -	Education for All

## **ABSTRACT**

This research proposal was aimed at ascertaining the factors contributing to poor performance of rural girl learners in science subjects. A case of Mvurachena Secondary School, in Mhondoro-Ngezi District, Mashonaland West Province, Zimbabwe. The research focused on the learning of chemistry. It was done at a period after the introduction of the new curriculum. Science is one of the important subjects one should possess in order to be admitted in a number of technical courses offered in tertiary institutions.

This research project sought broadly to achieve the following objectives;

- To establish the factors contributing to poor performance of learners in sciences
- To determine whether the rural school is fully equipped to teach science subjects.
- To establish if there is enough human capital to teach sciences.
- To explore and open means and ways that can be adopted by rural schools to promote the learning of science

The research was carried out on clinical quantitative basis. The researcher used self-administered completed questionnaires and in-depth interviews guide for data collection. Exploratory research design was used and descriptive method was employed in compiling gathered data for analysis. In addition to conclusion and recommendations the teaching of chemistry in Zimbabwe needs further research to explore how the subject can be simplified to suit the learners' needs.

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## **CHAPTER 1**

### **1.0 INTRODUCTION**

This chapter lays the foundation of the study that seeks to examine the Factors contributing to poor performance of rural girl learners in science subjects. A case of Mvurachena Secondary School, in Mhondoro–Ngezi District, Mashonaland West Province, Zimbabwe. The research focused on the learning of chemistry. As a result, the study sought to the factors that causes the underperformance by learners in science subjects especially chemistry. The chapter provided the introductory background of the entire study by indicating the main problem to be addressed, the objectives of the study focused by the study and the value of the study to various stakeholders. In addition the study also presents the delimitation of the research, the limitations of the research and the research questions to be answered by this study.

#### **1.1 Background of the study**

Globally, the issue of underperformance in science subject by female learners in rural areas is a cause for concern. Despite, the issue that when the world is advocating for equal access to opportunities by the girl child in all aspects of life. According to UNICEF Executive Director Catherine Russell (2022), when women and have an equal opportunity to learn, to participate and to lead and when education supports gender equality for all communities and societies prosper. Secondly Russell’ (2022) emphasized that there is a need to transform and education financing explicitly including actions to advance gender equality in sector plans programs and budget allocations. UNICEF went further to acknowledge the role being played by a number of Governments including Zimbabwe by developing gender responsive education sector plans and targeting investments to close gender gaps, with a focus on reaching the most marginalized girls. Such programs are being spearheaded by government of Zimbabwe and its development partners such as CAMFED and the Basic Education Assistance Module (BEAM).

Developed and developing nations have crafted various policy guidelines that ensure females’ empowerment with the aim for them to fully participate in social, economic, and political

activities. This calls for equal treatment and equal access to opportunities on one hand and equality of outcomes on the other. Thus, females and males are offered equal chances and treatment regarding the right of entry, participation, and progression in education in an environment free from stereotypes Chikuvadze et al (2023). Despite Zimbabwe having ratified various conventions and treaties such as the Convention on the Rights of the Child (Sections 29 and 30), Universal Declaration of Human Rights (Section 26), Convention on the Elimination of all Forms of Discrimination Against Women (1991), Beijing Declaration on the Platform for Action (1995), 2004 Solemn Declaration on Gender and Equality in Africa, Dakar Platform for Action, Beijing Declaration, SADC Declaration on Gender and Development, and Sustainable Development Goals. It is highly expected that to date the playing field for boys and girls should be now even. However, it can be argued that these conventions supposedly brightened the expectations of disadvantaged groups, wishing to have a gender-neutral and gender-sensitive approach to education, among other things.

It has long been argued that science education is a male domain and a masculine culture. In this context, the historical positioning of girls in the Zimbabwean society would suggest that, for many female learners, making a decision to study science subjects in this case chemistry requires considerable commitment and determination as a result of the cultural perception of the subject.

## **1.2 Statement of the problem**

The uptake of Science subjects by girls as well as the actual performance by the same girls in rural areas is a cause of concern due to a mirage of factors that can be attributed to the poor output.

A number of girls in rural areas in Zimbabwe are opting to register other subjects and are not taking Chemistry as one of their courses and in cases that they have registered the subject most of them are failing to pass the subject. This is a cause for concern to the researcher and intends to find out what factors are contributing to that failure as well as lack of interest. With these observations, the study was conducted to find out the factors that contribute to poor performance by female learners in science subjects especially Chemistry which is the researcher's field of expertise. The research was carried out in Mhondoro-Ngezi District in Mashonaland West Province, Zimbabwe.

### **1.3 Aim of the study**

The main aim of the study was to find out factors contributing to poor performance in science subjects by female learners in science subject and finding out possible solutions to resolve the problem. The research was carried out at Mvurachena Secondary School in Mhondoro-Ngezi District, Mashonaland West Province, Zimbabwe.

### **1.4 Objectives**

- a) To find factors contributing to poor performance in science subjects by female learners in rural areas.
- b) To assess benefits associated with good performance of science subjects.
- c) To determine the extent to which the failure in science subject by female learners has affected their advancement to tertiary institutions.
- d) To assess the possibility of addressing the poor performance by the girl learners in rural schools
- e) To identify strategies which the government can employ to address the poor performance by rural girl learners.

### **1.5 Research Questions**

1. What is the current status when it comes to performance by rural girl child learners in science subjects at Mvurachena Secondary School in Mhondoro-Ngezi District in Mashonaland West Province, Zimbabwe?
2. To what extent has the school tried to improve the performance by girl learners at the school?
3. What opportunities are associated with the passing of the science subjects that can be availed to female learners?
4. Are there any challenges associated with the learning of the subject at the school?
5. What strategies can be utilised to improve the pass rate by girl learners at the school in science subject?



## **1.6 Theoretical framework**

A theoretical framework in research can be defined as a set of concepts, theories, ideas and assumptions that help the understanding of a phenomenon or problem. It can be considered as a blueprint that is borrowed by the researchers to develop their own research inquiry Sreekumar (2023). A theoretical framework is a guide for a research. It is a framework based on an existing theory in a field of inquiry that is related and/or reflects the hypothesis of a study Dickson Adom et al (2018). In this case gender equality theories was the cornerstone of this research

## **1.7 Assumptions**

The research assumes that:

1. The girl learners I rural schools need more information on the need to study science subjects as there is a wide information gap on the importance of the subjects.
2. Rural schools need to be well equipped with both learning facilities and human capital.
3. The project assumed that resources required to conduct the research would be readily available to complete the project. Resources include, meeting spaces, human and financial resources.

## **1.8 Limitations**

The limitation to the study was time constraint since the researcher and the target group to research only meets during school going time. The time is strictly for lessons and if the researcher decides to do outside working hours it means that the researcher has to get into villages which are far from the school and has to seek parental consent since most learners are below the age of 18. This therefore may cause the research to take longer than expected since the research made use of the break time which is just 15 minutes per day. As a result, few focus groups were held with learners at Mvurachena Secondary School while in-depth interviews with the teachers were held at the school.

## **1.9 Delimitation**

The research was conducted at Mvurachena Secondary School in Mhondoro-Ngezi District which has an enrolment of less than 200 learners from form 1 to form 4 and only less than 40 learners register and sit for Ordinary Level per year. The research would have covered all rural schools in the District, but because of financial implication and time constraints as well as

distances between the school and other Secondary Schools. Henceforth, the investigation could only cover Mvurachena Secondary School. The research therefore focused its investigation on this School.

### **1.10 Study Outline**

The study consists of five chapters. Chapter One is the general introduction of the study, Chapter Two is the Literature Review, made up of the theoretical framework of the study and empirical evidence of research on the concepts under study, Chapter Three focuses on the research methodology and research designs adopted for the study, while Chapter Four is the Discussion and Analyses of Findings, and Chapter Five focuses on the summary of the study, key conclusions and makes recommendations. The following makes a detailed explanation of what each chapter entails:

#### **1.10.1 Chapter 1: Introduction and background of the study**

The first chapter gives the background of the study, thus explain, problem statement, objectives of the study and limitations of the study. This section states what the investigation is about, and it is a brief and concise overview of what the study plans to examine.

#### **1.10.2 Chapter 2: Literature Review**

The chapter is comprehensive in mapping out the literature foundation non which the study is situated. The review is organized conceptually or thematically, which establishes a framework for the investigation. The second chapter focuses on literature review and theoretical framework thus theories that were used to support the research or theories that will are used in the research. A critical review of the literature that pertains to the topic under investigation falls in chapter 2.

#### **1.10.3 Chapter 3: Research methodology and procedures**

This chapter discusses the methods that were used in the collection and analysis of data to answer the primary and secondary research questions of the study. It explains the research design, sampling techniques and data collection methods used; and describe how data collected from the research was analysed. Quantitative and qualitative research methods were used in carrying out the research.

#### **1.10.4 Chapter 4: Analysis, Presentation, and Interpretation of data**

In this chapter findings of my study were discussed. A description of my respondents was given and a clear outline of the results on data analyses. Where appropriate, tables and charts were used to illustrate the results presented.

#### **1.10.5 Chapter 5: Summary, Conclusion, and Recommendations**

In this chapter, findings of the study are discussed. The chapter highlights the contributions that the study makes to literature. The implications of the study's findings pertaining to the available literature are also discussed. Finally, the chapter identifies the limitations of the study and present recommendations for future research.

#### **1.11 Chapter summary**

The researcher highlighted on the topic, the background of the study, the significance of the study, the research problem, the conceptual framework, the research objectives, the research questions, delimitation of the study, limitations of the study, and assumptions of the study, limitations of the study, and assumptions of the study. The next chapter will focus on related literature review.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2. INTRODUCTION**

In this chapter, theoretical framework was highlighted to corroborate the objectives of the study in theoretical realm. This chapter will also review literature on gender equality, equity and education for the rural girl child focusing on international, regional, and local scholarly articles, opinion papers and other related texts. Scholars like (Kim, 2018; Nakano & Muniz, 2018) argue that literature review can take various forms depending on its nature, including argumentative literature, integrative review, historical review, methodological, systematic review, theoretical review, among others. Generally, literature review is lauded by scholars as; it justifies the statement of the problem. Butter, (2011), it focus theoretical framework (Nakano & Muniz, 2018), and it allows to establish and methodological focus. Mongan-Rallis, (2018). Throughout this chapter, literature review will focus on gender equality, equity and educational knowledge, opportunities, challenges, for the rural girl child and strategies to address the challenges at global, regional and local scale.

#### **2.1 HISTORY AND BACKGROUND OF THE RURAL EDUCATION SYSTEM IN ZIMBABWE**

##### **2.1.1 HISTORY OF THE EDUCATION SYSTEM PRE- INDEPENDENT ZIMBABWE**

The education system in Zimbabwe is equally related to the colonial set up that was put in place during the colonial era. The idea to divide the country into two distinctive areas that are urban and rural areas has an impact on the education system in Zimbabwe. The idea of rural areas was as a result of the Land Tenure Act of 1969 which was an amendment of the Land Apportionment Act of 1920 and the Native Land Husbandry Act of 1950. All these Acts were meant to divide land use in accordance to racial lines where Africans were squashed into reserves where they were apportioned small pieces of land that was not good for agricultural production and a few

Europeans took all the productive land and created commercial farms and urban areas where all the best schools were built for the benefit of the Europeans' children. (Ndofirepi and Nenji 2020)

The colonial administrators were critical of the type of education that the missionaries provided the Africans. They felt the Africans had to be given education which was practical in nature; that is, related to agriculture and industry to prepare them as labourers, but not to the extent where they could compete with Europeans as cited by Kanyongo (2005) in Atkinson, (1972); Dorsey, (1975) as well as O'Callaghan and Austin (1977), where Africans were to be given education but not equal to that given to whites. Industrial training in African schools was limited to elementary knowledge of agriculture, carpentry and building.(Kanyongo : 2005)

### **2.1.2 POST INDEPENDENT ZIMBABWE**

At independence in 1980, Zimbabwe inherited an education system that favored mainly white Zimbabwean students. Prior to 1980, very few black children had access to education. Those who had access to education found themselves in schools that were poorly funded, with very few educational resources and a separate curriculum from that offered in all-white schools. Education for black students was provided mainly by missionaries rather than by the government. Basically, two school systems existed prior to independence. The colonial government made education for white students compulsory and therefore offered universal education, spent as much as 20 times more per white student than the black student (Ministry of Education, Sport and Culture, 2001).

The first major reform was the unification of the separate education systems to remove anomalies and inequalities. At independence, the Government adopted a socialist principle: 'Growth with equity' to redress the inequalities in access to education and other basic needs such as health services. The government's socialist principle was perceived through Karl Marx's concept of 'polytechnic education' whose main objective was to link mental and manual work and produce 'totally developed individuals' Chung (2009).

The government expanded the education system by building schools in marginalised areas and disadvantaged urban centres, accelerating the training of teachers, providing teaching and learning materials to schools. Increase in enrolments gave rise to the need for buildings. This was managed by introducing double shifts per day, but with two different sets of teachers,

ensuring a more efficient use of existing classrooms without disturbing the existing teacher-pupil ratio. The need and supply of teachers was met by rapidly increasing the number of untrained teachers at primary level. Bhurekini (2021)

The government involved local communities to help support schools through providing labour and other resources. The emphasis was not so much on quality and cost effectiveness of the education system, but on accessibility to education. In 1988, the government formed a separate Ministry of Higher Education<sup>3</sup> to be responsible for tertiary education, which included teacher training colleges, universities and vocational colleges. More and more trained teachers were supplied into the education system and this helped reduce the proportion of untrained teachers. Raftopoulos & Pilosof (2017)

In the 1900s to early 2000s the reforms focused more on the relevance and quality of education and training through new approaches to content, technologies, teaching methodologies, skills provision and through decentralisation and devolution of technical and teachers colleges into degree awarding institutions. Shizha E & Kariwo M (2011)

An Act of Parliament created the examination board, the Zimbabwe School Examination Council (ZIMSEC) to administer and manage all of the country's primary and secondary education examinations. Prior to the creation of this examination board, all the examinations were set and marked by the University of Cambridge Local Examinations Syndicate (UCLES) in the United Kingdom. Thus, the localisation of the examinations helped cut costs by eliminating the need for foreign currency. However, it created other challenges as discussed further in this article. Education in Zimbabwe today aims at promoting national unity to contribute to national development particularly, economic development through the supply of trained and skilled teachers and staff. The aim is also to revive neglected languages and cultural values and to develop a distinctive way of life with mutual recognition and enrichment of the diverse cultures Machingura V & Mutemeri J (2006)

## **2.2 STATUTES THAT GOVERN THE EDUCATION SYSTEM IN ZIMBABWE**

The Zimbabwe education system is governed in terms of the Education Act [Chapter 25:04] established in 1987 amended several times the latest being the year 2020. This is the ACT that provides for the declaration of the fundamental rights to, and objectives of, education in Zimbabwe; that provides for the establishment, maintenance and regulation of Government schools, Government teachers colleges and other Government educational facilities; to provide for the establishment and administration of non-Government schools and teachers colleges, and for the registration and control thereof; to provide for the registration and control of correspondence colleges and independent colleges and for the establishment of an advisory council for such colleges; to make financial provision for schools and teachers colleges; to provide for the transfer of teachers to the Public Service; and to provide for matters connected with or incidental to the foregoing. Education Act (2020)

Machingaidze et al (2005), highlighted that since the attainment of national Independence in 1980, the Government of Zimbabwe has always believed in and worked towards the provision of education for all its citizens. This is out of the realisation that the most important resource of any nation is its people and that the development of the nation is heavily dependent on that resource. The level and rate of development is also dependent on the level of education of the people. To that end, Government widened access to education for all Zimbabweans regardless of their age, race, creed and sex.

The Government was able to do this with the active support and participation of many stakeholders and cooperating partners. Despite this unprecedented growth and development of the education system, the formal school system could not account for all school-going children. There remained many, especially in the remote parts of the country and commercial farming and mining areas, who failed to access education due to the unavailability of schools and poverty. To cater for the out of school children and adults Non-Formal Education was expanded and strengthened with the establishment of Programme for the various categories of learners. The Education For All (EFA) goals can only be achieved when all Zimbabweans join hands and pull together. Government will do its best to make resources available to implement the various Programme and projects throughout the plan period. The co-operating partners are also urged to

join hands with Government in providing the required additional resources to make the National Action Plan a reality Machingaidze et al (2005)

Despite all the effort by the Government of Zimbabwe and having mouthwatering laws but there are still gaps. The Act and policies have fairly extensive provisions to protect, to respect and fulfill the right to education for all children. It addresses issues pertinent to education. In order to fulfill this declaration the state has the duty to provide learners with resources and facilities for learning. Fambisayi (2020)

### **2.3 CHALLENGES FACED BY RURAL GIRL CHILDREN IN LEARNING CHEMISTRY**

UNICEF Executive Director Catherine Russell(2022) highlighted gender equality and women and girls empowerment is central to all of development goals. When women and girls have an equal opportunity to learn, to participate and to lead and when gender equality for all communities and societies prosper. All teachers should be fairly compensated and given the training and the support they need to do their jobs especially those working in the most challenging settings like rural areas, while there is a need to transform how the state and societies engage and empower children and young people to ensure that their education meets their aspirations. Russell (2022). It is in this context Zimbabwe endorsed a policy position in all spheres of life, i.e., education that supports the empowerment of all students (Chikuvadze, 2022). It is in this context that education was assumed to have an immense contribution towards the elimination of poverty, and ignorance, and spur productivity (Reilly, Neumann & Andrews, 2017). However, it is widely acknowledged that rural male students' participation in sciences at Advanced Level surpasses that of female students with a similar background (Mandiudza, 2021). This is against the background that the science and technology atmosphere is at times considered male-dominated and highly detached (Morganson, Jones & Major, 2010). Therefore, this calls for a renewed focus on rural female students' participation in education as well as ensuring that they receive high-quality and relevant education, which positions them for success in life (Sibanda, 2023).

In Zimbabwe, the participation of females in science education is a priority, realised and implemented from primary school to tertiary level through an all-inclusive approach. This is



grounded in a philosophy of integrating gender-related policy guidelines in science learning process. The integration of these guidelines in science education allows for the creation of equal opportunities for all students irrespective of one's gender and social background. Thus, this creates the platform for rural female students to participate in the so-coined 'male dominated' sciences. Chikuvadze (2023). Despite the much talked about efforts to engage females in the fight against injustices in different spheres of society, i.e., education, it is not clear how such commitments have been translated into the policy. Most of the studies introspected at gender issues in education covering areas like females' performance in science examinations, cultural barriers impeding their participation in education, (Chauraya, et al (2023)

Mutanana and Gasva (2016) revealed that the most dominant challenge is lack of money for school fees, followed by pregnancy and early marriages. Other challenges which were noted were family problems, personnel illness, need to earn money, caring for the sick and long distances to travel to school. To this end, the researchers recommended that the Zimbabwean government should enforce its education for all (EFA) policy in order to ensure that the girl child is not excluded from school, enact a robust law that prohibits the girl-child from getting married before she reaches the age of 18 years. In addition, there should be decentralization of nongovernmental organisations (NGOs)'s activities to rural communities to ensure that the communities keep informed of the necessity of education for all children, regardless of sex.

Gudyana Anna (2016), highlighted that history cannot be divorced from the culture of a people. Hence, the identity formation of female students who were or were not studying physics may have been shaped or influenced by their history of being an African in a patriarchal Zimbabwean society which is marked by the supremacy of the father in a clan or family i.e. fathers hold authority over women and children resulting in the legal dependence of wives and children. Zimbabweans practice patrilineal inheritance and the least powerful roles are carried out by women in the domestic sphere or reproductive toil, such as bearing of and caring for children, food preparation and housekeeping. These activities are all time-consuming as well as labour-intensive. Gudyana (2016)

Female students are under-represented in science when Zimbabwe needs more scientists to meet its developmental agenda in a technological world. The importance of science is officially recognised in terms of the central place given to science in the Zimbabwean secondary school

curriculum (Government of Zimbabwe Circular Minute Number 14, 2004). Despite this, female students are under-represented in science while Zimbabwe needs more scientists to meet its developmental agenda in a technological world.

In addition, sciences, plays an influential role in the life of an individual and the development of a nation in that it provides the basis for an innovative and globally competitive workforce.. When females choose not to study sciences like chemistry and physics in high school it leaves smaller numbers of students that are available to become scientific professionals. Due to their relevance to technology and infrastructure, sciences tend to limit advances in many areas of scientific study. according to Gudyanga, Adam, and Kurup (2015).

Despite having a large number of western studies have reported on the reasons for low uptake of sciences by girls, very few studies have been carried out in developing countries. There is therefore a need to carry out this type of research in a developing country like Zimbabwe where cultural gender role patterns are distinct and pervasive. The focus of studies by western countries researchers have been predominantly on school, classroom and student factors. However, there are hardly any study examining the role of identity with regard to female students' interest in science. Gudyana (2016)

Zimbabwe's Constitution Section 56 requires equal opportunities to be availed to males and females and appointments to high posts in the public sector to observe gender balance. Evidence shows that there are fewer women and girls who pursue science, technology, engineering and mathematics in high schools, colleges and universities. Constitution of Zimbabwe (2013).

The Constitutional requirement is progressive because studies of women leaders across the economic divide show that women in high positions perform better than men and are more inclined to be more committed, honest and more ethical than men. Most corporate scandals are caused by men in men-dominated boards (Sifile et al, 2015)

.The problems faced by the girl child throughout the education value chain and progression ladder must be identified and issues involved should be examined and resolved so that the girl child can fully and confidently participate in all economic spheres on equal footing with men. If

there are few females in areas of science, technology, engineering and mathematics, equality in appointments and gender balance in the involvement of women in economic spheres becomes difficult to observe. Sihlangu et al (2020)

This gender reversal change in academic performance is an interesting trend in the context of industrializing and least industrialized countries. Nevertheless, girls as compared to boys, are not doing well in science subjects: technology, engineering and math (STEM). The similar picture of boys and girls academic performance has depicted In Zimbabwe as well Ullah et al (2020). He mentioned in his study that the performance of girls in STEM education is not good and need attention. Grades of girl students are low and this falls each year almost at all levels of education (Riddell et al., 1991). Nevertheless, girls' grades drop quickly when they jump to higher education. Ullah et al (2020)

## **2.4 THEORETICAL FRAMEWORK**

A theory is a set of interconnected constructions, definitions and propositions that give a systematic view of events by establishing relations among variables with the objective of explaining and predicting phenomena. A theory can be utilised to successfully anticipate outcomes and this predictive capacity can assist direct researchers to select acceptable study questions. While a framework is defined as a set of ideas utilised to create decisions and judgments. On the other hand a framework gives structure for explaining the relationships between variables. Salawu et al (2023)

Therefore a theoretical framework is a systematically developed and intertwined set of concepts and foundations coined from one or more theories with the sole intend of supporting a study. Salawu et al (2023)

In this study it is important to note that rural girls' lifestyle is a true reflection of feminists and gender theories coined by different scholars.

### **2.4.1 INSTITUTIONAL ETHNOGRAPHY BY DOROTHY E. SMITH (1926)**

Institutional ethnography is a method of elucidating and examining the relationship between everyday activities and experiences and larger institutional imperatives. Interestingly, the very term “institutional ethnography” explicitly couples an emphasis on structures of power

(“institutions”) with the micro level practices that make up everyday life (“ethnography”).Balcom et al (2021)

Smith’s point, of course, is that it is in micro level, everyday practices at the level of the individual that collective, hierarchical patterns of social structure are experienced, shaped, and reaffirmed. In other words, by focusing on the world of paid labor, politics, and formal organizations (spheres of influence from which women have historically been excluded) and erasing or ignoring women’s world of sexual reproduction, children, household labor, and affective ties, sociology unwittingly served as a vehicle for alienating women from their own lives. Conroy (2017). This is the irony mentioned previously: at the same time that sociology emerged as a provocative new discipline dedicated to explaining the inequalities and systems of stratification at the heart of various societies, it created its own version of domination by shifting attention almost exclusively to one particular dimension of human social life—the masculine-dominated macro level public sphere—at the expense of another—the world of women. In short, Institutional ethnography underscores not only that the standpoint of men is consistently privileged and that of women devalued. The same applies to boys as compared to girls at rural schools. Girls are pinned down by gender roles and societal expectations than their male counterparts. Kearney G. P et al (2019).

The theory explains how “objective social, economic and political relations shape and determine women’s oppression”. Institutional ethnography focuses on “the relations between patriarchy and class in the context of the capitalist mode of production,” and emphasizes how “the inner experiences which also involved our exercise of oppression against ourselves were ones that had their location in the society outside and originated there” Rankin (2017)

#### **2.4.2 OBJECT RELATIONS THEORY BY NANCY CHODROW (1944)**

The main focus of the object relations theory is to understand a person’s current relationship in terms of their childhood attachments to objects affected their development. Objects are people or experiences with the people that can be deemed ‘good’ or ‘bad’ by an infant and or young child. Carnevale J and Cummins E (2023). Object relations theory; put emphasis on “relationship-seeking.” The theory used the term “object relation” to emphasize that bodily drives are satisfied through a medium, or object. Object relations theory extends this point, emphasizing that the

psychological life of the individual is created in and through relations with other human beings. Object relations theorists contend that humans have an innate drive to form and maintain relationships, and that this is the fundamental human need that forms a context against which other drives, such as libidinal and aggressive drives, gain meaning. In sum, the term “object relations” refers to the self-structure that we internalize in early childhood, which functions as a blueprint for establishing and maintaining future relationships. Kelland M. D (2022)

In this way, psychoanalytic feminists tackle one of the enduring conundrums that feminists face: the resiliency of gender roles. Especially in the 1960s and 1970s, many feminists were profoundly optimistic about the power of socialization to change gendered patterns of behavior. They assumed that if boys and girls were socialized in similar ways (i.e., if girls were not trained to do “girl” things and boys were not trained to do “boy” things), stereotypical gender roles would not persist. Gender roles would become obsolete, and sexism at the micro level would be largely eliminated. However, this has not been the case. Despite significant changes in socialization (e.g., the rise in girls’ sports and more genderneutral activities in school), and much to the chagrin of many parents and teachers, there are still strongly gendered preferences among both boys and girls. Thus, psychoanalytic feminists seek to explain how gender patterns are reproduced independent of our conscious intentions Etherington L (2024).

. Chodorow begins by noting that, because of the allocation of work roles, infants usually originally identify with the female parent. That is, the infant first develops a sense of his or her own selfhood in a close, one-on-one relationship with the mother, and qualities possessed by the mother are internalized. Girls, however, are never required to make a complete break with their mothers in order to achieve their adult sexual identity (i.e., to become “women”). Rather, society fosters the continuation of intense mother–daughter bonds into adulthood. However, not having been forced to emotionally separate from their mothers, women continue to long for the emotional intimacy provided by close relationships. This unconscious desire to form attachments to others leads women to suffer greater dependency needs, as their self-identity is tied to their relationships with others. Summers F (2024)

According to Chodorow, this lack of differentiation explains why women become preoccupied with the very relational issues at the heart of motherhood: intimacy and a lack of ego separation. Women find their self-in-relation (in intimate relations with others), but because of their

socialization into adult heterosexuality, men lack the emotional capabilities that women need in order to be fulfilled in relationships. Because masculinity is defined by separation and distance, women turn not to men but to motherhood to fulfill their unconscious desire for intimacy; they re-create the early infant–mother relationship by becoming mothers themselves.

## **2.5 CHAPTER SUMMARY**

This chapter gave the synopsis of literature review pertaining to research objectives and how the previous studies had attempted to discuss the topic under inquiry. The reviewed literature focused on the status of Zimbabwe’s education system during the colonial era, post-independence to date, statutes that govern the education system in the country, related literature on gender versus the education system in rural areas as well as current trends of education in Zimbabwe. In the same chapter, the study elaborated on the theoretical framework which set the basis of explaining the phenomenon of study objectives within theoretical confines. In the next chapter, the study will deliberate on methodological orientation of the study.

## CHAPTER 3

### RESEARCH METHODOLOGY

#### 3. Introduction

This chapter divulges in detail how the research was carried out by revealing the method used and focused on the research paradigm, research design, population, sample drawn, and the research instruments used. It also tackles reliability and validity, discusses ethical issues considered, and reveals the data presentation; interpretation and analysis methods adopted. Research methods broadly divided into quantitative and qualitative design are elaborated together with sampling strategies and data collection techniques. In this enquiry, research methodology enabled the researcher to collect data on indigenous parenting practices on factors contributing to poor performance in science subjects by rural girl learners. A case of Mvurachena Secondary School, in Mhondoro-Ngezi District, Zimbabwe.

#### 3.1 Research Philosophy

This study was underpinned by two major philosophical paradigms that are ontological and epistemological views of interpretivism and positivism on factors contributing to poor performance in science subjects by rural learners. In every research process, it is inevitable that researchers are replete with certain beliefs which define philosophical assumption to a research problem (DeJonckheere et al., 2018; Lincoln and Denzin, 2011). Ingrained with these beliefs, researcher distillate the type of research hypothesis, questions to ask and ways in which the data was collected. Considering that the issue of poor performance by rural girl learners due to various factors is embroiled in philosophical and practical discrepancies (Knauer et al., 2017); this research was dispensed with ontological and epistemological view of both positivism and interpretivism. Ontology deals with multiple realities on what is real with key question of what we know (Guyon et al., 2018; Denzin & Lincoln, 2011). However, epistemology deals with how knowledge is constructed and interpreted (Al-Saad, 2014; Goertz & Mahoney, 2012). In this context, the issue poor performance of rural girl learners in science subjects is imbued with different philosophical assumptions and constructions. For example, Gudyanga (2016) quoted a statement by the Zimbabwean Gender Policy which states that, “Eliminate all forms of discrimination against boys and girls in education and skills training which includes science and

technology as well as to promote and encourage girls to take on science, mathematics and technology at all levels of education” and Gwitirwa (2019) states that every time a woman stands up for herself, she stand up for the strength and resilience of all women, igniting a flame that lights the path for generations to come. Despite the persistent research wars between positivism and interpretivism (Ryan, G. & Sfar-Gandaoura, 2018), the researcher integrated these research philosophies to; refine and clarify research design, to decipher appropriate assumption of research problem and to stimulate research design debate on how the performance of the girl child and gender roles in society are constructed. With these ideas, the study was influenced by school positivism which paid attention on counts and calculation regarding the use and knowledge on gender issues. The school of interpretivism was used to provide some divergences in respondents’ understanding of gender imbalances associated by being a girl child in rural Zimbabwe. In this study, the use of interpretive frameworks was deeply rooted in the desire for researcher to understand gender roles and how they are reinforced and instilled to the children. The desire was to philosophically underscore the importance of society’s interpretive beliefs and how these are constructed or understood in the context of education and societal needs when it comes to the girl child. The use of positivism was premised upon the desire for the study to understand issues related to attributions and frequencies on educating the girl to be independent whilst upholding gender roles in Zimbabwe.

### **3.2 Research Design**

Considering the multiple streams of understanding gender issues in rural communities and the importance of education on the girl child, the study used both qualitative and quantitative research design.

#### **3.2.1 Quantitative research design**

Quantitative research design pay much focuses on objective measurements, and statistical or numerical data analysis collected through questionnaires and surveys or manipulating pre-existing quantitative data using computational techniques (Denzin & Lincoln, 2018; Rubin & Babbie, 2017; Yousaf, 2018). In this study, quantitative design was used determine the number of girls who performs well in science subject versus the enrolment figures In this context, researcher employed quantitative research design to determine the extent to which indigenous parenting practices on child discipline are still central in child nurturing among Shona people.



It also enabled the researcher to assess the influence of demographic variables such as age, education, family size, duties that girls perform at home. Quantitative design was also used to complement qualitative design to understand the opportunities and challenges associated with gender issues in relationship to educating the girl child. While appreciating the weaknesses of quantitative design such as; rigidity and inflexibility in understanding social phenomenon; inability to understand complex social problems and being less participatory in nature (Maxwell, 2012; Skinner, J. & Engelberg, 2018); the researcher utilised the strengths of design such as; ability to generalise results to other settings (Rahman, 2017), prediction of human behaviour (Ruben & Babbie, 2017) and large sample size (Ruben & Babbie, 2011).

### **3.2.2 Qualitative research design**

Due to wide fray of biases involved in understanding gender issues, the study also employed qualitative research designs to ascertain the participants' perception on the challenges that affect the performance of female learners as they navigate between education as well as fulfilling gender roles in society. The focus of qualitative research was to gain exploratory insights on people's perceptions, emotions and motivation towards educating the girl child who has gender roles that has to be fulfilled concurrently. In scholarly world, the justification for qualitative research is lauded for its humanistic approach which provides a clear image and thick description into the topic under investigation (Alasuutari, 2011; Hossain, 2011; Whiteman, 2016; Wong, 2014). Exploratory qualitative design enabled the researcher to the factors that contribute to poor performance by female learners in science subjects in rural schools.

The psychological, social and cultural beliefs behind the use of certain child disciplinary methods by parents requires a researcher to be immersed in the community to gain insights which cannot established by mere statistical modelling and predictions. Therefore, the use of qualitative research design enabled the researcher to avoid rigid frameworks in understanding factors that need to be established as causes to poor performance by female rural learners in science subjects. While qualitative design is criticised for its deficiencies in predicting the causality of social behaviour (Rasinger, 2013) and restricted on generalizations of the findings (Denzin & Lincoln, 2018; Ruben & Babbie, 2017); several scholars (e.g. Lincoln & Denzin, 2011; Silverman, 2010) laud it for its relational and participatory in nature, stimulate individual experience for both researchers and researched (Rahman, 2017; Strauss & Corbin, 1990);

provide and assure depth in understanding social phenomenon rather than relying general counts (Thomson, 2011; Watkins, 2015) and ability to explain complex and social -problems (Tuohy et al., 2013, Tsushima, 2015). Premised upon these scholarly observations, researcher used qualitative design to widen the scope of interrogating the issues related to gender roles and education through probing, question restructuring and follow-ups.

### **3.2.3 Mixed research design**

Based on above observations, the researcher integrated both qualitative and quantitative designs to comprehensively appreciate the issues of education for rural female learners and gender roles. In this study, the researcher used concurrent triangulation in mixing quantitative and qualitative research design. This involves the collection and analysis of both qualitative and quantitative data at the same time to cross-validate and corroborate the research findings within a study (Mckim, 2017; Rahnman, 2017). Compared to other mixed research designs such as nested concurrent, embedded and sequential mixed methodology; concurrent mixed design allowed the researcher to collect data and analyse it simultaneously. Apart from philosophical flexibility of concurrent design (Wisdom & Creswell, 2013); it saved time for the researcher while being able to collect data using both qualitative and quantitative research designs. Notwithstanding the challenges of mixed methodology such as design may be complex (Rahnman, 2017); need for large amount of resources (Rubin & Babbie, 2017); and difficult to implement (Denzin & Lincoln, 2018); it enabled the researcher to compensate the weaknesses of one method and allowed the researcher to understand the issue of education in rural set up as well as the kind of lifestyle for rural learners from different vintage points using different methods.

### **3.3 Target Population**

Target population is defined as entire group of individuals or objects to which the researcher is interested in generalisation of the research conclusions or findings (Asiamah et al., 2017; Kelley et al., 2003). In other sense, it is the total group of people from which the study sample was drawn. In this study, the target population to whom the study collected data is Shona speaking people in Ward 5. Based on 2012 census, Ward 5 in Sanyati had 11 135 people. Of these, there are 5 528 males and 5 607 females. The study primarily targeted 320 females and males aged between 22 and 90 years who have rich experience of parenthood. While there are no universal guidelines to define age limit for early adulthood, the researcher used his discretion to select this age group based on the assumptions that, it possessed some experience in understanding family

dynamics of modern day parenting and the traditional side of the inquiry. The study sought to understand the indigenous parental practices on child discipline which require the experience of the elderly who are considered to be repository of the African heritage and belief systems (Gergen & Gergen, 2000; Idang, 2015). Since the other objectives of the study are on the extent to which these practices are still being practiced, the young generation of respondents was crucial in unmasking such issues in contemporary Zimbabwe as they experience them. As a result, 150 children aged 16 and above were also targeted to help in illuminating some of views on problems emanating from applying indigenous parenting practices on child discipline.

The study is also targeted 20 Key Informants (KI) from 5 local schools, child protection nongovernmental organisations and government ministries who work with children and families. Apart from gaining exquisite expert knowledge from key informants, Chemuru (2015) argues that parenting extend beyond home into schools, community programmes and other social institutions who have interface with children on regular basis. On other hand, (Martínez-Mesa, 2016) advises that the selection of target population, like in sampling, should consider; the availability of participants, reasons for choosing the certain group of participants, costs involved, variability of data and risks and opportunities involved. In this study, the targeted population was able to meet above considerations which made sampling feasible.

### **3.4 Sampling and Sample Size**

Generally, a sample is a group of people or objects taken from the larger population for measurement (Sim et al., 2018). In other words, a sample implies the people to whom data is collected and findings are generalised. Several scholars (Blaikie, 2018; Long, 20014; Rubin & Babbie, 2017) agree that the sample should be representative of the larger population in entirety to ensure that the research findings can be generalised to the study population as whole. In the research, the total sample size for survey was 20 female learners, 10 parents and 5 key informants. This was based on Research Advisor (2006)'s sample size table which depicts a minimum of 20 female learners, 5 teachers and 10 parents participants for population size more than 100 learners and the 70 parents and 7 teachers. This can be ideal number by putting confidence level at 95% and sampling error at 5%, a sample which is sufficient to generalise the data. This sample size table is ideal when the researcher is not clear on the exact number participants which desired characteristics to meet the needs of research questions. On the same

note, researcher knew only the population size from ZimStats (2012) but not exact number of people who meets the needs of research questions. Generally, the sample representativeness is often affected by sampling bias which involves the deliberate or inadvertent tendencies by the researchers to select the participants which certain characteristics (Jonathan et al., 2013; van Hoeven et al., 2015).

### **3.4.1 Sampling inclusion and exclusion criteria**

In order to avoid unnecessary targeting and sampling of study participants, the researcher worked on the inclusion and exclusion criteria towards what constitute and qualify learners and parents with learners at the school. Inclusion criteria implies that the prospective research participants should have characteristics which meet the needs of research objectives while exclusion means that research participants do not meet the desired characteristics to answer the research objectives (Garg, 2016:17). Generally, inclusion and exclusion criteria may consider factors such as age, marital status, income level, race, location, language, among others. In this study, the researcher ensured that the selected participants are either learners or parents or guardians of learners at the school. This means those who were not learners or did not have learners at the school were not qualified for data collection, with exception of key informants. While there are not defined scientific rules to define native participants; the Nativist theory alleges that children, not only imitate language but form indigenous values and norms from it (see for example; Chomsky, 1965; Lemetyinen, 2012). This further epitomised the justification the problem under inquiry requires individual with deep knowledge on gender issues and education. The importance of considering exclusion and inclusion criteria in research is recognised by Salkind (2010) who posits that it ensures that the right participants are selected to answer the objectives of the study.

### **3.4.2 Sampling Methods and Techniques**

Most scholars subdivide the probability random sampling into three major categories (simple random sampling, stratified sampling, and cluster sampling). On other side, non-probability sampling which involves the selection of participants based on researcher's judgement rather than random selection (Erba et al., 2018) is more synonymous with qualitative research design.

### **3.4.3 Probability sampling techniques**

Considering that the study was underpinned by quantitative and qualitative research design, both probability and non-probability samplings were adopted. As for quantitative data, the researcher selected 20 learners, 10 parents, 5 teachers and 5 key informants as participants based on stratified proportionate sampling technique. This involves subdivision of the population into small homogenous group or strata when the entire target population is dissimilar (Rubin & Babbie, 2017). Erba et al (2018) argues that, the idea of subdivision is to ensure that the selected population reflects accurately each segment of a population. In this study, the major segments were based on all classes at the school since it has one class for each form from form 1 to form 4. The first strata of the study were based on the selection of 5 participants form each class. Then the equal number of participants was selected from the form 4 class. Despite the limitations of probability sampling such as requiring too many resources and time scholars like Rubin & Babbie (2017) observe that it allows representativeness in the selection of participants. The issue of representative is also appraised on the ground of results generalisation as it gives participants equal opportunity to be part of research (Omair, 2014). In this study, the researcher utilised probability sampling to select participants for quantitative data.

### **3.4.4 Non-probability sampling techniques**

As for qualitative data, the researcher used purposive sampling method to select 5 key informants and convenient sampling to select 15 participants to participate in Focused Group Discussions and In-depth interviews. Purposive sampling is deemed appropriate for key informants in data collection (Santagelo et al., 2013). It involves the researcher's use of his judgement or intuition to select participants who possess the characteristics of the problem under the investigation. So often, it is appropriate when the expert knowledge is needed in the study. As reiterated earlier, the study assessed the strategies which can be tapped to harmonise education and gender issues in Zimbabwe. Those participants who were readily available during data collection period were selected for in-depth interviews and focus group discussions using convenient sampling. Convenience sampling focuses on the selection of participants based on their proximity and accessibility to the researcher (Tress, 2017). The participants for in-depth interviews and focused group discussions were drawn from the same participants who took part in surveys using convenient sampling. While non-probability sampling techniques are criticized

for lack of representativeness (Omar, 2014); they save time and easy to carry out (Valerio et al., 2016).

### **3.5 Data Collection Methods and Research Instruments**

#### **3.5.1 Survey questionnaire**

The study used survey questionnaires to collect data from the participants. The researcher self-administered 30 closed ended questionnaires within 5-day period. The option for self-administered questionnaire was to; eliminate some of biases, time effective (Whitehead & Baldry, 2017) and can complement qualitative data through probing and observations (Hollomotz, 2017). This captured quantitative research data. Several scholars (e.g. Long, 2014; Rubin & Babbie, 2017) argue that survey questionnaires offer a broad capability of the study to collect data from large population. In this study, the researcher divided the questionnaire into four major sections.

1. Section A captured the demographic characteristics of respondents such age, form.
2. Section B captured data on duties that female learners perform at home.
3. Section C paying attention to challenges and opportunities and
4. Section D capturing data on role of community on raising children. To understand the locus of the topic in modern day,
5. Section E captured the opinion of the participants on the strategies which can be used to make sure that more female learners are encouraged to take part in science subjects. Although questionnaire is less flexible to collect complex data (Jones et al., 2013:29); the researcher managed to collect the required data for statistical analysis as well comparison with qualitative information.

#### **3.5.2 In-depth interviews**

As a follow up to a survey, the researcher conducted 5 in-depth interviews from teachers and 10 parents by employing in-depth interview guide. This consisted of open-ended questions to capture the participants' perceptions on the importance of educating the girl child. Adopting concurrent data collection approach, this was used to explain some of the quantitative or

numerical patterns from the survey. As argued by several scholars, in-depth interviews can allow the researcher to have a follow-up questions (Santagelo et al., 2013; Vacchelli, 2017); easy to establish a rapport with the participants and can be used to monitor non-verbal communication cues (Dobbie et al., 2017). This was useful to the researcher considering that the topic on education and gender issues is embedded in cultural diversities. Although several scholars are skeptical about in-depth interviews for lack data generalisation and time consuming (see; Adams et al., 2007; Alsaawi, 2014; Dobbie et al., 2017); the research was able to probe and observe participants' behaviour during data collection sessions. Therefore, solely depending numerical analysis may leave out some important gaps which need to be addressed by open ended data collection tools like in-depth interview guide.

### **3.5.3 Key informant interviews**

The researcher further cemented the data collection methods by conducting 5 key informants' interviews using open ended interview guide with expert from education, and members in the Ministry of Women Affairs, Gender, Small and Medium Enterprises Mhondoro-Ngezi District. Key informant interview focused on the opportunities, challenges, and strategies to integrate gender issues and education for the benefit of female learners in rural areas. The key informants are used mainly; to get expert information on pressing community problem when there is limited expert members in the community (Wong, 2008); understand people with diverse background on certain problems (Dilshad & Latif, 2013); to discuss sensitive and controversial topics (Mishra, 2016) and to get in-depth views on the problem. However, Brown (2013) observes key informant interviews require a careful selection of participants who are knowledgeable about the topic to ensure that data collected meet the study objectives.

## **3.6 Data Presentation and Analysis**

Data analysis is a systematic process of structuring, bringing order and meaning from collected data for decision making (Labree, 2009). The aim of data analysis is to inspect, cleanse, transform and model data for the overall goal of getting useful information for suggesting conclusion and support the decision making. The quantitative data collected from closed ended

questionnaires and post-coded and analysed using SPSS (version 25). The analysed data from SPSS was presented into frequency tables, cross-tabulation, and descriptive models. The qualitative data was integrated using the themes from the objectives of the study.

### **3.7 Feasibility**

The issue of feasibility entails an assessment, prognosis, and determination of doability of the study under consideration. Rubin and Babbie (2011:141) retort that “common issues determining the feasibility of a study are its scope, ethical consideration, time it will take, costs involved and the cooperation it will require from others.” The current study was carried out at Mvurachena Secondary School, Mhondoro-Ngezi District. While the researcher recognized challenges related to time constraints and transport challenges to reach the participants, thorough planning and personal experience with community enabled the researcher collect data. Also, to minimize the challenges of accessibility, researcher got assisted from two trained research assistants.

### **3.8 Validity and Reliability**

The major aspect of research instruments is to establish validity, which entails how well the results of study measure what it intended to measure (Ackerman, 2014; Angel & Schutt, 2013). There are many types of validity which include construct validity, content validity, face validity, formative validity, and criterion validity, among others. Scholars like (Ackerman, 2014, Furr, 2016; Joppe, 2000) believe that in social sciences, there are universal laws of measuring validity. To determine validity, the researcher ensured that; objectives of the study are clearly defined and operationalised, got expert input on the assessment of the results and conducting of data audit after collection. The measurement of validity and reliability in qualitative data is often tricky as it depends on human judgement (Ahmet & Bilge, 2016; Wong et al., 2016). In this study, the research sought the input of moderators to eliminate bias, use of respondent’s validation of the results and cross-checking of the results from triangulation of data collection tools. For those questions which were on Likert Scale were tested using Cronbach Alpha to determine internal consistency.



### **3.9 Ethical Procedures**

Ethical issues remain an integral part of any scientific research. Tafirenyika (2017:7) states that “research ethics are the cornerstone of conducting effective and meaningful research.” Precisely stated by Research Ethics Council (2013), research ethics means the moral principles guiding the research from its inception, through to completion and publication of results and beyond. In this regard, a research should abundantly comply with consideration of human protection and the integrity of his/her behaviour during and after the study.

#### **3.9.1 Clearance and permission to conduct a study**

To ensure the safety of the researcher, the research sought the clearance for community entry. The permission to conduct research was granted. The letter seeking permission was presented to District Schools Inspector, the School Head and the Chief, Wards Councils, Village Kraal heads and research participants clarifying the purpose and objectives of the study., Morris (2015) argues seeking permission to conduct a research in any community ensures accountability, responsibility and it chart the way for friendly data collection.

#### **3.9.2 Informed consent and voluntary participation**

Saunders et al (2016) observe that informed consent is a cornerstone of voluntary and democratic research process. The researcher designed consent form for the participants, and these were translated into Shona for easy understanding among the participants. Participants were not coerced to participate and those who were willing to participate signed the forms. It was made clear to participants that they were under no obligation to participate in the study and they could withdraw at any stage. The researcher further used oral consent where he requested the participant to agree on whether to start the interview or not.

#### **3.9.3 Confidentiality and anonymity**

Rubin and Babbie (2012) argue that ensuring confidentiality and anonymity is a clear demonstration of researcher’s conscience to protect the well-being of research participants. Confidentiality is defined as a form of privacy where the participants in not shred on physical, technical, and administrative grounds (Morris, 2015). On other hand, anonymity implies that the participant’s identifying clues are removed including names, address, and any other details (Crow & Wiles, 2008). Confidentiality and anonymity of participant’s information and their names was exercised in this study. Research instruments did not contain the names of participants and Pseudo names were used during data presentation. This is because, the issues of

cultural or traditional practices which the participants need to be protected and divulged in public.

#### **3.9.4 Data reporting and publication**

Scholars (e.g. Mamvuto, 2014; Namasasu, 2012, Matikiti, 2013) concur that ethics on data presentation is often ignored by the most researchers. The same authors argue that duplication of information in textbooks or online and deliberate manipulation of data presentation constitutes serious ethical breach in research. To avoid this, the researcher ensured that the study findings are treated with honest, objectivity, integrity, carefulness and legality. Data gathered was presented and reported without deliberate or any conscious manipulation of findings.

#### **3.10 Chapter Summary**

This chapter critically analyzed step by step, how data was collected as well as methods of data collection selected. Further, it highlighted the justification for methods used and the limitations of each method and how this was overcome. However, though limitations exist, the results was generalised as many methods as possible for data collection will complement each other hence limit bias. Next chapter will present the results paying attention on study objectives.

## CHAPTER 4:

### DATA PRESENTATION, INTERPRETATION AND DISCUSSION

#### 4. Introduction

The essence of this chapter is to present, interpret and discuss data which was collected from the field regarding the factors that contribute to poor performance by rural girl learners in science subjects at Mvurachena Secondary School in Mhondoro-Ngezi District. The importance of data presentation, interpretation and discussion is lauded in literature as it enables; ascertain whether research problem has been answered (Kalpesh, 2013), interpretation enables the filtering or restructuring of investigated problem (Sutton, 2015) and data discussion allows understanding of investigated problem at macro level through synopsis of comparisons and contrasting the findings (Anderson, 2010).

#### 4.1 DEMOGRAPHIC INFORMATION OF RESPONDENTS.

Demographic information for learners tries to give information about the pupils and the number of respondents in the research. The ages of learners who answered questionnaires ranged from less than 13 and above 18 years. The learners were of mixed abilities. The total number of respondents was 40

##### 4.1.1 AGES OF FEMALE LEARNERS.

**Table 4.1** Ages of female learners.

Age	Females	Grand Total
13 and below	2	2
14-16	7	7
16-18	6	6
Above 18	5	5
<b>Grand Total</b>	20	20

Table 4.1 shows that the age of pupils ranges from 15 and above which means they are pupils with mixed abilities, that is, they think differently. The sample chosen by the teacher gives the true representation of the total population. The ages of the learners are presented in fig 1.

### Ages of female learners respondents

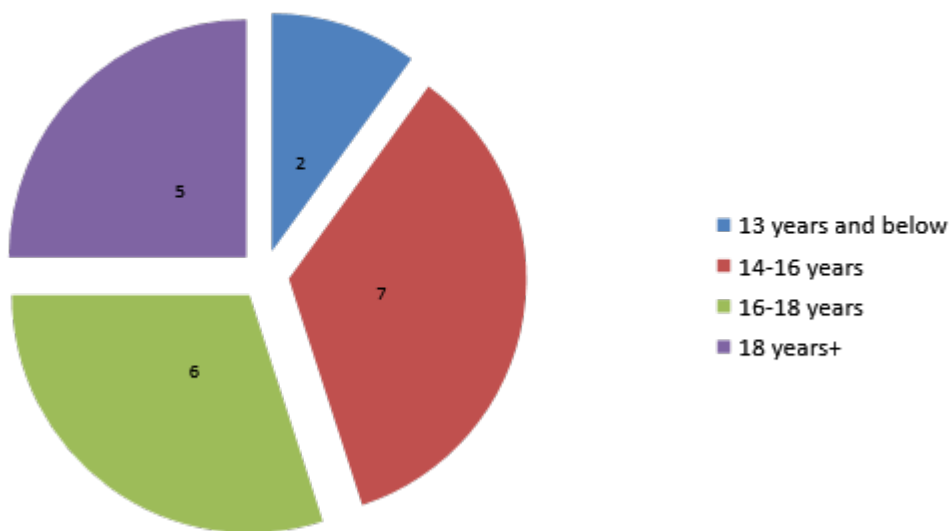


Figure 4.1: Learners respondents ages.

*Source: Field data*

The figure 4.1 above shows the ages of female learners that took part in the research. 2 learners who took part in the research were 13 years and below while those aged 14 to 16 years were 7, those aged 16 to 18 were 6 and those aged above 18 were 5. Based on in-depth interviews, it was revealed that as the learners progress with their education from form 1 and 2, the interest to study science was high, but as soon as they get into form 3 and 4 the competing pressure of fulfilling gender roles at home and studying becomes cumbersome on the female learners

#### 4.1.2 GENDER OF ADULT REpondENTS

Table 4.2: Gender of Adult Respondents (10 teachers and parents plus 5 key informants)

Gender	Number
Male	7
Female	13
<b>Total</b>	<b>20</b>

From Table 4.2 it is indicated the gender of the adult respondents whom among them are teachers, parents and key informants. The adult respondents had 7 males and 13 females.

Adult respondents by gender (Teachers, Parents and key informants)

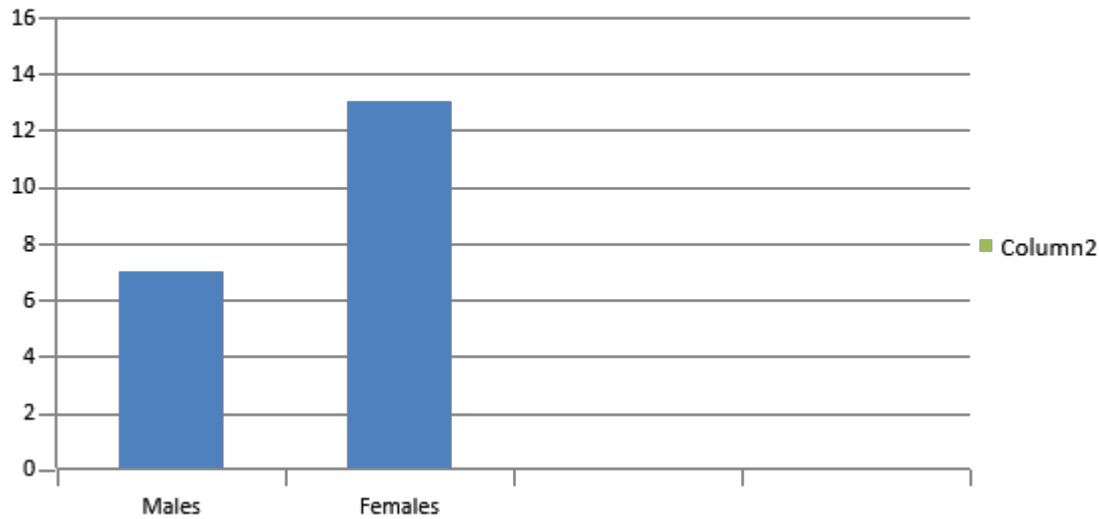


Fig: 4.2

Figure 4.2 is a presentation of the genders of adult respondents according to their gender as per table 4.2 where out of 20 adults 13 are females while 7 are males. This is because in rural areas females are usually available at homes doing unpaid household work which is also known as invisible labour, whilst males will have gone out to fend for their families.

### 4.1.3 ADULT RESPONDENTS LEVEL OF EDUCATION

Table 4.3: Adult respondents' level of education

<b>Level of education</b>	<b>Number of adults</b>
No formal education	3
Primary education	6
Lower secondary education	3
Tertiary Education	8
<b>Total</b>	<b>20</b>

The findings revealed that the majority had tertiary education with 8 adults, followed by those with primary education which had 6 adults, lower secondary education and no formal education were each at 3 adults. Poor access to education in Mhondoro-Ngezi is one that can be attributed to a higher number of adults going just up to lower Secondary Education. Those with tertiary education are resource persons, that are deployed to work in the district that include the District schools Inspector, teachers, the head and the resource person from the Ministry of Women Affairs

## Level of education for adult respondents

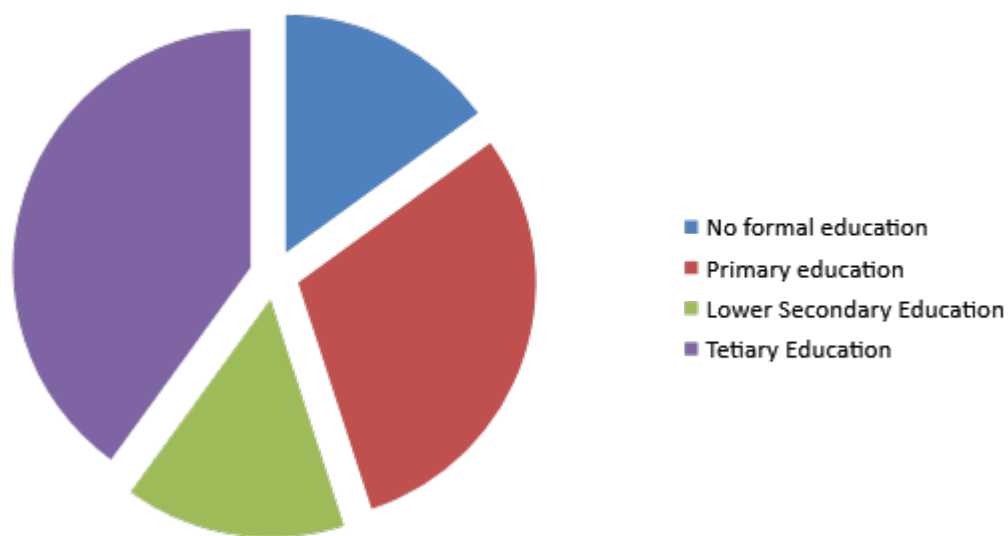


Figure 4.3

Figure 4.3 is the graphical presentation of information as at table 4.3 where we can see that adults with non-formal education as well as those with primary level education are the parents of most learners in rural areas and their understanding of programs that the government may enrol is non-existent. This usual affect the would be intended beneficiaries

### 4.2 CURRENT PASSRATE BY FEMALE LEARNERS AT MVURACHENA SECONDARY SCHOOL FROM 2019-2023

**Table 4.4: Passrate of female learners at Mvurachena Secondary School from 2019-2023**

YEAR	TOTAL NO OF GIRLS WHO SAT FOR 'O' LEVEL EXAMS	GIRLS WHO PASSED SCIENCE	%
2019	23	3	13%

<b>2020</b>	<b>18</b>	<b>5</b>	<b>28%</b>
<b>2021</b>	<b>13</b>	<b>2</b>	<b>15%</b>
<b>2022</b>	<b>19</b>	<b>7</b>	<b>37%</b>
<b>2023</b>	<b>17</b>	<b>3</b>	<b>18%</b>

From the above table we can all see that despite the school having a reasonable number sitting for ‘O’ Level Science only a few pass the subject which is the trend that prompted the researcher to want to find out why is this performance not only below half, but moreover it is not constant but escalates each year making it difficult for teachers in the subject to want to find out why?

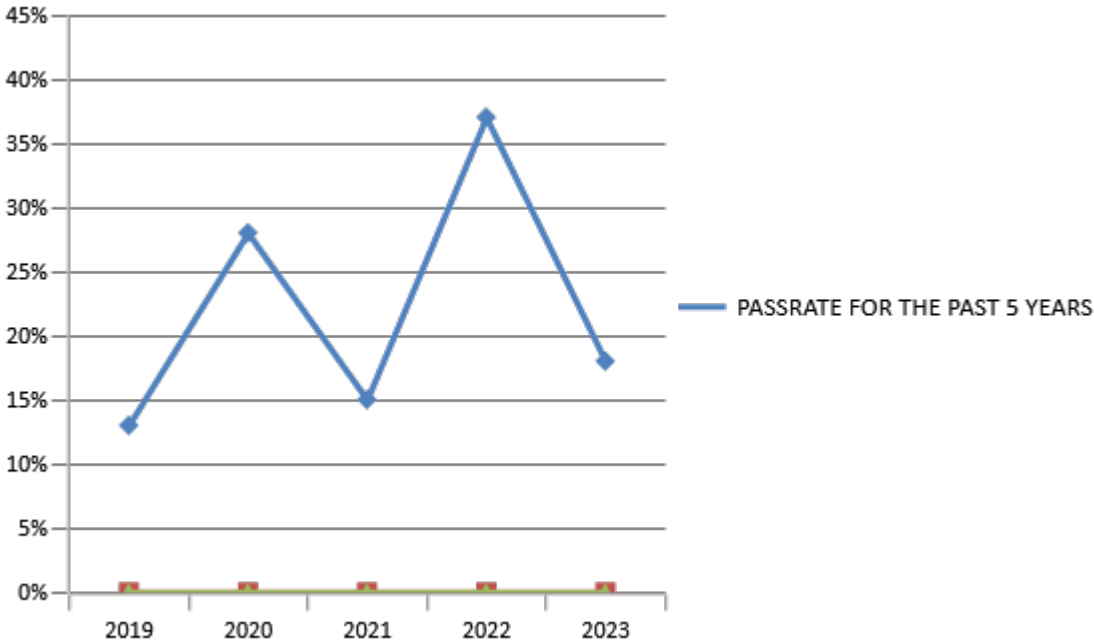


Fig 4.4

Presentation of data in table 4.4 whereby the pass rate is not constant but each year has its own rate and this affect the teachers when planning.



### 4.3 RESPONSE FROM LEARNERS ON GENDER ROLES AT HOME

From in-depth interviews that the researcher held with female learners she discovered that nearly all girls who were chosen as respondents had to carry out household chores either before coming to school or after school.

These chores really affected them either on concentrating at school or studying when they get home. This is because they will get to school already tired from duties that they had to perform at home as well as walking long distances to school or they was too tired to study after they will have performed their household chores.

This is because most households do not have maids to assist their parents and they have to fulfil that duty. In some instance these girls perform duties which culturally were meant for men, but due to the fact that their mothers were left by their husbands to carry out these duties, they end up encouraging girls to perform all the duties so that if they get married they will be equipped with all skills expected at a rural home.

### 4.4 HOME CHORES

Table 4.5 Home Chores

Home Chores	Number of learners who perform them out of 20	%
Cooking	20	100
Washing	20	100
Cleaning the houses and yard	20	100
Gardening	15	75
Milking Goats/ Cattle	13	65
Baby Sitting	17	85

Farming	19	95
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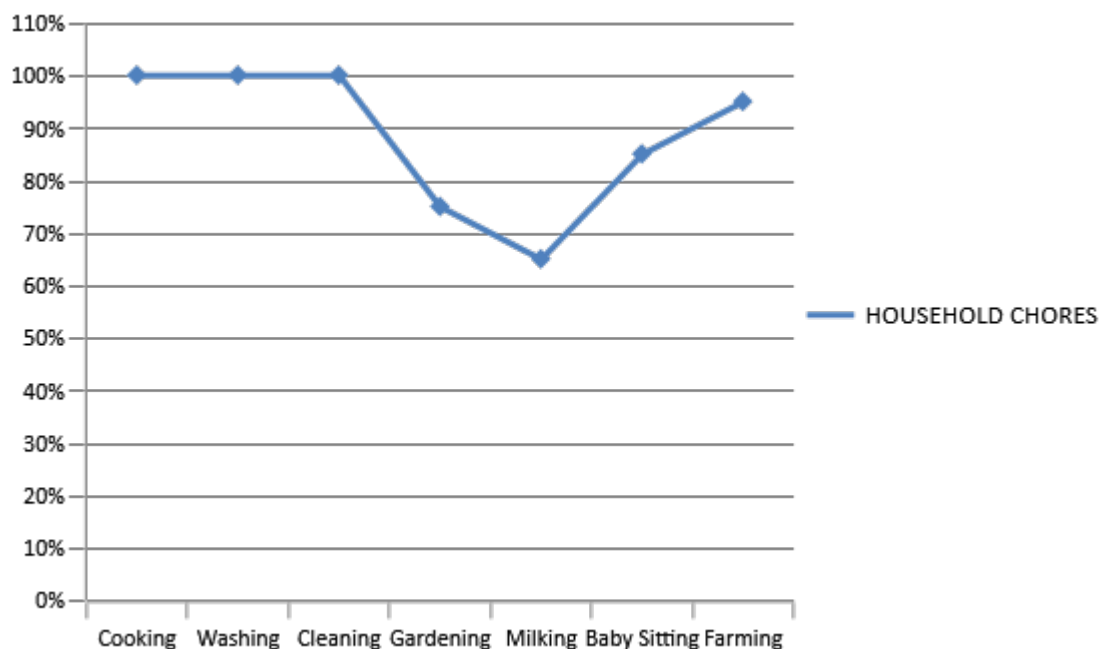


Figure 4.5

Figure 4.5 shows that female learners are the backbone of invisible house hold chores. They have less time for studies and eventually the learners may perform badly in their studies

#### **4.5 ADULT RESPONSES TO POOR PERFORMANCE BY FEMALE LEARNERS.**

From the interviews held with parents, some attributed the poor performance to the fact that obviously women are meant to be submissive to men hence there was no need for them to excel in such subjects. According to these parents women are only supposed to be able to read and write and the issue of excelling was not a priority. They are grooming girls to be good wives, not empowering them to be independent. The most important aspect to them is marriage above everything else.

The issue of having girls as scientists or engineers, despite the fact that they have seen some ladies excelling in those fields they are not a priority to them.

*Zvinobatsirei kuendesa musikana kuchikoro iye achazongoorwa*

*Translated to English as ' what is the use of educating the girl child, after all she is going to get married'*

Was the response from one parent

However key informers and teachers are proving to be working tirelessly in order to make sure that all learners are accorded equal opportunities when it comes to education and they are working extremely hard to educate the parents.

*We are trying all our best to make sure that the community understands the essence of educating the girl child the same way they do to the boy child*

This concurred with some parents' concerns over their children's future taking into consideration the fragility of marriages currently.

*Ishuwiro yedu kuti vasikana vadzidze vaite ezvinongoita vakomana*

*Translated to English as 'it is our wish that girls just get the same treatment as boys when it comes to education*

It was one of the response from one parent.

#### **4.5 CHAPTER SUMMARY**

This chapter, presented, interpreted and discussed data in thematic form derived from research objectives. Key issues deliberated in this chapter included; the description of education and gender issues the extent to which all system of the community are working towards the realisation of a brighter future for the girl child through educating her. In the same chapter, some statistical analyses were done to complement thematic issues which emerged from the research findings. Admittedly, parents indicated that they are still a long to fully understand gender equality issues. Findings also revealed that these methods were considered to be effective though its application is being undermined by host of intricately linked social, political, cultural and technological factors. In the next chapter, the researcher will give the summary of the whole thesis, conclusion and recommendation based on the overall objectives of the study.

## **CHAPTER 5:**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5 INTRODUCTION**

The focus of this chapter is to provide a summary of study aim, objectives, research, methodology, and results of the study. Based on the insights from the findings, the chapter presents study conclusion and recommendations. Recommendations suggested are directed towards policy issues, community-based matters and options for future studies.

#### **5.1 SUMMARY**

The following is summary of the whole thesis based on key issues noted and raised from section each of the study.

#### **5.2 Study focus**

The major focus was to investigate the factors contributing to poor performance by female learners in science subjects at Mvurachena Secondary school in Mhondoro-Ngezi District, Zimbabwe. The study was inspired by the current pass rate which saw a number of female learners being unable to excel in science at 'O' Level. The general observation by researcher was that, many synopses on advancing education to all learners in Zimbabwe have been written focusing on infrastructure and human capital development without attempting to assess the impact that the society plays in advancing the cause. In order to understand the aim of the study, the following were the objectives of the study:

- a) To find factors contributing to poor performance in science subjects by female learners in rural areas.
- b) To assess benefits associated with good performance of science subjects.
- c) To identify strategies which the government can employ to address the poor performance by rural girl learners.

### **5.3 The study findings**

**On objective one**, the study revealed that the poor performance by female learners is as a result of a complex societal system that need to be properly looked into in order for society to holistically address education and gender issues in rural areas The study also revealed that some parents are not yet aware of the need to embrace gender equality for their own benefit as well as for the benefit of their female children. They are still stuck in the notion that the man of the house is the breadwinner and all privileges should be forwarded to males first before girls can have them.

**In objectives 2**, which focused on assessing the benefits associated with good performance of science subjects, the absence of such benefits that can be seen by the community as well as the female learners is a big setback for the learners to be interested in science subjects. There is a need for extensive carrier guidance which specifically target the girl child and has the involvement of the private sector where women have excelled in fields like mining engineering, civil engineering, chemical engineering, medicine and others.

The **objective 3** focused on the strategies that the government can implement so that rural learners are not left out in the development matrix due to their location. A lot need to be

done in order to make sure that the community embraces the development associated with the girl child..

#### **5.4 CONCLUSION**

Based on the findings, the issue of education and gender equality is an ongoing process that needs to be properly and well-funded by the government so that the results can be realised. It should not be an urban issue that leaves out the rural populace.

Parents and societal opinion leaders need to be well informed about the importance of educating the girl child as well as giving the same child equal opportunities as the male child.

#### **5.5 RECOMMENDATIONS**

The following are recommendations based on the findings which were derived of major objectives of the study and themes which emerged during data collection and analysis.

##### **5.5.1 Policy implementation**

The study noted major gaps in policy implementation regarding the issue of education and gender issues. Despite Zimbabwe having a fully-fledged commission to do with gender issues as well as being a signatory to many declarations on gender issues, the implementation of such recommendations is taking long to be realised and the nation is losing a number of girls to early marriages, cultural distortions and masculinity.

##### **5.5.2 Inclusive education curriculum**

One key issue that emerged in the study was that gender issues are not being implemented holistically but selectively such that those who remain with archaic ideology will hinder the progress of realisation of gender equality. Hence the need to have an inclusive education curriculum that encompasses everyone.

##### **5.5.3 Community initiatives**

One key observation was that communities are no longer participating in traditional activities which were used as a behaviour modification tool. Communities leaders need to organise some

important and acceptable cultural activities were gender issues are topical. Community leaders need to organise some important and acceptable cultural activities were gender issues are discussed. In the same context, this can aid the concept of acceptance in the modern day society.

#### **5.5.4 Public debate**

There is a need to encourage all players interested in the issue of gender equality and education including Non-Governmental Organisations, politicians, technocrats, students, civil society, among others, to debate more on the issue of education and gender. This can open avenues for concerned players involved in gender and education to understand the opportunities and challenges associated with indigenous parenting practices on child discipline. These debates may include; parliamentary, guest lectures, inter-professional debates, among others, to provide the reflexivity on both those who support or disparage gender equality amongst learners.

#### **5.5.5 Inclusive child protection programme**

The study learnt that education and gender issues are multispectral and require a dialogic based on mutual and reinforcing agreement among key child protection stakeholders. There is a need for inclusive child protection programmes to ensure that all interested express their views. Programmes such as child rights movement should include parents in planning so that their views on gender and education are assessed and taken into account.

#### **5.5.6 Knowledge development**

The study also established that there is not enough scientific documentation of education and gender which can be accessed by less literate parents. There is need for documentation of these methods in form of books, journal articles, magazines, Newspapers, TV shows in vernacular languages, among others. Increased research on education and gender will also likely to open new insights, debates and recommendations for policy review, formulation and implementation.

## **5.6 CHAPTER CONCLUSION**

The chapter gave the overall portrait of thesis in brief but succinct way by focusing on giving the summary, conclusion, recommendations and the area of future study. This was done in order to give the consumer of this thesis with issues involved in the whole study such as; the summary of topic, aim and objectives, key methodological issue, major themes that emerged in the findings and researcher's conclusion on the topic which precipitated the formulation of major recommendations.



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BINDURA UNIVERSITY OF SCIENCE EDUCATION

Date: 09 April 2024

TO WHOM IT MAY CONCERN

TARU BEREKERA  
NAME: MEMORY

REGISTRATION NUMBER: B1542382

PROGRAMME: HBScEdCh

PART: 2.2

This memo serves to confirm that the above is a bona fide student at Bindura University of Science Education in the Faculty of Science Education.


The student has to undertake research and thereafter present a Research Project in partial fulfillment of the HBScEdCh programme. The research topic is:

Factors contributing to poor performance of rural girl learners in chemistry, A case study of Mvurachena Secondary School in Mhondoro Ngezi District

In this regard, the department kindly requests your permission to allow the student to carry out his/her research in your institutions.

Your co-operation and assistance is greatly appreciated.

Thank you

  
Ndemo (Dr.)  
CHAIRPERSON - SAMED

