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MATHEMATICS



**THE IMPACT OF SOCIAL BACKGROUND ON THE LEARNING OF
MATHEMATICS AT ORDINARY LEVEL AT PORTA FARM SECONDARY**

BY

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS
OF THE BACHELOR OF SCIENCE HONORS DEGREE IN**

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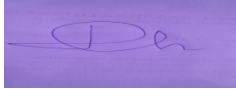
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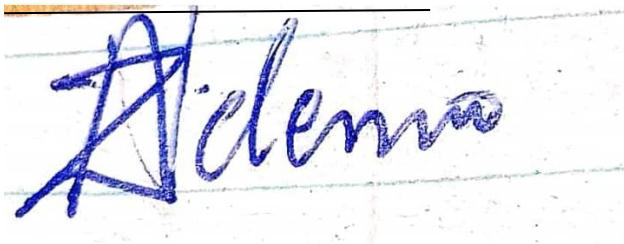
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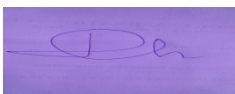
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Dedication

This research is dedicated to my husband Edwell Chakoroma, sons Gillian and Elroy Chakoroma, sister Mollyne Chamboko and brother Talent Chamboko. May the Lord bless you.

Abbreviations and acronyms:

SES- social economic status

ILAR -Intergenerational Literacy Action Research Project

BEAM-Basic Education Assistance Module

ICT- Information Communication Technology

OVC- Orphaned and vulnerable children

Abstract

This study investigated the relationship between social background and the learning of Ordinary Level mathematics at Porta Farm Secondary School. Using a mixed-methods approach, the research combined questionnaires, interviews, and observational data to explore how socio-economic status, parental education and support, peer influence and home environment influence mathematics achievement among secondary school students. The findings revealed significant differences in mathematics performance among students from diverse social backgrounds, with those from disadvantaged backgrounds performing significantly lower than their peers. The study identified key factors contributing to this achievement gap, including limited access to resources, lack of parental support, and low self-esteem. The research concludes by highlighting recommendations which include the need for targeted interventions and support structures to address the socio-economic disparities in mathematics education, ensuring equal opportunities for all students to succeed, parental involvement in the learning of mathematics. The findings have implications for mathematics education policy, teacher training, and school practices, emphasizing the importance of addressing the social context of learning to promote inclusive and equitable education.

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CHAPTER ONE:

1.1: INTRODUCTION

The social background of a learner plays a vital role on the performance of the learner in Mathematics. Most students from unstable rural backgrounds tend to perform poorly in Mathematics due to the problems they face like lack of educational provisions, poor nutrition, abuse and lack of role models. It has been noted that learners at Porta Farm Secondary perform poorly in Mathematics as they are prone to challenges similar to the ones noted above. These predicaments negatively affect their performance in Mathematics. This chapter highlights the pertinent circumstances that compelled the researcher to develop the urge to investigate the impact of Ordinary Level students' social backgrounds in their academic achievement in Mathematics. The rationale behind carrying out this study as well as the research questions to be addressed in trying to find the solution to the main problem is also addressed. The chapter also highlights the importance of the study to various groups of people, the assumptions on which the study is based on, possible difficulties to be met in trying to gather data for the study and the boundaries of the research. A glossary of key terms in the study is also given.

1.2: BACKGROUND OF THE PROBLEM

The bulk of students in most rural schools are susceptible to varied socio-economic challenges which tend to negatively affect their academic performance in the various learning areas offered at the school, in particular Mathematics Zamchiya, (2018). The social background of a person relates to one's history, how they were raised, their religion, culture as well as their type of associates Kasambira, (2017). The majority of students from unstable socio-economic backgrounds, mostly orphans and vulnerable children (OVCs) are prone to numerous socio-economic predicaments like lack of money for school fees and other educational provisions like school uniforms, stationery, clothing as well as adequate feeding. Again, the majority of learners from unstable home backgrounds are exposed to abuse in the form of child labour, sexual

molestation or early marriages mostly instigated by neighbors, the extended family or those who look after the OVCs.

The existence of these unstable social backgrounds in most African communities contribute to the failure by students to perform well in Mathematics as the students often fail to get parental support, which helps them to excel in mathematical skills as it is a pillar of emotional security. Tsegaye (2018) argues that lack of role models, from whom students can acquire mathematical skills, instills negative attitudes towards the subject in students. Moreover, for most disadvantaged pupils, the home has nobody to assist them with mathematics homework tasks, to take care of their health and sanitation needs, as well as to timeously send them to school. The students' dietary provisions, the family earnings, the family size, the family's geographical location, the culture of the surrounding community, the family's religious denomination, as well as the education level of the parents also has an effect on the learners' performance in Mathematics. The researcher thus intends to ascertain the negative impact of students' social backgrounds in the effective learning of mathematics.

1.3: STATEMENT OF THE PROBLEM

Globally, Mathematics is construed as one of the most challenging learning area in the secondary school curricula. Its challenging nature is attributed to a number of factors Woolfolk, (2020). Some of the causes of massive failures in mathematics stem from the way the subject is taught by educators as well as the students' general perception of mathematics. The amount of attention given to the subject by school authorities also makes it an uphill battle for teachers to execute their duties effectively Kasambira, (2017). On the other hand, the researcher feels that the students' home upbringing is also influential in the effective teaching and learning of Mathematics. Thus, she believes that the students' social background can be detrimental to secondary school learners' acquisition of Mathematics concepts. The study therefore seeks to explore the impact of Ordinary Level students' social background in the learning of Mathematics at Porta Farm Secondary School.

1.4: RESEARCH OBJECTIVES

The researcher hopes to achieve the following objectives:

- a) To identify social problems that hamper academic efforts of secondary school learners in learning Mathematics.
- b) To explore how social difficulties impede on academic achievement of secondary school learners in Mathematics.
- c) To suggest possible measures that can be adopted to lessen the social setbacks that inhibit the performance of secondary school learners in Mathematics.

1.5: RESEARCH QUESTIONS

In trying to solve the main problem, the researcher shall address the following sub-problems

- a) What social problems hinder secondary school learners' academic performance in Mathematics?
- b) How do the social and economic challenges hamper the academic achievement of secondary school learners in Mathematics?
- c) How can the socio-economic challenges encountered by secondary school learners in Mathematics be surmounted?

1.6: SIGNIFICANCE OF THE STUDY

It is the researcher's hope that this study may benefit the learners immensely, since their efforts in Mathematics are going to be improved and their attitudes towards the subject shall be directed towards a positive end. The researcher also hopes that the above objectives are achievable if the educators discover those factors of students' social upbringing that hinder academic achievement in Mathematics, and then address them fully. Again, the students may be familiarized with the need to offer material and socio-emotional support to other students that hail from unstable social backgrounds. The teachers may also find this study helpful as they shall be enlightened on the merits of knowing their students' social upbringing, and assist them accordingly. Not only may this improve pass rates in Mathematics, but may also motivate the learners to develop an appreciation and interest in the subject, even after school. The recommendations to be proposed from this study may also help teachers to realize the essence of providing both moral and

material support to those pupils from unstable social backgrounds. The knowledge of the existence of disadvantaged students in schools may help the school authorities and members of the local community to give them a hand as a way of improving their lifestyles, which in turn may improve their academic performance. The school authorities in partnership with members of the local community may identify needy students and enlist them for organizations like Capernaum Trust or BEAM programs to ease their fees problems. They may also give these socio-economically disadvantaged pupils some holiday work to assist with the provision of scholastic materials. Since Mathematics is regarded as one of the most challenging learning areas in the secondary school curriculum, recommendations from this study may assist curriculum developers by giving them guidelines and proposals that place all Mathematics students doing Ordinary Level at the same starting point. This may greatly help to demystify the myths in the subject.

1.7: ASSUMPTIONS

The researcher assumed the following:

- Selected interviewees responded in time.
- The respondents had a general understanding of social background.
- Information collected from respondents was accurate, relevant and can be relied on.
- Issues under investigations remained constant throughout the period of the research

1.8: LIMITATIONS

The researcher preferred to carry out this study in several schools in Norton, but both financial constraints, and the time within which the study is to be completed, restricted her to one school. The researcher is a fulltime teacher, who felt that there is not enough time to intermingle her job demands and her part-time education. However, the researcher made use of the weekend and holiday times to perfect her study. Again, in trying to gather evidence for this study, the researcher feared that some of the students from socio-economically unstable backgrounds may be reluctant to reveal their true home situations, for fear of stigmatization and its related effects. To counter this likely challenge, the researcher worked hand in glove with the school counselors and school authorities to ascertain the genuine home backgrounds of some of the students.

Moreover, the researcher felt that the school at which this study was carried out operates with meager resources, which also tend to negatively affect the academic performance of Ordinary Level Mathematics students. Nonetheless, the researcher supplemented the shortfalls with her own efforts to make the learning environment more conducive and harmonious. The researcher also wanted to incorporate many schools in her study, especially those in towns, but both financial imbalances and work commitments, confined her to one rural learning institution.

1.9: DELIMITATION

This study was carried out on 100 Mathematics students at Porta Farm Secondary School. The learning institution is found in Norton Rural District. The school is located a stone's throw from the Harare- Bulawayo highway, and enrolls students in both sexes. The school is purely rural day and has a total enrolment of 500 students as well as 15 teachers. Ordinary Level students are not streamed according to ability at Porta Farm Secondary School.

1.10: DEFINITION OF KEY TERMS

1.10.1 Mathematics – Hyde (2000) defines Mathematics as the study of patterns, numbers, shapes and relationships. It is also the science dealing with the logic of quantity, shape and arrangement.

1.10. Social background

According to Deelan, (2010) social background refers to the social and economic circumstances that a person is born into and raised in. These include religion, family income, social class, race and geographic location.

1.10.3 Impact – refers to the influence or effect that something has on something else, Collin (2003).

1.11: SUMMARY

This chapter mainly concentrated on pertinent issues that compelled the researcher to develop the urge to investigate the impact of Ordinary Level students' social backgrounds in their academic achievement in Mathematics. Research questions to be addressed in trying to find the solution to

the main problem were analyzed, together with the rationale behind carrying out this study. Also scrutinized in this chapter was the importance of the study to various groups of people, the assumptions on which the study is based on, possible difficulties to be met in trying to gather data for the study and the theoretical and physical boundaries of the research. A glossary of key terms in the study sealed the chapter.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1: Introduction

In this chapter, the researcher will compile literature available on the impact of learners' social background on the learning of Ordinary level Mathematics at secondary school level. In carrying out the review, the researcher is aiming to fill in the gap in the work carried out by other researchers on different socio-economic backgrounds. The researcher is aiming at coming up with new ideas addressing the challenges facing the learning of Mathematics when dealing with learners from different social backgrounds.

2.2: Theoretical Framework

This theoretical framework aims to explore the impact of social background on the learning of ordinary level mathematics at Porta Farm Secondary. By drawing upon sociological perspectives and educational theories, the framework provides a basis for understanding how various aspects of students' social backgrounds can influence their mathematics learning experiences and outcomes. This study is informed by socio-cultural theory, which emphasizes the role of social and cultural factors in shaping individuals' learning processes. According to Vygotsky (1978), learning is a social activity that occurs through interaction with more knowledgeable others and the cultural tools and resources available in a particular context. In the context of Mathematics learning, students' social backgrounds, including their family, community, peers, parental involvement, cultural influences and socio-economic status of the parents can significantly impact their engagement in the learning process, understanding, and achievement in Mathematics.

2.2.1: Role of Social Capital in learning

Bourdieu(1986) purports that social capital is relevant in understanding the impact of social background on the learning of Mathematics . According to Bourdieu, (1986), social capital refers to the resources, networks, and relationships that individuals possess within their social groups and communities. In the context of Mathematics education, social capital can manifest through

access to supportive networks, mentorship, and opportunities for Mathematical engagement outside of the school environment. Students from privileged social backgrounds may have greater access to social capital, which can enhance their learning experiences and outcomes in mathematics as compared to the less privileged students.

2.2.2: Role of Cultural Capital in learning

Cultural capital encompasses the knowledge, skills, and cultural resources that individuals acquire through the socialization processes, Bourdieu, (1986). In the context of Mathematics learning, students from different social backgrounds may possess varying levels of cultural capital, including Mathematical knowledge, problem-solving strategies, and attitudes towards Mathematics. Students with higher levels of cultural capital may have an advantage in comprehending and applying mathematical concepts, leading to better performance in Mathematics.

2.2.3: Role of Socio-economic Status (SES) of parents in learning

Socioeconomic status (SES) is a critical aspect of social background that can influence Mathematics learning. SES encompasses factors such as income, occupation, and education level of parents or guardians. Students from higher SES backgrounds often have greater access to educational resources, such as high-quality schools, well-equipped classrooms, and private tutoring. These resources can provide them with additional support, exposure to Mathematical concepts, and opportunities for enrichment, potentially resulting in higher achievement in mathematics DiMaggio, (1982). A family which is struggling with everyday needs does not have the money to take the children out and give them experiences, nor can they buy all the supplies the child needs. Poor families tend to have lower demand for schooling than richer families. The benefits of schooling, the costs, for them, are more difficult to meet than is the case for richer. The pressure on children from poorer background in particular, to withdraw from school increases as they get older, particularly as the opportunity cost of their time increases, Cummins, (2000). Poverty could be regarded as the most common contributing factor which forces many children to be out of school. Glewwe, (2010) calls poverty a plausible explanation of school disruption. When parents are constrained by fewer resources, children's learning is consequently

affected as the children will not have adequate schooling resources which can result in poor performance, Bjorkman, (2005).

2.2.4: Role of Family Support and Parental Involvement in learning

The level of family support and parental involvement in the learning of students in Mathematics is another important factor influenced by social background. Research suggests that parents' educational expectations, involvement in homework assistance, and engagement in math-related activities at home can positively impact students' Mathematics learning, Lareau (1987). According to Volante (2019), if children do not have the support of parents who value their education and help to challenge them to learn, do their homework, and pay attention in class; they will not adopt the necessary drive to become well educated. Education can be enhanced by the parents with visits to museums and interesting places, with exposure to more than the work in school such as books, theaters and films. Part of the parental job is to extend the child's horizons by offering experiences which broaden the child's understanding of the world Martin, (2009). Students from supportive family environments, where parents actively participate in their mathematical development, tend to have better mathematics achievement.

2.2.5: Role of parents' level of education in learning

Significantly, children's education can be affected by the level of education of their parents and it is reflected in the high aspirations of the more educated parents for the education of their own children. Father's and mother's educational aspirations were found to be the two most consistent factors affecting the children's education, Deelan (2010). In another survey conducted by Yusuf, (2018) on a sample of 346 dropouts, 83% of the researches counted parental interest and encouragement among the major factors of children's enrolments and retention in schools. The children whose parents have less education tend to systematically perform worse than children whose parents have more education and high socio-economic status.

2.2.6: Role of Peers and Social Networks in learning

Peers and social networks can also play an important role in shaping students' Mathematics learning experiences. Peers can influence students' attitudes, motivation, and engagement with mathematics. If a student plays with friends who have a negative attitude towards Mathematics, the student is more likely to also have a negative attitude towards Mathematics. . If the children have trouble socializing or have friends that are bad influences, they can underperform due to peer pressure. Also, learners can become distracted by the values of the peers and shy away from education. Thus, it is important for parents to know the friends of their kids and help their children navigate through any problems Yusuf, (2018). Peers have an influence, especially with boys, because they can bully or tease a boy who wants to work at school, treating him as someone who does not belong to the current male culture of the group. Being an outsider is always difficult and it is easy to succumb to such pressure. Collaborative learning, study groups, and positive peer interactions can enhance understanding and problem-solving skills. Conversely, negative peer influences or social barriers may hinder Mathematics learning for students from disadvantaged social backgrounds.

2.3: Suggestions for parents on how to overcome social and economic challenges and to help in the Educational process of their children.

Most research that has been done on parental involvement in schools shows that low-income are less involved in their children's education, and because of this lack of participation, their children are less likely to be successful in school. Considering this statement, Government and society should focus on how to alleviate some of the stress in the lives of these families, and how to help students from all backgrounds thrive in school. One idea is the concept of establishing workshops to develop the relationships between parents and their children. These workshops could help parents with low-incomes and low educational backgrounds to learn how to help their children succeed in school. Best and Khan (2013) purports that during the last decade, educators and policy makers have become increasingly interested in the notion that educationally disadvantaged parents and children are a learning unit and that family and intergenerational literacy programs are a promising approach to supporting parents in their role as first teachers.

Programs, such as these, not only help parents learn how to teach their children, but they also put an emphasis on the importance of parental involvement in the public school system. Parents

would be learning how to be good teachers, and additionally they would discover the hardships of being a teacher and perhaps become more willing to work with their children's teachers, instead of against them. There have also been programs suggested specifically for mothers on ways they can improve their children's education. In the research by Martin (2009), it was revealed that, the Intergenerational Literacy Action Research Project (ILAR) conducted by Wider Opportunities for Women, involved mothers participating in community-based programs that provide women with basic-skills instruction and job training. The study revealed that 65 percent of the children benefited from their mother's participation in the adult education and training programs. Although this type of program may seem time-consuming, the benefits received after the process greatly outweigh the initial costs. The burden of attending classes on how to be a good teacher to your children dissipates as soon as a child is excited about learning.

Another solution to the challenges of parents, which might help is returning to reading to children every night instead of watching television or playing video games. Yusuf, (2018) says, a parent should begin reading to a child as soon as possible. Books provide interesting visual stimuli to infants, which forms the basis for future interest in books and reading. Keeping a child in age-appropriate books is one of the best investments any parent or grandparent can make. Today, there is more emphasis on the use of television, video games, and computer games in the education of children and less emphasis on the simple act of reading. Parents need to go back to the basics of providing a warm, supportive home environment that supports exploration and self-directed, autonomous behavior, and that will greatly increase the chances of having an academically successful child. An emphasis on the parental involvement in education is the key to their children's successful education because they are their first teachers, and therefore establish the beginning of the learning process.

2.4: Summary

By considering socio cultural theory, social capital, cultural capital, SES, family support, parental involvement, and peer influence, it can be noted that there is a link between social background and mathematics learning outcomes. Understanding these dynamics is crucial for developing effective interventions and strategies that promote equitable mathematics education for all students. Just as the National Center for Children in Poverty, works to transform research into real progress, policy makers, administrators, educators, and community members must also

take action to assure that this generation of low-income can end the poverty cycle and permanently close the gap of academic achievement between the rich and economically struggling students.

CHAPTER 3

RESEARCH METHODOLOGY

3.1: INTRODUCTION

This chapter seeks to give a detailed description and justification of the research methodology that the researcher employed in the study. The research design, research methods, data collection methods, research instruments, data analysis procedures and a conclusion are also going to be presented in this chapter to meet the demands of the main research topic.

3.2: RESEARCH DESIGN

Best and Khan (2013) defines a research design as a plan that directs the researcher in gathering, examining, and interpreting observable data. This means that the research design acts as guide on how to conduct the research. For this study, the researcher used a mixed-approach descriptive survey research design. The mixed approach descriptive survey method gave the researcher the chance to see and interact with participants in person. It worked best as a tool for idea generation, establishing theories, and developing solutions that the researcher ultimately chose to test statistically. Mixed research aims to comprehend a certain situation or subject from the viewpoint of the local populace Phillips & Pugh, (2016). Additionally, it works effectively in influencing cultural practices within the social context of specific communities Creswell, (2014).The researcher chose the mixed approach because it helped to gain new insights on things which are already known and gain new in-depth information that was difficult to solely convey either quantitatively or qualitatively. The mixed approach also helped to provide a more comprehensive understanding of the research topic.

3.3: TARGET POPULATION

According to Shumbayawonda (2011), the research population is the group from which the researcher is interested in learning more and making conclusions. Population is defined by Tuckman (2014) as "the group to whom the researcher would like the results of the study to be generalized, and it includes all persons with certain specified characteristics. All of the students

doing Ordinary level mathematics and teachers at Porta Farm Secondary School were the target population of this study. However, the researcher won't be able to collect data from every teacher and student, necessitating the use of a sample because of limitations in time, space, money, and resources.

3.4: SAMPLE AND SAMPLING PROCEDURE

A sample is a given number of subjects from a defined population which is representative of it, Borg and Gall, (2019). Thus, it is a group of subjects on which information is obtained and the sample subjects should be a representative of the large group (population) from which they were obtained. In this study 4 teachers out of the 15 teachers were selected and 50 students out of 100 students doing Ordinary level Mathematics at Porta Secondary School were selected. All the 100 students doing mathematics at ordinary level at Porta Secondary School in Norton had an equal chance of being selected as the sample. The sample was selected by the use of 50 papers which were written yes and the other 50 written no. A paper written yes implied that the student would be part of the sample whereas the one written no meant the student would not be part of the sample. Simple random sampling was employed in selecting students for the study as the papers were folded and put in a box for learners to pick randomly. Collin, (2003) is of the view that simple random sampling gives equal chances to be selected to the subjects under study. Using this method, a total of 50 learners which is 50% of the total population was selected as the sample. Purposive sampling technique was used in selecting the teachers. This implied that only those teachers taking mathematics were selected for use in this study.

3.5: DATA SOURCES

A combination of primary and secondary data sources were used to gather data for this study. Primary data sources are data that are collected directly from the target population or study participants, Brown (2009). Primary data sources include: surveys, observations, experiments, questionnaires, focus groups, and interviews. Borg and Gall (2019) defines secondary data sources as data that have already been collected and published for other purposes and are used by researchers to inform their studies for example books, journals, articles, web pages, and blogs. Creswell (2014) says that primary data sources contain information that is shown for the first

time or original materials on which other research is based. Both primary and secondary data sources were used by the researcher in this study so as to obtain relevant and quality data to the research problem. The information obtained from data sources was essential in defining the knowledge gap, particularly on correlations of previous work on impact of social background versus academic performance in Mathematics and current findings obtained by the researcher.

3.6: RESEARCH INSTRUMENTS

Data for the study was collected through interviews, observation and questionnaires.

3.6.1: QUESTIONNAIRES

The researcher designed questionnaires for students. The questionnaires were divided into two sections. The questionnaires also contained closed and open ended questions. In closed ended questions respondents were limited to a list of answer choices from which they were to choose answers to given questions. Open-ended questions were useful because respondents answered in their own words, thus increasing comparability of responses.

The main advantage of using the questionnaires in this study was that it afforded the respondents a chance to give their responses freely. The questionnaires also had an advantage in this study in the sense that since the respondents were anonymous, there was a greater chance of obtaining respondents' views even on sensitive issues. According to Volante, (2019), questionnaires also have the advantage that fear and embarrassments which may result from direct contact were avoided. Questionnaires can guarantee confidentiality and hence may bring out more truthful responses than those obtained from a personal interview.

The disadvantage of this instrument in this study was that there was a possibility of misinterpretation of the questions by the respondents and also the method does not allow the researcher to probe for responses. According to Cummins (2000), the instrument allows little flexibility to the respondent with respect to the response format. The problem was overcome by allowing frequent spacing for comments. Comments usually provided insightful information that would have otherwise been lost.

3.6.2: OBSERVATIONS

The researcher also collected information by observing the teaching and learning of Ordinary level Mathematics at Porta Secondary School and documented the observation. The observational method has been found suitable for this study because it helped the researcher to get first hand information by actually seeing the existing situation in order to make comparisons with responses from the questionnaires. Chinoda (2011) says that the observational method is often preferable when there is concern that the individual may misrepresent the requested information deliberately. The observational method was also used to verify information from all open- ended questions. The method however also had its weaknesses like the observer effect (presence of an observer in some way influenced the behavior of those being observed) and observer bias, thus, undermining the reliability and validity of the data gathered. The researcher was as unobtrusive as possible as a way of reducing observer effect Lee, (2002).

3.6.3: INTERVIEWS

The researcher used open-ended interviews for comparability and verification of aspects noted by the researcher in observations. Shumbayawonda (2011), purports that interviews give room to clarify issues and probe further. Use of interviews also had the advantage that it was flexible and allowed the researcher to rephrase the questions Chinoda, (2011). The challenge was however, that some respondents felt nervous on some of the sensitive issues.

3.6.4: DOCUMENTARY ANALYSIS

The researcher used document analysis whereby the researcher interpreted documents to give meaning to the aspect under study. The instrument was used because it is effective in gathering information as the researcher is able to read an article multiple numbers of times. Brown,(2009) is of the view that information from documents is neither prone to the researcher's influence nor the research process. This means that the researcher is able to review the information from documents at any time without fear of changes to the documented data. The researcher is also able to gather trustworthy facts which would have been left out by the respondents during interviews or questionnaires. However documents are also prone to subjectivity as they may

portray only that which the author wants to convey. To overcome this, the researcher had to combine the findings from documents together with the information gathered from interviews and questionnaires so as to get the correct facts for the study.

3.7: DATA COLLECTION

The researcher personally distributed the questionnaires. According to Woolfolk (2020), self-administration of questionnaires has many advantages of yielding high response rate, accurate sampling and minimum interview bias. The researcher then observed and documented observations on attributes of learners from varied social backgrounds and their mathematics performance. The information was used to compare responses from open-ended and closed questions from the questionnaires.

3.8: DATA PRESENTATION

Data presentation is a process of comparing two or more data sets with visual aids such as graphs. The data collected was displayed on bar graphs and tables. The tables used helped to organise complicated textual data into simple form which helped to highlight trends in the data. They also helped to present specific amounts of data. The tables however do not provide a quick visual representation of data. The bar graphs made it easy to comprehend data and allowed for easy comparison between categories. The color codes on bar graphs helped to highlight specific categories making it easy to comprehend the data.

3.9: DATA ANALYSIS

Data analysis is the process of inspecting and modeling data with the goal of finding out useful information informing decisions and help in decision making. The researcher used graphs and tables to present data so that the collected data can be analyzed. The researcher analyzed the responses from the interviews and questionnaires so as to determine the impact of social background on the learners' performance in Mathematics. The collected data from observations and documents was also used to analyse the effect of learners' social background on the learning of Mathematics.

3.8: VALIDITY AND RELIABILITY OF RESEARCH INSTRUMENTS

Phillips and Pugh (2016) state that the research instruments used to collect data must be both valid and reliable. For the purpose of this study, a combination of direct observations, questionnaires and face-to-face oral interviews were used. Creswell (2014) further contends that in order for meaningful considerations to be drawn, the research should produce true knowledge on one hand, and repeatable on the other hand. These depict validity and reliability respectively.

3.8.1: VALIDITY

Martin (2009) defines validity as the extent to which the results of an evaluation procedure serve the particular purpose for which they were intended. Deelan (2010) defines validity as the extent to which an instrument measures what it is designed to measure. The researcher tried to guard against weaknesses of ambiguity, as well as vague wording. The researcher also resorted to the use of simple language as a way of avoiding double-barreled questions and she pre-tested the research tools with a locally assembled sample to ascertain if they would be employed to gather authentic data.

3.8.2: RELIABILITY

Reliability is defined by Best and Kahn (2013) as the degree of integral consistency and measure stability. According to Creswell (2014), reliability can also be called dependability, and is the degree to which the same data would be gathered each time the same phenomena is observed repeatedly. As a result, accuracy and consistency of the measuring tools are important for taking repeated measurements. The researcher self-conducted interviews and made sure that the interview questions linked to the study objectives in order to assure the trustworthiness of the data acquired for this study. Additionally, the researcher self-administered the questionnaire to learners, saw to it that they completed it within a reasonable amount of time, and then collected them for data analysis.

3.9: Summary

This chapter looked at the description and justification of the research methodology that the researcher employed in the study. The chapter also looked at the research design, the sample size

and sampling techniques used to come up with the sample for the study. The research instruments as well as research validity and reliability were also highlighted in this chapter.

CHAPTER 4

DATA PRESENTATION, INTERPRETATION AND ANALYSIS

4.1: Introduction.

The chapter presents the findings of the research study on the impact of learner's social background on the learning of Mathematics at ordinary level at Porta Secondary School. The data collected through interviews, questionnaires and observation and document analysis is presented, discussed and analyzed using bar charts, tables, narrative and descriptive reports.

4.2: Data presentation

The background information that was collected for teachers included gender, age, teaching experience and whether they had a teaching qualification or not.

Table 4.1: Teacher's background information

Respondents	Variable	Description of variable	Frequency	Percentage
Teachers	Gender	Females	1	25%
		Males	3	75%
	Age	21-30	3	75%
		31-40	1	25%
	Teaching experience	1-5 years	2	50%
		6-10 years	1	25%
		Above 10 years	1	25%
	Teaching	Yes	1	25%

	qualification	No	3	75%
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Table 4.1 shows that (75%) of the respondents were male teachers whilst (25%) were females. The finding thus shows that male teachers dominate the teaching of Mathematics and this might have been caused by gender imbalance in Mathematics teaching. The male domination was also evident in the learners who participated in the research as thirty (60%) of male students participated as compared to twenty (40%) and this as a result contributes to fewer females teaching Mathematics. Three (75%) teachers interviewed were between the ages 21-30 years while one (25%) was between 31-40years. There is a shift in the nature of teaching methodology used in education due to the emergence of technology. Table 4.1 shows that the majority of teachers who teach mathematics are middle-aged, suggesting that most of them are fresh from school, and are familiar with current teaching and learning approaches like group discussion. 75% of the teachers did not have a professional qualification in teaching while 25% of the teachers have a professional qualification in teaching. The researcher found out that the majority of teachers have content knowledge of the subject but do not have the pedagogical knowledge of the job. When the researcher observed the teachers teaching without a professional qualification in teaching she noticed that they were facing problems in finding the suitable ways to deal with learners with different socio-economic background as evidenced by the examples they used, some of which were farfetched to learners from poor backgrounds. This means having a professional qualification in teaching plays an essential role in influencing how successfully teachers help pupils with poor backgrounds. The findings show that the majority is not seasoned teachers but rather they are novice teachers. The researcher actually witnessed how important experience is when she observed the teachers teaching pupils affected by poor socio-economic

backgrounds. The researcher observed that the teacher with ten to fifteen years teaching experience encountered few difficulties in dealing with different problems faced by pupils with different backgrounds that include pupils from poor and rich socio-economic backgrounds.

4.3:Socio-economic issues affecting learner’s performance

The data collected showed that there are different socio-economic issues which affect the performance of learners. The socio-economic issues affecting learner’s performance are compiled in Table 4.2.

Table 4.2: Responses of teachers and learners on socio-economic issues faced by learners

Socio-economic issue	Does it affect learner’s performance	
	Yes	No
lack of school materials	75%	25%
poor clothing	50%	50%
parental support in homework	100%	0%
pupil’s low esteem	100%	0%
child headed families	75%	25%
absenteeism	100%	0%
low socio-economic status	75%	25%
Poor nutrition	90%	10%

The information from Table 4.2 shows that the majority of the respondents were of the view that lack of school materials causes poor performance; perhaps pupils are motivated if there are enough school materials. 50% of the respondents showed that poor clothing causes poor performance in students and this is perhaps students may feel out of place because of clothing hence affecting their performance. 50% of the respondents were against the argument that poor clothing affects pupil's performance. All of the respondents indicated that parental support in home work improves pupil's performance in the learning of mathematics at Porta Farm Secondary School as learners are able to ask for clarification on areas of difficulty. From table 4.2, 75% of the participants were of the view that low self esteem affects a pupil's performance as learners will not be confident to participate in schooling activities as they would regard themselves as inferior. 25% of the respondents were of the idea that low esteem doesn't affect a child's performance. The majority of the respondents (75%) indicated that child headed families do not perform well in mathematics at Porta Secondary School because they have a lot of other responsibilities at home. 25% of the respondents argued that child headed families perform well in mathematics because they put effort as they are aware of their background. From table 4.2 it can be noted that most of the participants indicated that absenteeism affect pupil's performance in mathematics at Porta Secondary School because they may fail to catch up with others especially in mathematics. 25% of the respondents were against the idea that absenteeism drops pupils performance because maybe those pupils who do not come to school every day work hard to fill the gap hence they will produce good results. The majority of the participants were of the view that low socio-economic status plays a role on student's achievement in learning of Mathematics at Porta Secondary School because pupils who come from a poor background have poor self-esteem and they are not motivated hence they produce poor results in mathematics.

25% of the respondents are of the opinion that low socio-economic backgrounds do not have impact on student's achievement in mathematics as learners will not have adequate resources needed for effective learning like stationery and school fees. 90% of the respondents cited poor nutrition as a contributing factor to poor performance.

4.4: How do socio-economic issues affect academic performance of learners in Mathematics?

The document analysis that was done by the researcher on school records and reports revealed that there is a relationship between learners' socio-economic status and their academic performance in Mathematics. It was noted that learners from low-income backgrounds struggled to access resources and materials necessary for mathematics learning hence they performed poorly in Mathematics as compared to their counterparts from stable socio-economic backgrounds who could easily access schooling materials. The interviews which were done with teachers and learners highlighted the impact of poverty, lack of parental support, and poor nutrition on learners' ability to focus and engage with mathematics lessons hence in the end they would produce poor results. The impact of lack of parental support was echoed by one learner who said that

“My father comes home late from the market, usually at around 9pm and it is difficult for him to help me with my homework as he complains that he will be tired. My mother died when I was in primary school so I always do my homework alone. Most of the times I fail my homework because I do not have anyone to help me,”
(Student 1, per. Com)

Economic challenges of parents and guardians such as unemployment hindered the performance of learners in Mathematics as it limited the parent's ability to support their children's education as they are unable to provide their children with all the school requirements. One of the teachers interviewed had this to say about the impact of poverty on the learning of mathematics

“ Students who come from poor backgrounds mostly have inadequate resources like mathematical sets and graph books which makes it difficult for them when doing topics which require those materials, this has a negative impact on their performance on such topics, ”(Teacher 8, per.com)

Observations of mathematics classes showed that learners from disadvantaged backgrounds often lacked confidence and struggled to participate in class discussions and this contributed to poor performance in Mathematics. Responses from questionnaires from learners indicated that social challenges, such as peer pressure and bullying also affected their motivation and interest in mathematics. If learners lack interest and motivation they will perform poorly in Mathematics as they will not have the zeal to pay attention in lessons.

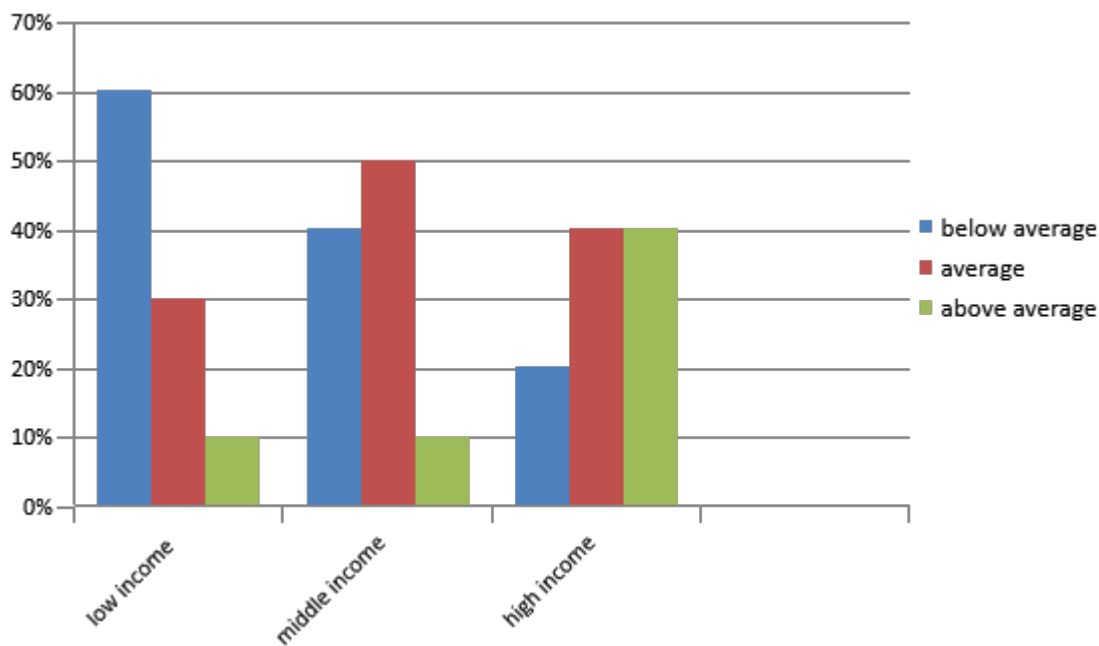


Figure 4.1: Academic achievement in Mathematics by socio economic status

The bar chart shows that most learners from low-income families perform below average in Mathematics as compared to those learners from middle and high income families due to the socio-economic issues affecting them like lack of schooling resources, absenteeism and lack of parental support.

4.5: Strategies to overcome the socio-economic challenges encountered by learners in Mathematics

80% of the teachers and learners suggested that provision of resources and materials, such as calculators and textbooks could help bridge the gap for disadvantaged learners. The interviews conducted revealed that 70% of the respondents were of the view that involvement and support by parents could also help to improve the performance of the disadvantaged learners from low socio-economic status. One teacher said that,

“Parents should be involved in their children’s education through helping them with homework and attending parent-teacher conferences as this gives them an opportunity to discuss issues affecting their children’s performance.”(Teacher 7, per.com)

Implementing targeted tutoring programs that provide individualized support to students struggling with mathematics due to socio-economic factors can also help to overcome socio-economic challenges faced by mathematics learners. This can involve recruiting and training volunteer tutors or partnering with local universities to provide mentorship opportunities. 70% of the respondents also suggested that teacher professional development for teachers is crucial to enhance their skills in teaching mathematics effectively to students from diverse socio-economic backgrounds. The skills include training on different instruction and strategies for supporting students with learning difficulties. 100% of the respondents suggested that collaboration with local businesses and non-profit organization to secure funding and resources would help learners from low socio-economic backgrounds. 100% of the teachers and 90% of the learners suggested that an inclusive curriculum and pedagogy will help to ensure that the mathematics curriculum and instructional approaches are inclusive and relevant to the everyday experiences of students from diverse socio-economic backgrounds. This will help the learners to relate Mathematics with their daily life which in turn will help to comprehend Mathematical concepts. 80% of the respondents suggested that the integration of technology such as online learning platforms, educational apps, and virtual learning would help to provide equitable access to high-quality mathematics instruction and resources, especially for students in remote or underserved areas. 20% did not agree with this notion as they argued that most of the learners from low income backgrounds do not have access to ICT gadgets like computers and electricity. Document analysis revealed that school programs aimed at providing extra support and resources for

disadvantaged learners showed promise in improving academic achievement in mathematics. Intervention by the government was also highlighted as a way of helping learners from low socio-economic status through inclusive policies and funding such as BEAM, scholarships which can help to subsidize and accommodate the disadvantaged learners.

4.6: Discussion

The findings by the researcher revealed that teachers without a professional qualification in teaching faced problems in finding suitable ways to deal with learners from different socio-economic background as they used examples which were farfetched to learners from poor backgrounds. This means having a professional qualification in teaching plays an essential role in influencing how successfully teachers help pupils with poor backgrounds. The findings concur with the findings of Jussim and Harber, (2020) who purports that there is a significant difference between the perceptions of trained and untrained teachers; trained teachers easily accommodate and help those pupils with poor backgrounds unlike the untrained ones. Therefore students taught by untrained teachers may have poor performance because at some stage these teachers may fail to help pupils affected by socio-economic background. The researcher also observed that the teachers with few years teaching experience encountered difficulties when dealing with different problems faced by pupils from different socio-economic backgrounds. The findings are in line with the study by Yusuf (2020) who is of the view that there is a significant difference between the way trained and untrained handle learners, trained teachers easily accommodate all the problems faced by learners while teaching unlike the novice ones. The findings revealed that poor clothing causes poor performance in students as students may feel out of place because of clothing hence affecting their performance. These findings agree with the views of Laureu (1987) who argued that pupils should be provided with proper clothing which suit the environment and weather for them to perform well in school. Some of the respondents were against the argument that poor clothing affects pupil's performance and their argument is in line with that of Lee, (2002) who states that poor clothing does not play any part in a student's performance. The respondents argued that parental involvement in a student's homework improves the child's performance. These findings concurs with the arguments of Wentzel, (1993) who claims that parents who involves themselves in their pupils work after school will yield good results in their children. The participants were of the view that low self esteem affects a

pupil's performance as he/she will not be confident to participate during lessons. This concurs with the view of Chinoda, (2011) who says that pupils with low esteem will eventually produce low results hence there is need for teachers to introduce different measures to motivate those pupils. Most of the respondents were of the view that absenteeism and child headed families do not perform well in mathematics. These findings agrees with that of Volante, (2019) who argued that child headed families produce poor results because they have a lot of other responsibilities at home. However some of the respondents argued that child headed families perform well in mathematics. This may be because they base their arguments with that of Martin, (2009) who states that child headed pupils perform well in mathematics because they put effort as they are aware of their background.

4.7: Summary

In this chapter, the researcher presented her findings on tables and bar graphs. The data was then analyzed with reference to research questions and the main aims of the study. The analysis and interpretation also sought to strike a balance between the researcher's findings against the findings of other earlier researchers. The researcher found out that pupil's socio-economic background has an impact on the learning of mathematics at Porta Secondary School. Most teachers are aware of the principles of teaching and helping pupils from different socio-economic backgrounds. The study revealed that in order to improve the performance of pupils who have poor and low socio-economic status there should be clear communication between the teacher and students, good skills in handling pupils from different socio-economic backgrounds and there should be training courses for teachers without those without pedagogical skills for them to successfully handle pupils from different socio-economic backgrounds. It was also revealed that pupils from low socio-economic backgrounds face a lot of challenges in the learning of Mathematics for example poor clothing, lack of school materials, absenteeism, low self-esteem, hunger and lack of parental support when doing homework. However, these challenges have a

direct negative impact in the learning of Mathematics at Porta Secondary School which actually drops the performance of these pupils. Finally, analysis of direct observations made by the researcher indicated that if all the challenges faced by different pupils from different socio-economic backgrounds are monitored, effective learning will be achieved.

CHAPTER 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1: INTRODUCTION

The purpose of this study was to investigate the impact of pupil's social background on the learning of Ordinary Level Mathematics at Porta Farm Secondary School in Norton. This chapter summarizes the findings of the study and provides recommendations for future practice and research.

5.2: Summary of the Findings

Chapter one presented the research topic, providing background information on the impact of social background on the learning of Mathematics at ordinary level at Porta Farm Secondary School. The research questions, objectives, limitations, delimitations and definition of terms were also outlined in this chapter.

Chapter two examined relevant literature on the topic, investigating the relationship between the learner's social background and performance in the learning of mathematics. The chapter discussed various factors influencing mathematics performance, including socioeconomic status, parental involvement, peer and parental involvement in the learning of mathematics.

Chapter 3 presented the research methodology used in this study. A mixed approach was employed which combined both qualitative and quantitative data collection and analysis methods. A sample of 50 learners and 4 teachers from Porta Farm Secondary School participated in the study. Primary data was collected through interviews, questionnaires and observations, while secondary data was gathered from existing literature and school records. The data collection tools included learner and teacher questionnaires, teacher and learner interviews, observations of mathematics lessons, and school records and documents. The reliability and validity of the research methods employed in the study were also examined.

Chapter four presented the findings of the study, which revealed a significant relationship between social background and the performance of learners in mathematics at Porta Farm Secondary School. The chapter discussed the results in detail, highlighting the differences in mathematics performance among students from various social backgrounds. The findings of the research were presented in tables and bar graph. A comparison of the findings of the research and the findings of other researchers was also made in this chapter.

5.3: Conclusions

This study has investigated the impact of social background on the learning of mathematics at Porta Farm Secondary School. The findings suggest that social background plays a significant role in shaping students' mathematics performance. Social background can have a positive or negative effect on the performance of ordinary level students in Mathematics. Learners from higher socioeconomic backgrounds tends to perform better in Mathematics as compared to those learners from lower socioeconomic status who face challenges that hinder their performance in Mathematics.

5.4: Recommendations

Basing on findings, the researcher would like to propose the following recommendations:

- Further studies should be carried out which focus on pupils across all levels of education and in other subject areassince this study was carried out on Secondary School students only.
- Educators should keep on revising various methods of teaching pupils from different socio-economic backgrounds so that all learners are accommodated in the learning process of Mathematics. .
- Schools should provide equal access to mathematics resources and support for all students, regardless of their social background.

- Since the study highlighted the impact of socio-economic backgrounds in teaching and learning of mathematics, all teachers should fight to solve problems faced by different pupils from different socio-economic backgrounds.
- Teacher training programs should include culturally responsive teaching methods to help teachers adapt to diverse student populations.
- The government should avail programs and scholarships to help the less privileged learners.
- Policy makers should consider the findings of this study when developing policies and programs aimed at improving mathematics education.
- Programs and awareness campaigns should be introduced so as to educate and encourage parents on the importance of supporting their children's learning.

5.5: Implications

The findings of this study have implications for mathematics education, policy and practice. Teachers need to be aware of the impact of social background on teaching and learning and adapt their methods to cater to students from diverse backgrounds. Schools need to provide equal access to mathematics resources and support for all students, regardless of their social background. The mathematics curriculum should include real world applications and situations that cater for students from diverse backgrounds. Parents should be involved in the education of their children. Education policies should give importance to inclusivity and equity so as to eradicate disparities in the learning of mathematics

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APPENDICES

APPENDIX 1: Introductory letter from Bindura University of Science Education

SAMED

P Bag 1020
BINDURA
ZIMBABWE

Tel: 0271 - 7531 ext 1038
Fax: 263 - 71 - 7616


BINDURA UNIVERSITY OF SCIENCE EDUCATION

Date: 14 April 2024

TO WHOM IT MAY CONCERN

NAME: CHAMBERO L REGISTRATION NUMBER: B225399B
PROGRAMME: HBScEd Maths PART: 2.2

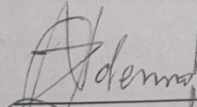
This memo serves to confirm that the above is a bona fide student at Bindura University of Science Education in the Faculty of Science Education.

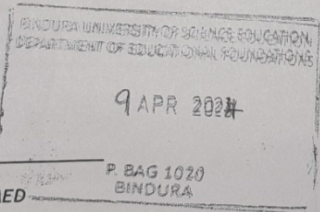
The student has to undertake research and thereafter present a Research Project in partial fulfillment of the HBScEd maths programme. The research topic is:
The impact of social background on the learning of Mathematics at Ordinary Level at Porta Farm Secondary

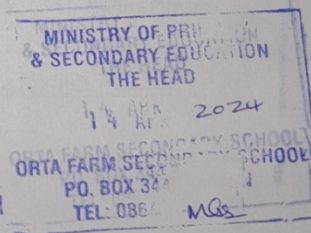
In this regard, the department kindly requests your permission to allow the student to carry out his/her research in your institutions.

Your co-operation and assistance is greatly appreciated.

Thank you


Zindemo (Dr.)
CHAIRPERSON - SAMED





APPENDIX 2: Approval letter from responsible authority

Warren Park Mabelreign District
Porta Farm Secondary
P.O. Box 344
Norton

14 April 2024

To whom it may concern

This letter serves to confirm that Chamboko Joyce
Student number B225399B has been granted
permission to carry out her research at Porta
Farm Secondary.

Your cooperation and assistance is greatly
appreciated

Yours faithfully

MCh

M. Chitumba
MINISTRY OF PRIMARY
& SECONDARY EDUCATION
THE HEAD

14 APR 2024 *MCh*

ORTA FARM SECONDARY SCHOOL
P.O. BOX 344 NORTON
TEL: 08544 286 944

APPENDIX 3: Teacher questionnaire

This questionnaire serves to find out your opinion on the impact of Social Background on the Learning of Ordinary Level Mathematics at Porta Farm Secondary School.

Please answer all questions honestly and to the best of your ability. Your responses will be kept confidential and anonymous.

Section A: Demographic Information

1. Gender: Male/Female
2. Teaching experience: _____ years
3. Subject specialization: Mathematics
4. Level of teaching: Ordinary Level

Section B: Teaching Mathematics

1. How do you approach teaching mathematics to students from diverse social backgrounds?
2. What strategies do you use to support students who may be struggling with mathematics due to socio-economic factors?
3. How do you assess student understanding and progress in mathematics?
4. What resources do you use to support mathematics teaching and learning?

Section C: Social Background Influences

1. Have you noticed any differences in how students from different social backgrounds approach mathematics learning?
2. How do you think social background affects students' access to mathematics resources and support?

3. Have you experienced any challenges in teaching mathematics to students from diverse social backgrounds?

4. How do you think the school can better support students from low socio-economic backgrounds in mathematics learning?

Section D: School and Curriculum Factors

1. How do you think the school's mathematics curriculum and pedagogy address the needs of students from different social backgrounds?

2. Are there any specific school policies or programs in place to support students from diverse social backgrounds in mathematics learning?

3. How do you think the school environment and resources impact mathematics teaching and learning?

4. Are there any professional development opportunities or support systems in place for teachers to address the needs of students from diverse social backgrounds?

Section E: Additional Comments

1. Is there anything else you'd like to share about teaching mathematics to students from diverse social backgrounds at Porta Farm Secondary School?

APPENDIX 4: Learner questionnaire

This questionnaire serves to find out your opinion on the impact of Social Background on the Learning of Ordinary Level Mathematics at Porta Farm Secondary School.

Please answer all questions honestly and to the best of your ability. Your responses will be kept confidential and anonymous.

Section A: Demographic Information

1. Gender: Male/Female

2. Age: _____

3. Social background (tick one):

- Low socioeconomic status (SES)
- Middle SES
- High SES

4. Parent's highest level of education (tick one):

- Primary
- Secondary
- Tertiary

5. Do you have access to mathematics resources at home (e.g., textbooks, online materials)?
Yes/No

Section B: Mathematics Learning Experiences

1. How confident do you feel in your mathematics abilities? (Scale: 1-5, where 1 = Not confident at all and 5 = Very confident)

2. How often do you practice mathematics outside of class? (Scale: 1-5, where 1 = Rarely and 5 = Frequently)

3. Do you have a mathematics tutor or receive extra mathematics support? Yes/No

4. How do you rate your understanding of mathematics concepts? (Scale: 1-5, where 1 = Poor and 5 = Excellent)

Section C: Social Background Influences

1. Do you believe your social background has affected your mathematics learning? Yes/No
2. How has your social background influenced your access to mathematics resources?
3. Have you experienced any challenges or barriers in learning mathematics due to your social background?
4. How do you think your social background has impacted your mathematics performance?

Section D: Additional Comments

1. Is there anything else you would like to share about your experiences learning mathematics at Porta Farm Secondary School?

APPENDIX 5: Interview questions for teachers

Introduction:

"Thank you for participating in this interview. Can you please share your experience teaching mathematics at Porta Farm Secondary School?"

Section A: Teaching Mathematics

1. How do you approach teaching mathematics to students from diverse social backgrounds?
2. What strategies do you use to support students who may be struggling with mathematics due to socio-economic factors?
3. How do you differentiate instruction to meet the needs of students from varying social backgrounds?
4. Can you share an example of a successful mathematics lesson or project that catered to diverse social backgrounds?

Section B: Social Background Influences

1. Have you noticed any differences in how students from different social backgrounds approach mathematics learning?
2. How do you think social background affects students' access to mathematics resources and support?
3. Have you experienced any challenges in teaching mathematics to students from diverse social backgrounds?
4. How do you think the school can better support students from low socio-economic backgrounds in mathematics learning?

Section C: School and Curriculum Factors

1. How do you think the school's mathematics curriculum and pedagogy address the needs of students from different social backgrounds?
2. Are there any specific school policies or programs in place to support students from diverse social backgrounds in mathematics learning?
3. How do you think the school environment and resources impact mathematics teaching and learning?
4. Are there any professional development opportunities or support systems in place for teachers to address the needs of students from diverse social backgrounds?

Section D: Student Support

1. How do you identify students who may be struggling with mathematics due to socio-economic factors?
2. What support systems or resources do you use to help these students?
3. How do you involve parents or guardians in supporting students' mathematics learning?
4. Can you share an example of a successful intervention or support strategy you've used with a student from a disadvantaged background?

Section E: Conclusion

1. Is there anything else you'd like to share about teaching mathematics to students from diverse social backgrounds at Porta Farm Secondary School?
2. How do you think the school or teachers can better support students from diverse social backgrounds in mathematics learning?

APPENDIX 6; Interview questions for learners

Introduction:

"Thank you for participating in this interview. Can you please introduce yourself and share your background?"

Section A: Mathematics Learning Experiences

1. Can you describe your experience learning mathematics at Porta Farm Secondary School? How would you rate your understanding of mathematics concepts?
2. How do you think your teachers have supported your mathematics learning? Have you had any particularly helpful or challenging teachers?
3. How do you approach mathematics problem-solving? Do you have any strategies or resources that help you?
4. Have you noticed any differences in how your peers from different social backgrounds approach mathematics learning?

Section B: Social Background Influences

1. How do you think your social background has influenced your access to mathematics resources, such as textbooks or online materials?
2. Have you experienced any challenges or barriers in learning mathematics due to your social background? (e.g., financial constraints, lack of support at home)
3. How do you think your social background has impacted your confidence in mathematics? Have you ever felt discouraged or encouraged due to your social background?
4. Are there any specific experiences or incidents that stand out to you as particularly influential in your mathematics learning journey?

Section C: School and Teacher Factors

1. How do you think the school environment and resources have supported or hindered your mathematics learning?
2. Have you had any teachers who have particularly helped or hindered your mathematics learning? What made them effective or ineffective?
3. How do you think the school's mathematics curriculum and pedagogy have addressed the needs of students from different social backgrounds?

Section D: Conclusion

1. Is there anything else you'd like to share about your experiences learning mathematics at Porta Farm Secondary School?
2. How do you think the school or teachers could better support students from diverse social backgrounds in mathematics learning?