

Bindura University of Science Education



**OPPORTUNITIES AND CHALLENGES OF LEARNING 'INTEGRATION'
OUTSIDE SCHOOL SESSIONS IN ZVIMBA DISTRICT, MASHONALAND WEST
PROVINCE, ZIMBABWE.**

A RESEARCH PROJECT

BY

Vimbai Mataruse

B211658B


**SUBMITTED TO THE FACULTY OF SCIENCE EDUCATION IN PARTIAL
FULFILMENT OF THE REQUIREMENTS OF THE BACHELOR OF SCIENCE
EDUCATION HONOURS DEGREE IN MATHEMATICS**

DUE DATE: SEPTEMBER 2022

APPROVAL FORM

The undersigned certify that they have read and recommended Bindura University of Science Education for acceptance as a dissertation entitled:

**OPPORTUNITIES AND CHALLENGES OF LEARNING ‘INTEGRATION’
OUTSIDE SCHOOL SESSIONS IN ZVIMBA DISTRICT, MASHONALAND WEST
PROVINCE, ZIMBABWE.** Submitted in partial fulfilment of the Bachelor of Science Education Honours Degree in Mathematics.

Supervisor...Dr Y Mudavanhu..... Signature ...  Date:07.01.2023...

Coordinator..... SignatureDate.....

DEDICATION

I dedicate this research project to my family, husband, my daughters and my son, my grandmother.

ACKNOWLEDGMENTS

No words can satisfactorily convey my gratitude towards Dr Y Mudavanhu who took it upon himself to see me through the writing of the research. Words fail me to express fully my appreciation. Many thanks to Zvimba district schools that made this research a success. Thanks to my family who were patient and supported me in every way. All the glory to God for seeing me through.

ABSTRACT

The purpose of carrying out this study was to examine the opportunities and challenges of carrying out lessons outside school sessions when teaching 'Integration' at Advanced level. A mixed methods research paradigm and a descriptive survey research design were preferred by the researcher to collect data for this study. This study was done in 2022, and it was delimited to three high schools found in Zvimba District, Mashonaland West Province. The researcher used convenience sampling techniques which relied on oral interviews, questionnaires and focus group discussions as key research instruments to gather. The oral interviews were conducted with 10 teachers, focus group discussions were done with 10 parents and questionnaires were administered to 20 learners. Thematic data analysis was used. From the gathered data, it was established that extra lessons greatly help to eradicate idleness, were the main option to cover up for the lost time, served as a source of encouragement for all learners, and were beneficial for instilling confidence that would boost interest to excel in Mathematics at Advanced level. It also emerged from the findings that the extra lessons were illegal and hence teachers were doing them clandestinely, and that the teachers involved in extra lessons were cashing in on parents as they continued to increase fees. The participants also lamented at the lack of protection for the learners, and felt that extra lessons put female children at risk of sexual molestation. The participants again indicated that the best approach to curtail the detrimental effects brought by partaking in lessons outside school sessions was for the Government to offer adequate remuneration to the teachers and they also wished for the Government to legalize extra lessons, so that teachers would carry them out in classrooms. The study recommended that parents should not send their children for extra lessons for the sake of just sending them, the Government of Zimbabwe should come up with viable policies that permit the undertaking of lessons outside school sessions legally, there is need to strictly monitor learners partaking in extra lessons to check if they are not going off the rail, and the Government of Zimbabwe should improve remuneration for teachers as a way to shun underhand dealings like lessons outside school sessions.

TABLE OF CONTENTS

<u>APPROVAL FORM</u>	ii
<u>DEDICATION</u>	iii
<u>ACKNOWLEDGMENTS</u>	iv
<u>ABSTRACT</u>	v
<u>LIST OF TABLES</u>	vii
<u>LIST OF FIGURES</u>	viii
<u>CHAPTER 1: INTRODUCTION</u>	1
<u>1.0 Introduction</u>	1
<u>1.1 Background of the problem</u>	1
<u>1.2 Statement of the problem</u>	3
<u>1.3 Research Questions</u>	3
<u>1.4 Importance of the study</u>	4
<u>1.5 Delimitations</u>	6
<u>1.6 Limitations</u>	6
<u>1.7 Definition of terms</u>	6
<u>1.8 Organization of the study</u>	7
<u>1.9 Summary</u>	8
<u>CHAPTER 2: LITERATURE REVIEW</u>	9
<u>2.0 Introduction</u>	9
<u>2.1 Overview of conducting lessons outside school sessions</u>	9
<u>2.2 Benefits of lessons outside school sessions</u>	10
<u>2.3 Challenges when conducting lessons outside school sessions</u>	14
<u>2.4 Strategies to improve lessons outside school sessions</u>	17
<u>2.5 Research gap(s)</u>	19
<u>2.6 Chapter Summary</u>	19
<u>CHAPTER 3: RESEARCH METHODOLOGY</u>	21
<u>3.0 Introduction</u>	21
<u>3.1 Research Paradigm</u>	21
<u>3.2 Research design</u>	21
<u>3.3 Target Population</u>	22
<u>3.4 Sample and Sampling procedure</u>	22
<u>3.5 Research instruments</u>	22
<u>3.6 Reliability and Validity issues</u>	23

3.7 Data collection procedures	24
3.8 Data analysis plan	24
3.9 Ethical Considerations	25
3.10 Summary	25
CHAPTER 4	26
4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION	26
4.1 Introduction	26
4.2 Demographic data of participants	26
4.3 Advantages of teaching and learning of Advanced level Mathematics outside school sessions	33
4.4 The challenges associated with teaching and learning of Advanced Level Mathematics outside school sessions	35
4.5 Strategies to be implemented to improve the teaching and learning of Advanced Level Mathematics outside school sessions	38
4.6 Discussion of the findings	39
4.7 Chapter summary	42
CHAPTER 5	43
5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	43
5.1 Introduction	43
5.2 Summary of the study	43
5.3 Conclusions	44
5.4 Recommendations	45
REFERENCES	47
APPENDIX A: INTERVIEW GUIDE FOR TEACHERS	50
APPENDIX B: FOCUS GROUP GUIDE FOR PARENTS	51
APPENDIX S: QUESTIONNAIRE FOR STUDENTS	53

LIST OF TABLES

Table 4. 1 Showing Ages of teachers	28
Table 4. 2 Frequency Table Showing Years of Teaching Experience	30
Table 4. 3 Showing the views of Advanced level learners (n = 20)	33
Table 4. 4 Showing learners' views on challenges teaching and learning of Advanced level Mathematics outside school sessions (n = 20)	36
Table 4. 5 Views of learners on strategies that can be implemented to improve the teaching and learning of 'Integration' at Advanced level during lessons outside school sessions (n = 20)	38

LIST OF FIGURES

Figure 4. 1 Pie Chart Showing Sexes of Learners	27
Figure 4. 2 Pie chart showing ages of learners	28
Figure 4. 3 Pie chart showing analysis of teachers' sex	29
Figure 4. 4 Bar Graph Showing Ages of Parents (n=10)	31
Figure 4. 5 Pie chart showing sex of parent respondents	32
Figure 4. 6 Bar chart showing parents educational qualifications	33

CHAPTER 1: INTRODUCTION

1.0 Introduction

This introductory chapter examines the background to the study, the problem statement, research questions, as well as the significance of this study to various stakeholders. As the chapter progresses, the researcher highlights study boundaries, challenges that scuttled the smooth undertaking of this study, as well as the conceptual analysis of key terms used in this study.

1.1 Background of the problem

Extra lessons outside school sessions in Zimbabwe were established over 20 years ago as an approach to working with learners having learning and behavioural difficulties on a one-to-one encounter with professionally trained practitioners (Paviot, 2018)). Implied is the idea that lessons outside school sessions were normally designed to assist students with special needs and individual tuition was envisaged to maximize the gains of the exercise. Bray (2017) argues that increased competition for good careers and passing of specific international examinations has driven parents to seek lessons outside school sessions for their children. One can infer that parents are being driven by the anxiety to ensure their children do well in public examinations and the need to access good schools to increase chances of a bright future for their learners.

So, while other stakeholders in the society believe that teachers are benefitting when parents pay for extra lessons, the lessons outside school sessions are an avenue to supplement learning of school related material in a bid to increase the student's chances of doing well in public examinations. Tokwe (2018) avers that historically, extra lessons in the Zimbabwe education system were a remediation avenue negotiated by parents with a reputable teacher to assist a child experiencing learning difficulties in a particular subject. Inferred is the idea that lessons outside school sessions were designed to help struggling pupils catch up with others. This is also supported by (Bray, 2017) who claims that lessons outside school sessions are normally for pupils with special needs. This suggests that lessons outside school sessions are for a minority of students who may be having problems in grasping concepts during normal school hours. Nonetheless, in the Zimbabwean context, exceptionally good students are forced to attend extra classes due to numerous parental considerations.

With the Zimbabwean education system having been beset by an avalanche of problems, the conduct of lessons outside school sessions has taken a new dimension. Of late, the Zimbabwe education system has been characterised by questionable teaching. Continuous strikes and the brain drain have paralysed the public schools (Kwenda, 2017; UNICEF 2018; Tokwe, 2018). Persistent work stoppages due to COVID-19 induced lockdowns and loss of personnel have also severely weakened the Zimbabwean education system ((Bukaliya, 2021)). According to Kwenda (2017) and Ndlela (2019), teachers who have remained in public schools spend most of their normal working hours moonlighting due to low remuneration. Entailed is the assertion that teachers in public schools have neglected their core business, focusing on crafting survival means. One of the survival strategies employed by teachers has been to engage students in lessons outside school sessions for a fee as a way of supplementing their incomes to sustain their families, especially in more challenging subjects like Mathematics (Mustafa, 2020).

Kwenda (2017) also posits that teachers have given the students the impression that in the prevailing environment the syllabuses cannot be adequately covered during normal school hours and that it is in their best interest to embark on lessons outside school sessions. One can point out that teachers have deliberately created the demand for lessons outside school sessions and impressed upon students that they stand to benefit from engaging in lessons outside school sessions. Ndlela (2019) also observes that during lessons outside school sessions teachers cover subject matter thoroughly and comprehensively in contrast to the rushed manner that characterizes normal teaching sessions. This is supported by Bray (2019) who observed that teachers explain subject matter superficially, without going into details during normal teaching hours. One can argue that Mathematics teachers have deliberately neglected their normal duties to expand demand for lessons outside school sessions; hence student participation in lessons outside school sessions is now a basic need.

Kwenda (2017) observes that teachers are demanding from US\$5 to US\$ 20 per subject, per month for lessons outside school sessions. The fees charged by the teachers are exorbitant considering that the generality of the parents cannot afford to pay. Some parents have vowed that they will not pay for lessons outside school sessions (Herald 9 September, 2019). One can infer that some parents have strongly objected to the practice of paying teachers for lessons outside school sessions. Hence, some students are bound to lose out and this will in turn affect their future livelihoods and incomes. Again, the researcher contends that there are benefits as well as shortcomings characteristic with conducting lessons outside school sessions, and these emerging issues are making it imperative for the researcher to carry out this study to establish

perceptions of teachers and learners to opportunities of carrying out lessons outside school sessions to teach ‘Integration.’

The main aim of the study was to establish the opportunities and challenges of learning ‘Integration’ outside school sessions in Zvimba district, Mashonaland West Province, Zimbabwe.

1.2 Statement of the problem

The dawn of the COVID-19 pandemic brought a raft of changes to the way Advanced Level Mathematics is being taught in the majority of High schools. Owing to countless breaks in normal school learning sessions induced by COVID-19, teachers, learners and the parent community engaged in facilitating learning of Advanced Level Mathematics outside school sessions. The researcher has observed that the Advanced Level Mathematics syllabus is very long and normal school learning sessions may not suffice, compelling the majority of learners to resort to lessons outside school sessions, commonly called ‘extra lessons’ to cover the syllabus. The researcher has also established that extra classes were susceptible to numerous challenges. In addition, the researcher has noted that there were no uniform ways of implementing lessons outside school sessions. The researcher has also observed that Mathematics teachers at Advanced Level have developed corrupt tendencies, and they rush through concepts like ‘Integration’ to force learners to attend to lessons outside school sessions despite the associated consequences. This affected learners and parents, as the latter had to fork out large sums of money to fund extra classes. Again, the researcher noticed that there are both benefits and challenges associated with conducting lessons outside school sessions and thus, it is against these observations that the researcher was motivated to ascertain opportunities open to and challenges associated with conducting lessons outside school sessions when teaching ‘Integration’.

1.3 Research Questions

1.3.1 Main research question

What are teachers, parents and students’ perceptions of benefits and challenges of learning ‘Integration’ outside the school sessions in Zvimba district in Mashonaland west province, Zimbabwe?

1.3.2 Sub-research questions

1.3.2.1 To what extent are lessons outside school sessions are conducted in Advanced level Mathematics?

1.3.2.2 What are the benefits associated with teaching and learning of “Integration” at Advanced level outside school sessions?

1.3.2.3 Which challenges are characteristic with teaching and learning of ‘Integration’ outside school sessions?

1.3.2.4 What techniques can be implemented to improve the teaching and learning of ‘Integration’ at Advanced level outside school sessions?

1.4 Importance of the study

The researcher hopes that this study may be beneficial to many stakeholders, among them: the students, the mathematics teachers, the parent community served by the sampled schools, the sampled schools as well the researcher herself and policy makers in the Ministry of Primary and Secondary Education. If the study establishes that extra lessons are essential, stakeholders may consider making these formal so that they are supervised.

1.4.1 To the students

The researcher hopes that students may improve their interest and motivational levels in mathematics at Advanced level, and particularly in the topic ‘Integration’, which will consequently improve their pass rates. Again, the researcher also hopes that the successful completion of this study may help students to realize the benefits they can derive from lessons outside school sessions, as well as the associated setbacks. As a result, students doing lessons outside school sessions may not fall prey to abuse since they will be aware of the underlying consequences.

1.4.2 To the teachers

The researcher also hopes that the mathematics teachers at Advanced level carrying out lessons outside school sessions may benefit from this study, as they may be acquainted with the correct procedures of undertaking them without endangering their professions. Again, the study can help teachers to take cognizance of the risks they may face in their execution of extra classes, and possible solutions to avert these shortcomings.

1.4.3 To schools

Schools may also benefit from the use of findings and recommendations to be proposed from this study. If well organised, the schools may also provide resources for the conduct of extra lessons and reap monetary rewards from them. This implies that lessons outside school sessions can be used as a source of revenue, if the school system is roped in to manage them.

1.4.4 To the parent community

The parent community is also set to benefit from this study as they shall also be familiarized with their roles in facilitating the safe undertaking of lessons outside school sessions in teaching the topic 'Integration' at Advanced level. The parent community may be enlightened on the benefits of sending their average performing children for extra classes, as well as the safety measures envisaged of them when sending their children for extra tuition. This means that parents who sent their children for lessons outside school sessions will do so with the knowledge of how these extra classes will benefit their kids. The findings of this study may also help parents to save money by refraining from sending even their gifted children for lessons outside school sessions, when the latter can fare well in normal school sessions.

1.4.5 To policy makers

Officials at the helm of policy making may also benefit from the study as they are going to acquire knowledge of how they can formulate and implement policies that can improve the undertaking of lessons outside school sessions. For example, the recent announcement by the Government that extra lessons are now legalized in Zimbabwe is an indication that the nation is considering coining up a policy along those lines. This will help to perpetuate the opportunities realized from lessons outside school session, at the same time guarding against the safety concerns characteristic with extra lessons (Newsday, 23 August 2022).

1.4.6 To the researcher

Apart from amassing a great deal of research skills after successfully completing this study, the researcher may also find this study to be a spring board of further research studies in the same area. This means that the findings from this study, coupled with the recommendations to be proposed, may help the researcher to delve deeper into lessons outside school sessions, and see the phenomenon spreading to other facets in the Advanced level curriculum.

1.5 Delimitations

The study was delimited to three high schools found in Zvimba District, Mashonaland West Province, namely Masiyarwa High School, Matoranhembe High School, and Kutama Day High School

1.6 Limitations

Due to time and financial constraints the study was delimited to 3 schools and findings from this study may not be generalized beyond the three schools. Again, the researcher also carried this study amidst the dreadful COVID-19 pandemic, which made data collection an uphill battle as there were protocols to adhere to avoid spread of the fatal scourge. The researcher used telephone interviews and postal questionnaires to lessen the dangers of contracting the lethal COVID-19 pandemic. The researcher also made use of non-participatory observations to collect data.

1.7 Definition of terms

1.7.1 Challenges

A challenge is a problem that makes it difficult for one to achieve certain objectives (Mutambudzi, 2020). In this study, these are problems characteristic with partaking in lessons outside school session in teaching and learning of 'Integration' at Advanced level.

1.7.2 Opportunities

In this study, these are the benefits associated directly with studying, teaching and learning of Advanced Level Mathematics. These includes critical thinking, problem solving and commitment (Zvobgo, 2014)

1.7.3 Performance in Mathematics

This refers to the extent to which learners acquire and display requisite skills in Mathematics, both during normal lessons and outside school sessions. This is shown by how they score high marks after being tested.

1.7.4 Outside school sessions

These are commonly called ‘extra lessons’ or ‘extra classes’, and they are school sessions outside the gazetted school time tables, purported to give learners additional time for remediation or to cover the syllabus.

1.8 Organization of the study

This study is organized in five sections.

Chapter one is the elementary chapter, which highlights the general overview of the whole study. The general outline entails; a brief history of the problem, research questions and related objectives, the importance of the study to different groups of people as well as research boundaries. Also highlighted in the first chapter was: study limitations, the conceptual analysis of key terms and the organizational structure of the study.

Chapter two examines the literature gathered from other renowned authors and websites with information related to the carrying out of lessons outside school sessions during the teaching and learning of ‘Integration’ in Advanced level Mathematics. In this study, the researcher examined: the merits of employing lessons outside school sessions in teaching and learning of ‘Integration’ in Advanced level Mathematics and the challenges that are encountered by educators and learners when carrying out lessons outside school sessions in Advanced Level ‘Integration’ lessons. Also scrutinized in Chapter 2 are possible interventions that Advanced Level Mathematics teachers and learners can adopt in trying to improve the use of lessons outside school sessions in teaching and learning of ‘Integration’.

The third chapter involves the methods and techniques which the researcher adopted to enable her to effectively gather evidence for the study. These include; the research paradigm and design, population and sample size, sampling techniques, and the nature of research instruments that were used to gather data. The merits and shortcomings of each of the research instruments used in this study are also highlighted in this chapter, together with the detailed procedure of collecting, presenting, analyzing and interpreting the findings. The researcher worked with three schools, and with a total population of 35 participants, among them: 20 learners, 10 parents and 5 teachers.

Chapter four mainly focuses on how the gathered data is presented on various statistical tables to deduce meaning out of them. Mostly used statistical graphs include; frequency distribution tables, pie charts, bar charts, as well as tally tables. Thereafter, the data was analyzed and interpreted with reference to the study’s research questions and objectives.

Chapter five seals the study by giving: the detailed summary of the entire investigation, the conclusions drawn basing on the findings, recommendations proposed from the findings, as well as other research questions generated by the study.

1.9 Summary

This introductory chapter chiefly outlined the background to the problem, circumstances that motivated the researcher to partake of this study, research questions, research objectives, as well as the significance of this study to teachers, parents, policy makers, learners, as well as school authorities. Furthermore, the research highlighted challenges encountered by the researcher, boundaries of the study, and definitions of key terms. The organization of the study's five chapters was also examined at the end of the chapter. The next section, Chapter 2 reviews literature related to the study.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter serves to unpack the literature related to the topic under investigation. This entails: the overview of lessons outside school sessions, their benefits to learners at Advanced level, their shortcomings as a way of teaching the topic ‘Integration’, and the techniques that can be adopted to improve the use of lessons outside school sessions in teaching and learning of ‘Integration’ at Advanced level. Thereafter, the researcher will establish the research gap, mainly

2.1 Overview of conducting lessons outside school sessions

Lessons outside school sessions are also called extra lessons, and they are lessons done outside the gazetted school time tables, purported to give learners additional time for remediation or to cover the syllabus (Ndlela, 2019). Lessons outside school sessions can also be called private lessons, owing to their expensive nature as well as the one-on-one tuition. The culture of lessons outside school sessions has become part and parcel of the Zimbabwe education system. The onset of COVID-19 led to loss of precious learning time for the majority of learners sitting for national examinations, with the Zimbabwe School Examination Council (ZIMSEC) going with national examinations despite the half-backed learning. According to Kwenda (2017) lessons outside school sessions have become a mixture of entrepreneurship and exploitation, with many parents however failing to cope and some children losing out. One can deduce that lessons outside school sessions have brought mixed feelings among Zimbabweans, with some students being negatively affected by this practice. A lot has been written about lessons outside school sessions and their increasing prominence in education systems (Tokwe and Bwititi, 2015; Ndlela, 2019; Paviot, 2018). However, very little is empirically known about the practice and financial implications of this phenomenon in teaching ‘Integration’ at Advanced Level, hence the need to carry out this study.

This research gap has motivated the researchers to undertake a study to establish the practice and its implications in Zvimba District schools. It has been observed that teachers are giving students the impression that syllabi cannot be covered during normal teaching time (Ndlela, 2019). As a result lessons outside school sessions have increasingly become the order of the day in Zimbabwean schools. However, some parents cannot afford to pay for lessons outside

school sessions and some have vowed not to pay for lessons outside school sessions (Herald 9 September, 2019; Kwenda, 2017). Lessons outside school sessions have also added an extra burden on parents who are already struggling to pay for tuition and uniforms. Of late a number of teachers' homes have been converted to mini-classrooms for lessons outside school sessions. This development has often led to many problems, among them, sexual abuse of learners. This study will establish if lessons outside school sessions lead to behavioural problems such as sexual molestation by teachers.

Many parents think that associating students with extra classes gobbles up their leisure time (Thomas, 2020). But that is not the case as lessons outside school sessions provide an opportunity for extra practice. It is known that due to the ravaging COVID-19, formal classes have had minimal learning time due to lockdowns, and sometimes, it becomes highly impossible for teachers to spread and cover all the requisite knowledge in the given time. Since knowledge gained from formal classes is regarded as temporary due to its transient nature, extra classes are essential, and enrolling children in different classes will help them review and practise whatever they have learnt previously (Thomas, 2020). Moreover, through extra classes, students can acquire detailed knowledge and have better understanding when learning one-on-one. On the other hand, social life is crucially important for every individual. Therefore, extra classes provide an environment for students who are different from those in the formal educational system. For instance, extra classes for preparing for university entrance exams will consist of students from diverse backgrounds (Shizha (2013). This study seeks to ascertain if mathematics at Advance level use lessons outside school sessions to consolidate what they learn in formal classes.

2.2 Benefits of lessons outside school sessions

2.2.1 Learning environment devoid of any pressure

Unlike formal education in school, extra classes do not pressure the students (Kwenda, 2017). They are provided with tailored support by the tutors and given ample time for delving into new course material. The learning environment of extra classes is devoid of any pressure as the students can take as much time as required (Mupa and Chinooneka, 2015). This entails that when given assignments during lessons outside school sessions, learners are not compelled to finish them within strict timelines, as they are allowed to work at their own pace. This gives them ample time to consolidate and regurgitate any material they have learnt. Agere (2019)

acknowledges that learning outside school sessions eradicates the pressure associated with conducting normal school lessons in overenrolled classes as some slow learners may be found wanting. The pressure associated with learning of 'Integration' during formal lessons can be eradicated when the learners engage in lessons outside school sessions, as adequate one-on-one support is often given, and the pace is not that hurried. This study will determine if extra lessons ease Advanced mathematics learners' pressure to handle large volumes of data as is the case with formal classes.

2.2.2 Focused Attention

Teachers and personnel providing extra classes can give focused attention to every individual. Even though the extra classes are conducted in groups, they ensure that every student can understand (Tokwe, 2018). In the same vein, Mutambudzi (2020) acknowledges that during normal school sessions, classes are often huge and every learner is forced to move at an accelerated pace, inducing uneasiness and too much pressure on some average-performing learners. This suggests that lessons outside school sessions offer an enabling environment in which teachers can attend to learners' individual differences and the latter are also free to make enquiries on those concepts that they feel like have not been well explained. With focused attention, students are ensured that they are supported and emphasis is provided on significant areas of academic concern to consolidate learnt concepts (Ndlela, 2019). The study will corroborate if extra classes take along students with a slow pace and focus students on vital aspects to be learnt during teaching and learning of Integration.

2.2.3 Eliminate worry

Formal education in the best international schools in Zimbabwe is instilled with excellent facilities and is undoubtedly effective (Best and Khan, 2013). However, many children find the academic curriculum extremely difficult, which delivers emotional turmoil. As a responsible parent, there is need to ensure that this is never the case, and the only thing that can save children from this trouble is assigning them to extra classes. Acquiring assistance from specialised personnel will help the students feel more secure and confident about them (Bourdieu, 2018). Besides, they will be able to grasp the knowledge and materials, which will pave the way for better academic results. This entails that lessons outside school sessions have the potential to remove worries associated with failure from both the parent community and

the learners concerned. This study seeks to verify if lessons outside school sessions eliminate worry and instil confidence in mathematics learners.

2.2.4 Personalised to suit the learning style

Formal education might not always encourage a child to study and learn, and as a result, the students will not be able to perform well with this powerful technique and will run behind (Thomas, 2020). But with the alternative of extra classes, students can explore various learning methods, and teachers can quickly switch teaching approaches to adopt those that help learners best. Again, small tests after every chapter will help assess how the students can understand, and this helps in revisiting the previous topics which have already been covered (Gordon, 2014). A thorough revision is best suited for effective learning procedures. Thus, this study seeks to establish if extra lessons provide learners with numerous different teaching styles that may suit individual differences. .

2.2.5. Work as an alternative source of encouragement

Unlike formal education in schools, extra classes pave the way for acquiring encouragement. Students are offered incentives for performing well in their tests (Bray, 2019). In other words, students taking extra classes are provided with words of encouragement if they perform well. The minutest of things encourage the students to remain motivated and carry on with their studies seriously. Moreover, other students acquiring extra classes will grow their competitive nature, thereby trying to outperform one another (Osman, 2020). Sometimes, the other students also offer help when there is difficulty with specific topics. All the above assertions imply that lessons outside school sessions are instrumental as they motivate learners to excel in their academic pursuits. This study will authenticate if lessons outside school sessions can help to boost Advanced level learners' motivational levels when learning the topic 'Integration.'

2.2.6. Procure extra knowledge beyond textbooks

On a larger scale, extra classes provided by the best international schools in Zimbabwe hire specialised personnel for teaching students (Thomas 2020). The personnel will have experience in other fields other than teaching, and will resultantly help learners in varied facets of life. While communicating and associating with the teacher, students can learn about career prospects as well. So this provides the opportunity for students to gain knowledge beyond the formal textbooks. This consequently motivates the learners as they learn with the knowledge

of careers they want to pursue in their future lives (Paviot, 2018). It's of important to note that lessons outside school sessions help to build rapport between teachers and parents and consequently teachers will be able to shape children with parents' involvement. Thus, this study will confirm if private lessons help to provide learners with additional knowledge and skills not found in textbooks.

2.2.7 Enhance student interaction

In a related finding by Mapara (2019), extra classes also encourage students to do group study which enhances team spirit. Thus, supplementary classes can help students to revise what they have learnt in smaller groups, which offer greater chances of comprehending learnt concepts. Such classes improve and enhance knowledge of students as they get immediate solutions from the teacher which is not possible in formal classes involving many other students. Kwenda (2017) also submits that lessons outside normal school sessions have encouraged group work, which eventually helps to build confidence in learners. Thus, when interacting on Mathematical problems in smaller groups, learners can acquire self-assertive skills and confidence that will be instrumental when in classes involving many people. This study seeks to substantiate if extra classes in Advanced level mathematics aid in the development of student interaction, which eventually improves level of comprehending facts.

2.2.8 Rapport between the teacher and learners

In another study carried by Becta (2014) in Kenyan secondary schools, the use of lessons outside school sessions in teaching and learning of Mathematics is a good way to improve teacher – pupil relations. This implies that those teachers who wish to induce positive attitudes in learners towards the teacher and schooling can achieve this by taking out their learners for extra classes. Correspondingly, Becta (2014) avers that teachers who resort to the use of lessons outside normal school sessions are well connected with their learners, as extra lessons instil massive interest in learners. The rapport created between teachers and learners makes the latter accord due respect to the former, consequently improving learner grades. Bray (2017) opines that learners attached to their teachers during extra classes pay particular attention as they assume this is the best platform for them to discuss exam-type questions. This study will establish if lessons outside school sessions are instrumental in improving rapport between mathematics teachers and teachers during mathematics lessons at Advanced level when teaching the topic 'Integration'.

2.2.9 Extra lessons encourage self-discovery and team work

To a greater extent, Tsai and Chai (2017) posit that the use of lessons outside school sessions to teach mathematical concepts helps learners to discover some of the concepts by themselves, especially where research work is being encouraged. This implies that, where teachers give learners assignments which should be completed by surfing and searching for information through the internet, discovery learning is greatly promoted. Tsai and Chai (2017) however observed that there is need for teachers to offer achievable assignments or targets to learners if the latter are to discover concepts by themselves. Moreover, Wong et al. (2016) also accept that where classes are very large and shortages are manifest, learning apparatus are shared among learners during lessons outside school session, and cooperative learning is achieved. Masuku (2017) also aver that the use of group work is also recommended during extra classes, as this would build team work or corroborative learning. This study will try to establish if lessons outside school sessions can be used to promote attributes like team work and self-discovery.

2.2.10 Extra classes help to occupy idle learners

Besides, lessons outside school sessions have been instrumental in occupying children during the COVID-19 pandemic when they had nothing to do (Mustafa, 2020; Mikis, 2021). This implies that extra lessons were used as a way to keep children busy, a situation that dissuaded them from partaking in unscrupulous activities such as drug abuse and early marriages. Though it was not automatic that engaging in lessons outside school sessions was a way to ward off unwanted behaviour from the children, it was noticeable that those children with something to occupy them, even online, found no time for deviant activities (Mikis, 2021). Thus, it is one of the aims of this study to verify if idle learners can be occupied through the use of lessons outside school sessions.

2.3 Challenges when conducting lessons outside school sessions

2.3.1 Extra classes are time consuming

Attending too many extra classes on weekdays and even the weekends leads to the lack of free time for children. As a result, children don't have enough time to relax by taking up an interesting hobby such as playing a popular sport which can improve their physical health as

well as their mental health (Bordbar, 2016). In addition, due to the lack of adequate free time, kids are no longer hanging out with their friends or taking part in any outdoor activities. Hence, their ability to communicate with others and the lack of social skills now become serious issues for parents when raising their kids. The researcher shall use this study to establish if extra classes are time consuming when learning the topic Integration.

2.3.2 Extra lessons put students under a lot of pressure

Again, the expectations of parents on their children put the kids under a lot of pressure as the parents want their kids to be always at top of classes and get insanely high scores for every test (Mutambudzi, 2020). According to some researchers, over-studying doesn't make the kids become more intelligent, however, attending too many extra classes such as maths or science subjects can cause children's cognitive impairment especially for young kids for example, kindergarten and primary school students due to a large amount of time focusing, lacking sleep and being stressed (Manatsa, 2018). Furthermore, extra classes normally provide theoretical lessons which are mostly the same with compulsory classes while teenagers need more particular skills, for instance, critical thinking, time management, and creative thought. Thus, the research will ascertain if extra lessons put a lot of pressure when teaching 'Integration' at Advanced level.

2.3.3 Burden of lessons outside classroom on students

On the contrary, extra classes can be an unnecessary burden on children. Not every student requires extra attention. When students are forced to attend extra classes, they become uncomfortable and lose their interest and attention in regular classes (Barmidele, 2020). Similarly, every student is unique and has different needs apart from academic, and extra classes will waste the time that can be utilized in games, competitions or developing other important life skills. Overall, it can be established that lessons outside school sessions are an effective approach to enhance students' academic performance, in spite of their shortcomings ('O' Hogan, 2020). However, parents should understand the needs of their children and focus on their overall development. This entails that there should be use of discretion in deciding whether children should attend lessons outside school sessions in Mathematics or not. Thus, the research will ascertain if extra lessons are burdensome to learners when learning 'Integration' at Advanced level.

2.3.4 Cost of lessons outside school sessions

It is really a fact that none of these programs be it lessons outside school sessions or home tuition is rendered free of charge. In a finding in South Africa, it emerged that most of the extra classes are rendered to the children at very exorbitant prices (Eickelmam, 2018). It is therefore weighing on parents when after all this effort; their children continue to perform poorly in their academic dispensation. This entails that sometimes lessons outside school sessions may not even help the learners, as some of them continue to struggle with school work despite attending extra classes on a daily basis. It is true that some parents even strip their children off household chores just to afford them enough time needed to attend to their books (Basilaia and Kvavadze, 2020). This study validates if extra lessons are expensive and hence beyond the reach of many learners in teaching and learning of 'Integration' to Advanced level students.

2.3.5 Can lead to brain complications

Despite all the associated benefits, parents having the thought of helping their children to be better equipped for the future through lessons outside school sessions fail to see the kind of damage being meted on the brains of their children (Kabanda, 2017). The children have absolutely no time to play and relax their brains, and this provides a likelihood of future health problems for the child. Mostly, some of these students who have all the numerous opportunities at their disposal still blow fuse in examinations, and this only implies that no matter the number of classes and teachers lined-up for a particular child, the rest of the effort solely lies with the pupil. The effort of the teacher is only 30% by some group of people whereas the rest 70% lies with the pupil (Kwenda, 2017). Undoubtedly, this means that every pupil still needs assistance to make the set complete. This study will establish if extra lessons extra lessons may overload students and cause mental challenges.

2.3.6 Inconsistent and unclear educational policies

As if that is not enough, there is no strict Ministry Policy that enforces the use of lessons outside school sessions in the teaching and learning of secondary school learners (Kabanda, 2017). In another finding by Delpont and Dhlomo (2015), there are numerous unclear and inconsistent educational policies regarding the teaching and learning of Mathematics through lessons outside school sessions. To add to that, Manatsa (2018) notes that policy makers and curriculum developers' recommendations that Mathematics should be compulsory in the primary school curriculum fuel up extra classes in the subject. Mapara (2019) notes sadly the amount of time given to Mathematics in the secondary schools, versus the size of the syllabus

to be covered and the difficulty nature of the subject. This study seeks to ascertain if policies in Zimbabwe's education system are favourable to allow the holding of extra lessons,

2.3.7 Lessons outside school sessions can cause health problems

Studying in general is not considered a bad thing, but studying too much can lead to serious health problems including stress and social alienation according to Health Line (2020). Academia International (2021) notes that studying too much can actually have the opposite of the intended effort, causing students to become distracted, forget important facts or make mistakes classified as 'silly'. They also point out that exhaustion and 'burn out' are common when learners over-engage in lessons outside school sessions. It was also revealed in a research published in the Journal of Experimental Education (2018) that students who complete more than 3 hours of homework per night experience physical health problems such as depression, sleep deprivation, academic stress and a lack of balance in their lives. Thus, this study will ascertain if there is a link between over-indulgences in extra classes.

2.4 Strategies to improve lessons outside school sessions

2.4.1 Consider learner abilities before enlisting them for extra classes

Students have different abilities hence there is need to put that into consideration when enlisting them for extra classes. Parents and teachers have to reach an agreement on the type of assistance that will be needed by the students before commencing classes. This will help on improving and strengthening the ability of the student.

2.4.2 Cohesion between government and parents

In a recommendation by Thomas (2020), the government and parents should join hands to create educational systems which are more practical, creative and stress-free environment for their children. This means that there should be a collaborative effort between the government and the parent community, and there should be policies aligned to the effective implementation of lessons outside school sessions. Correspondingly, Osman (2020) avers that extra classes should be banned and substituted by soft skills classes instead. This suggests that focus should be directed on remediation classes rather than extra classes. The study sought to establish if there is a correlation between Zimbabwe's policy documents and stakeholders' expectations. .

2.4.3 Parents should give their children a break

Although the relevance of extra classes cannot be underestimated, there is the need to give the whole idea a second thought of consideration because even before students close at the stipulated time, there is already undue pressure on their brains and most begin to show signs of fatigue and mental stress (Masuku, 2017). It is high time parents begin to consider the option of giving their children a break. Their offer of help is causing more harm than good, as nobody can do more than their body can allow. The same phenomenon applies to the brain. Once it gets to its limit, no amount of input would yield the much needed results. In this study, the researcher will verify if there is need for breaks in lessons outside school sessions.

2.4.4 Monitoring of learners when carrying out lessons outside school sessions

In another interesting finding by Ihmeideh (2019) in Nigerian secondary schools, the use of the internet in lessons outside school sessions was no longer applied in the education domain, as learners abused the facility and watched videos downloaded from You-tube, and other social platforms such as Facebook, Instagram, and Twitter. In the above study, learners who were not monitored during lessons outside school sessions took advantage of the teachers' absence to use the internet to browse through improper websites not meant to facilitate the teaching and learning process. The abuse of social media platforms is very addictive, and learners exposed to it develop into hard-core addicts, who may go beyond redemption in their future years (Bordbar, 2016). Thus, strict care should be taken cognizance of, lest the lessons outside school sessions may breed unruly elements of society.

Again, Buabeng-Andoh (2017) observes that since some of the extra lessons are done via ICTs, and if learners are not monitored when engaging in lessons outside school sessions using ICTs, there are chances that they may engage in unsolicited social media communication and view porno and nude pictures downloaded from various universal websites. Resultantly, learners leave out their research work and spend the greater chunk of their time on the internet involved in unscrupulous activities. This calls for teachers and parents to be observant and ensure that learners are doing assigned tasks. In the same way, Mustafa (2020) advises educators to be very wary of wayward learners who may abuse the use of social media communication and seduce other learners. This implies that the parent community should refrain from giving their children ICT gadgets during lessons outside school sessions without properly monitoring them since the gadgets may be abused at the expense of the teaching and learning process. This study will establish if parents monitor their children during lessons outside school sessions.

2.4.5 Education policies guiding undertaking of lessons outside school sessions

It was therefore commendable, the effort made by the former minister of education, Dr. Dokora in 2015 to stop the illegal practice of organizing extra classes for students saying "pupils as well as their brains have limits as to what they can absorb". It was however short-lived. He however erred when he said "teachers can cover all the topics in the syllabus within the stipulated teaching hours" (Thomas, 2020; Mutambudzi, 2020). It is an undeniable fact that teachers find it very difficult in covering the syllabus before the end of the academic year. They therefore see the extra class time a good opportunity to cover up the gaps. That notwithstanding, their efforts to uphold their end of the deal should not be at the detriment of pupils they are trying to help. This is because their efforts only push students to learn without understanding. In this study the researcher will establish if Zimbabwe's education policies are feasible to enable lessons outside school sessions.

2.5 Research gap(s)

Negative behavior by students is one major hindrance parents' and teachers face in the outside school sessions environment for the successful implementation of these lessons. The environment in which students are socialized is also affecting their attitude towards Advanced Level Mathematics. The present research was a case study of the situation in Zvimba District schools, Mashonaland West Province, a "keyhole" into the understanding of the issues at stake in the topic at a national level. It is recommended that, a more exhaustive understanding of the issues at stake can be obtained if a wide geographical area is covered by a similar study. It would therefore be important to carry out a more comprehensive national study involving more respondents and a wider geographical coverage so as to establish all-inclusive results with a more national outlook from which policies on outside school sessions lessons can be informed and therefore improve service delivery and customer satisfaction by schools.

2.6 Chapter Summary

This chapter examined the literature associated with the undertaking of lessons outside school sessions in teaching and learning of Advanced level mathematics. The merits of partaking in lessons outside school sessions, the challenges encountered by parents, teachers and learners

when partaking in extra classes, as well as the mechanisms that can be implemented to improve the use of lessons outside school sessions – were analysed in the literature review. The researcher noted that in spite of the variables analysed in the literature review, a research gap existed on use of lessons outside school sessions in a particular topic ‘Integration’, hence the desire to partake of this study. The next section, Chapter 3, examines Research Methodologies.

CHAPTER 3: RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the research paradigm and research design which the researcher adopted. The advantages and disadvantages of the research design are to be discussed as well. The chapter also examines the target population, the sample and the sampling technique, as well as the merits and setbacks of the research instruments used to collect data for this study. The data collection procedure and ethical issues, complement the contents of this chapter.

3.1 Research Paradigm

The paradigm that was employed in this study is pragmatism, which uses the mixed method approaches. The major advantage the researcher realized from the use of mixed methods approach is its ability to incorporate both aspects of qualitative and quantitative approaches. This means that the researcher was able to benefit from the advantages of both qualitative and quantitative research approaches. For example, the use of the qualitative approach enabled the researcher to explain in detail the perceptions of teachers and learners towards lessons outside school sessions. Similarly, the quantitative approach also helped the researcher to collect perceptions of teachers and learners, particularly their degree of agreeing or disagreeing with particular aspects of extra lessons, and also helped to present data on pie charts and bar graphs, a scenario that enabled her to make easy comparisons of the data.

3.2 Research design

This study followed a descriptive survey design not only because of its flexibility and the nature of the responses sought, but also because it was the best method to study the problem under investigation. A study on the perceptions of teachers to the use of online learning produced results that were generalizable in similar situations. The descriptive survey in this study made use of three essential instruments, the focus group discussions, the questionnaire and interviews – a process called triangulation. Since the questions were uniform, it had an advantage of producing precise results (Chiromo, 2019). The descriptive survey research design, however, has a weakness in that data collected through the use of this method are susceptible to distortion through bias (Creswell, 2014). The researcher avoided bias by pre-testing research tools before unveiling them to respondents. This entails that the research tools were initially given to randomly chosen respondents to eradicate cases of ambiguity.

3.3 Target Population

The target population for this research is all Advanced level Mathematics teachers and learners in Zvimba District, Mashonaland West Province. There are 64 secondary schools in Zvimba District of which 42 are high schools. In Zvimba District, there are 61 A-level Mathematics teachers, 1582 A-level Mathematics students, of which 820 are in Form 5 and 762 are in Form 6.

3.4 Sample and Sampling procedure

To come up with schools, convenience sampling was used – which entails selection of subjects due to their proximity and accessibility to the researcher. Systematic sampling is whereby every n th case after a random start is selected. For example, if surveying a sample of parents, every fifth parent was selected from the sample. The researcher selected 10 teachers, 10 parents as well as 15 learners. The advantage of this sampling technique is its simplicity. The researcher assigned four digit values to the participants, from which she picked the 10th participant randomly using a computer. This technique was selected because it saved time, money and effort (Yin, 2019). It enabled the researcher to select a sample based on the knowledge of a population. Thus, the technique was flexible and met multiple needs and interests, and ensured that each member from the target population stood an equal chance of being selected for the study, a move that served to reduce bias immensely.

3.5 Research instruments

Data collection for descriptive survey research designs can rely on many sources of evidence including documents, archival material, direct observations, interviews, questionnaires and focus group discussions (Creswell, 2014). This study therefore used questionnaires, focus group discussions and interviews to gather the data that was required. The definitions, as well as advantages and disadvantages of each of the instruments are given below:

3.5.1 *The questionnaire*

These are forms with questions to be filled in by respondents (Yin, 2019). The researcher issued questionnaires to 20 Advanced level Mathematics learners. The questionnaires used contained both open-ended and closed questions to enable the recipients to explain their opinions in detail. The questionnaire was constructed in line with the research questions. The researcher preferred the use of questionnaires as they provided for anonymity and they were easy to construct (Yin,

2019). The researcher also chose to use questionnaires as they enabled her to gather data that could be quantified, presented on tables and analysed using statistical inferences such as the mode, median and mean. Thus, the questionnaires were helpful as they enabled the researcher to easily make comparisons between the gathered data.

3.5.2 Focus Group Discussions

The researcher carried out focus group discussions with 10 parents. The researcher made sure that the items tabled for the focus group discussions were aligned to research questions to enable uniformity in data analysis. The researcher made plans well ahead of the focus group discussions to ensure that all the participants attended since there were challenges of scheduling a common day for all the research participants expected. The focus group discussions were advantageous since each of the participants was given liberty to air out views on benefits and challenges associated with the conducting of extra lessons when teaching integration at Advanced level.

3.5.3 Interviews

Creswell (2014) defines an interview as a process which involves collecting data through direct verbal interaction between individuals. The researcher conducted interviews with 5 Advanced level Mathematics teachers. With interviews, participants could not falsify data such as age, sex and race (Yin, 2019). Again, interviews helped to build relations between the researcher and the respondents, as there was a greater need to confide in each other, especially when dealing with sensitive information (Popper, 2014). The researcher preferred information about personal feelings, opinions and perceptions. Thus, another advantage of oral interviews is that, they allowed for soliciting of sensitive information from respondents (MacMillan & Schumacher, 2018), and the respondents' own words were recorded and ambiguities were clarified. Respondents were able to give reasons for their responses, and interviews were not influenced by others in the group (Best & Khan, 2013). Again, the researcher recorded firsthand information directly from the participants, for example, their emotions.

3.6 Reliability and Validity issues

Reliability and validity were also ensured during the course of the study. The researcher pre-tested the research tools with a randomly picked population. The researcher selected few participants similar to the ones that were to be used in the main study and administered

questionnaires. This helped her to remove questions that were ambiguous and double-barrelled, for example, on the benefits and challenges of lessons outside school sessions. The researcher made sure that the research instruments were given to respondents so as to enable high response rate. The researcher made it known to respondents that the research would benefit the local community if lessons outside school sessions are conducted effectively – hence their anticipated maximum participation and cooperation.

3.7 Data collection procedures

Data collecting techniques are ways that were followed and used to gather information about the features of the subjects being studied (MacMillan & Schumacher, 2018). The researcher acquired a stamped letter from the faculty of Education at Bindura University of Science Education (BUSE), requesting permission to perform the study. The goals of the research tools were presented to the participants by the researcher. Following that, the researcher handed out the questionnaires by hand and collected them in person as soon as they were completed. To administer interviews, the researcher visited the participants during lunch hour to avoid disruption of their daily activities. Parents held their focus group discussion when they visited the school on the consultation day.

3.8 Data analysis plan

The researcher used Microsoft Excel applications to analyse data for this study. This was done by coding data on statistical graphs. Microsoft Excel uses statistical graphs such as pie charts and bar graphs to present the data. These graphs were used to represent quantitative data collected from questionnaires. Chiromo (2019) describes data analysis procedure as the translation of information collected during the course of the research project into an interpretable and manageable form. Yin (2019) says that data analysis is a body of methods that assists to describe facts, detect patterns and develop explanations and answering of research questions. The biographic and other quantitative data that were collected from questionnaires were tallied and presented in pie charts and bar graphs. Descriptive statistics such as frequencies and percentages were used in data analysis. This helped the researcher to easily summarise, organise, evaluate, interpret and communicate numerical information. Data collected from interviews and focus group discussions was analysed narratively. This means that the data was not presented on statistical tables by analysed by using narrations and explanations.

3.9 Ethical Considerations

Participants in this research comprised the parents as well as Advanced level teachers and learners from three selected high schools in Zvimba District, Mashonaland West Province. The researcher sought approval to conduct this research from the Department of Education at BUSE, from the District Schools Inspector (DSI) and from heads of the three selected schools (To be attached at the end). Participation was voluntary and all the participants were free to withdraw at any time. Informed consent was requested from individual participants with regards to their participation. The data were collected in a way that did not interfere with the normal activities of the participants.

3.10 Summary

The chapter laid the theoretical foundations for the practical conduct of the study. It considered the research design, the population and sample, as well as the sampling techniques and procedures. In addition, the chapter also looked at the strengths and weaknesses of the data collection instruments, as well as the ways to avert the latter. The data collection procedures and ethical issues were also examined at the closing sections of the chapter. The next section, Chapter 4, will present, analyze, and interpret data collected from the research field.

CHAPTER 4

4.0 DATA PRESENTATION, ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter presented the researcher's findings on pie charts, bar graphs and frequency distribution tables. The above statistical tables did not only make the researcher's data amenable for analysis, but also compacted the data, at the same time retaining original findings. The presented data was then be analysed and interpreted with the aim of answering the study's research questions. The analysis ad interpretation sought to reveal any correlations between the researcher's findings and the findings of other earlier authorities.

4.2 Demographic data of participants

4.2.1 Demographic Data of Learners

4.2.1.1 Sexes of Learners

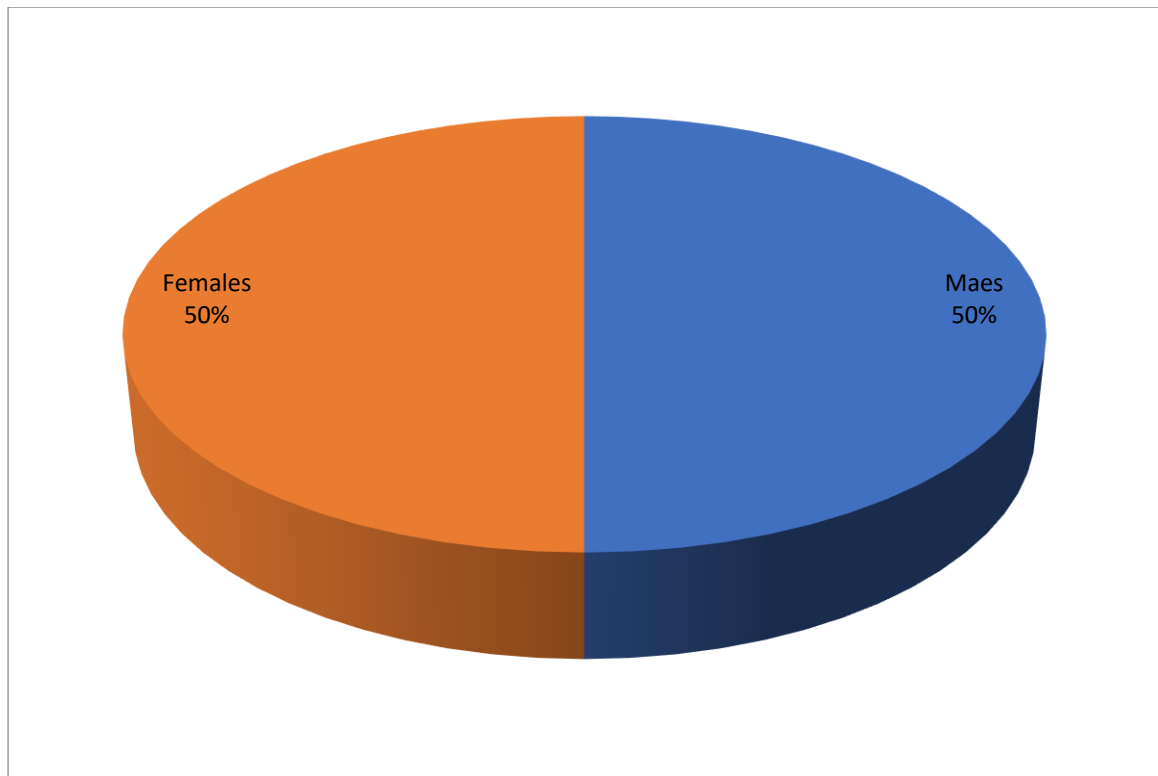


Figure 4. 1 Pie Chart Showing Sexes of Learners

Data revealed on the pie chart in Figure 4.1 indicates that the researcher worked with 50% (10) male students, as well as 50% (10) female students in this study. The same data also shows that the researcher worked with a population of twenty (20) students, with the figure of males equalling that of females. This data indicates that, in the schools where this study was done, the population of female Mathematics students is similar to that of their male counterparts, and the researcher got views of both boys and girls, regarding opportunities and challenges that are associated with the teaching and learning of the topic ‘Integration’ at Advanced level in lessons outside school sessions. This implies that findings of this study were credible as the researcher addressed gender equality issues. The same data above is indicative that Zimbabwe’s education system values education of boys and girls.

4.2.1.2 Ages of Learners

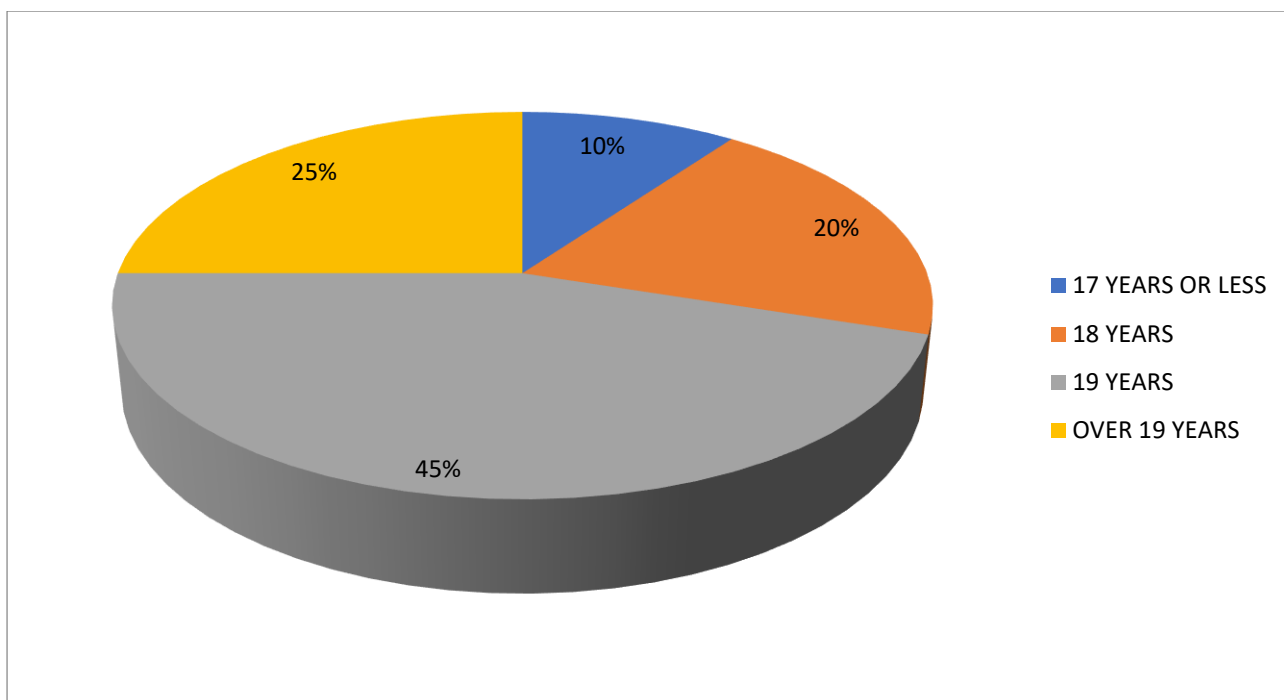


Figure 4. 2 Pie chart showing ages of learners

The Pie Chart in Figure 4.5 reveals that of the 20 learners, 2 (10%) were 17 years old or younger, 4 (20%) were 18 years old, 9 (45%) were 19 years old and 5 learners (25%) were over 19 years old. The researcher collected data from learners of varying age groups, a situation that increased validity and reliability of the data they proffered. This also means that the mixture of the varying age groups was a perfect sample to obtain ideas of all age-groups regarding the opportunities and challenges characteristic with the teaching of ‘Integration’ at Advanced level during lessons outside school sessions. The various age groups used by the researcher in this study also indicate that the researcher worked with learners from various ages. The same data is also reflective that Advanced level Mathematics is taken by learners of varying ages in Zimbabwe, as some of them can suspend the whole year after completing Ordinary level.

4.2.2 Teachers’ Demographic Data

4.2.2.1 Age of teachers

Table 4. 1 Showing Ages of teachers

Age (Years)	Frequency	Percentage
Between 20 and 40 years	1	10%

Between 40 and 50 years	4	40%
Above 50 years	5	50%
TOTAL	10	100%

Of the ten teachers used by the researcher, one of them, i.e. 10% was between twenty and forty years of age, while four of them (40%), were between forty and fifty years, and five teachers (50%), were above 50 years. The above ages reflect that, at the sampled schools, teachers of Advanced level Mathematics learners were a mixed bag of youthful and elderly teachers, and who could be seasoned or fresh from university, and could be conversant with the opportunities as well as challenges of using lessons outside school sessions to teach the topic ‘Integration’ at Advanced level. The teachers were also not too young to be novices in teaching Advanced level learners; hence the researcher assumed that she gathered reliable and valid data from the teacher respondents.

4.2.2.2 Sexes of Teachers

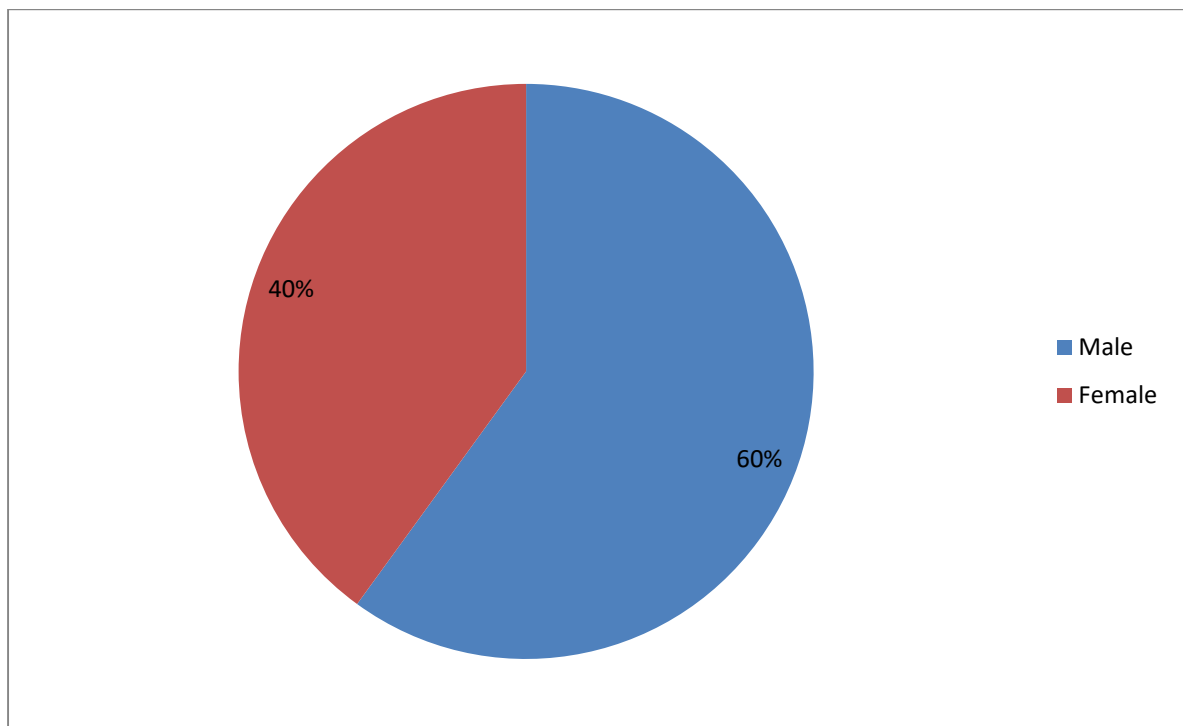


Figure 4. 3 Pie chart showing analysis of teachers’ sex

Figure 4.3 Pie Chart showing Analysis of teachers' sex (n=10)

From the pie chart above, it is evident that the researcher used 60% males and 40% female learners. This entails that of the 10 teachers, 6 were males and 4 were females. The use of both females and males in this study served to address gender balance. Thus, the researcher collected perceptions of all the sexes regarding the benefits and challenges of using lessons outside school sessions to teach 'Integration' outside school sessions.

4.2.2.3 Teaching experience

Table 4. 2 Frequency Table Showing Years of Teaching Experience

Working Experience	Frequency	Percentage
Less than or equal to 5 years	0	0%
Between 5 and 10 years	4	40%
Between 10 and 15 years	4	40%
Above or equal to 15 years	2	20%
TOTAL	5	100%

As shown on the frequency table above, four teachers (40%), had teaching experience of between five and ten years, four others (40%), had teaching experience of between ten and fifteen years, and two of them (20%), had more than fifteen years as a classroom practitioner. No teacher had less than or five years of teaching experience. The levels of teaching experience are ideal for this study, since the researcher intends to unravel challenges which these educators have been facing, or continue to meet as they design and use audio and visual instructional resources in their lessons. Though these highly experienced teachers could be maintaining the status quo, and failing to completely find possible solutions to challenges they face when using audio and visual media, the researcher feels that they must have found possible intervention

mechanisms to address the above challenges during their countless years of teaching experience.

4.2.3 Parents' Demographic Data

4.2.3.1 Ages of parents

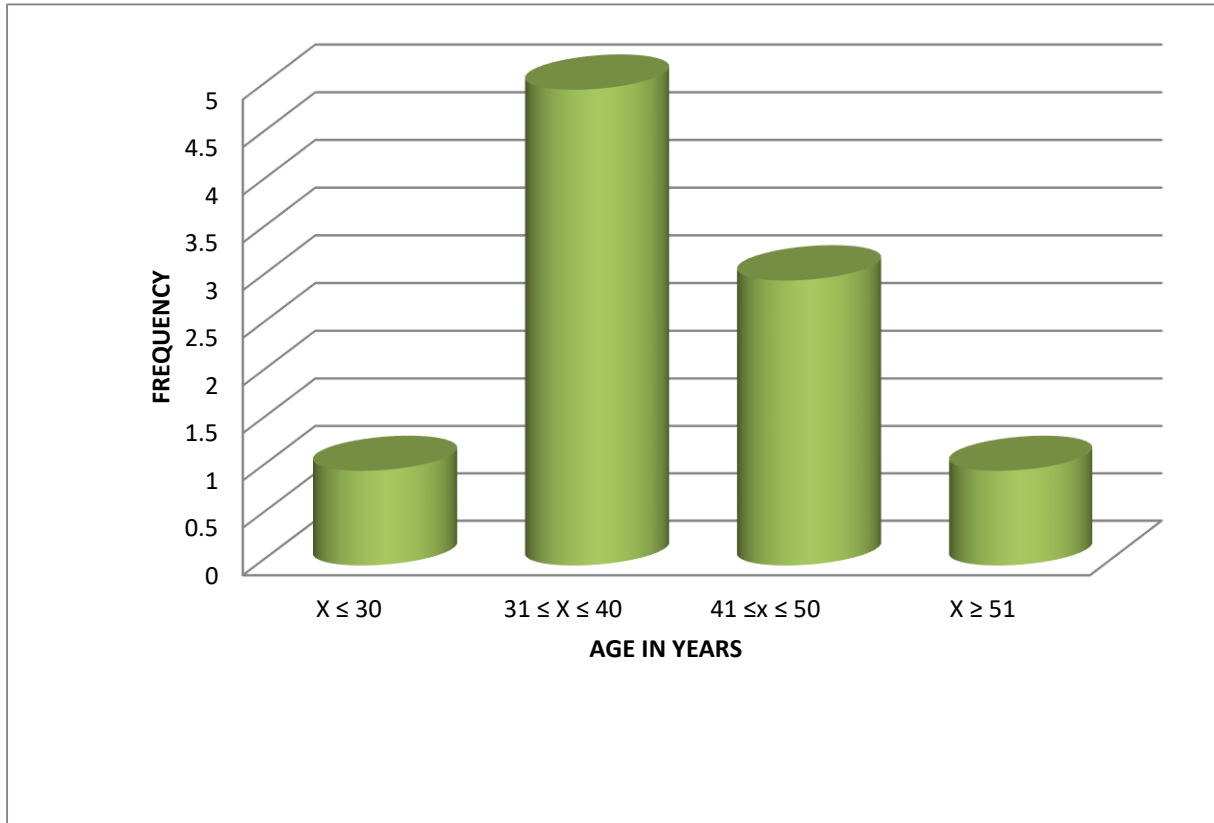


Figure 4. 4 Bar Graph Showing Ages of Parents (n=10)

From the bar chart above, it is manifest that of the respondents, one teacher (10%) is thirty years old or less, five teachers (50%) are between 31 and 40 years old, 3 teachers (30%) are between 41 and 50 years old and 1 teacher (10%) are greater than 51 years of age. This data shows that the greatest percentage (50%) of teachers used is in the age range of 31-40 years old, followed by 30% who are between 41 and 50 years. The data also reflects that a very small percentage of teachers (10%) are less than 30 years of age and another small figure, only 1 teacher (10%) is over 51 years old.

4.2.3.2 Sex of parents

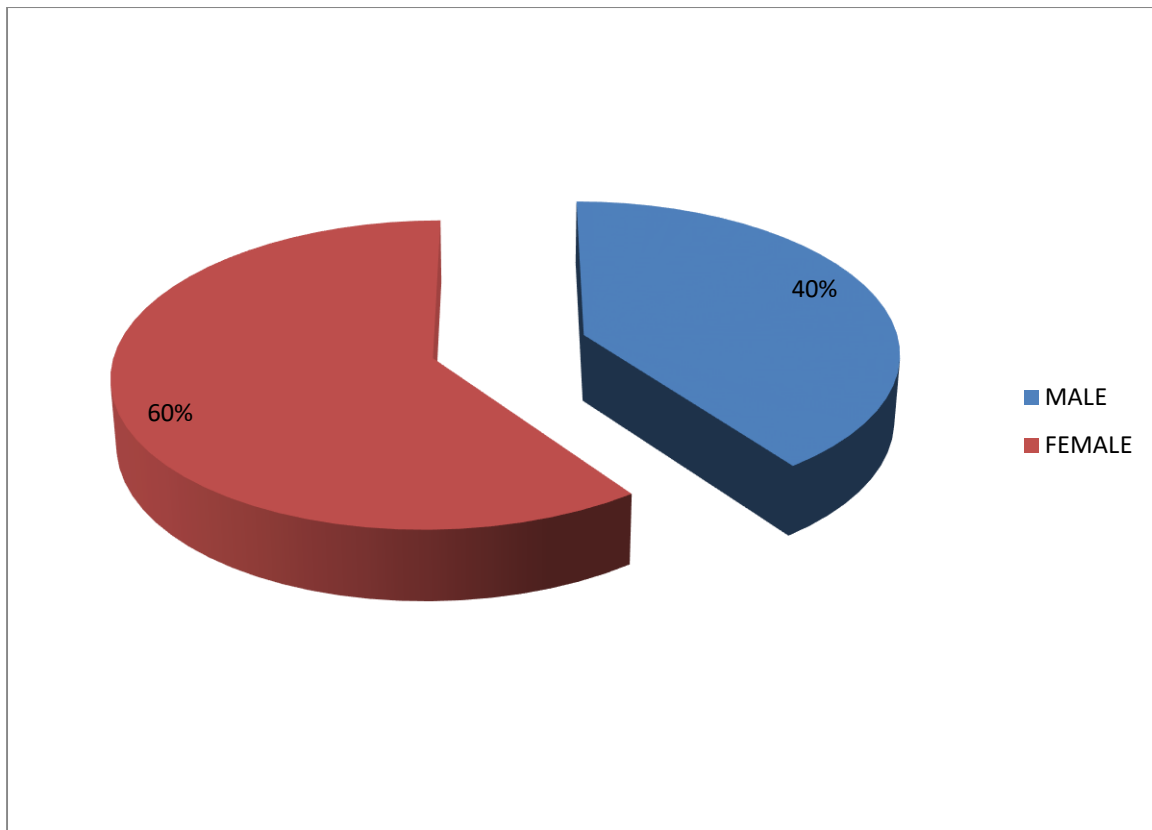


Figure 4. 5 Pie chart showing sex of parent respondents

The pie chart above shows that there are four male teachers (40%), and six female ones (60%), who worked with the researcher in this study. The inclusion of both sex groups in the study indicates that the researcher shall be able to authentic data from both male and female respondents. This ensured credibility to the information gathered, and the researcher was assured that her findings are generalizable. Creswell (2014), advises researchers to select their research populations with discretion, lest they fail to gather evidence that is not only valid or reliable, but also fail to gather data that can be generalized on various similar populations.

4.2.3.3 Educational qualifications of parents

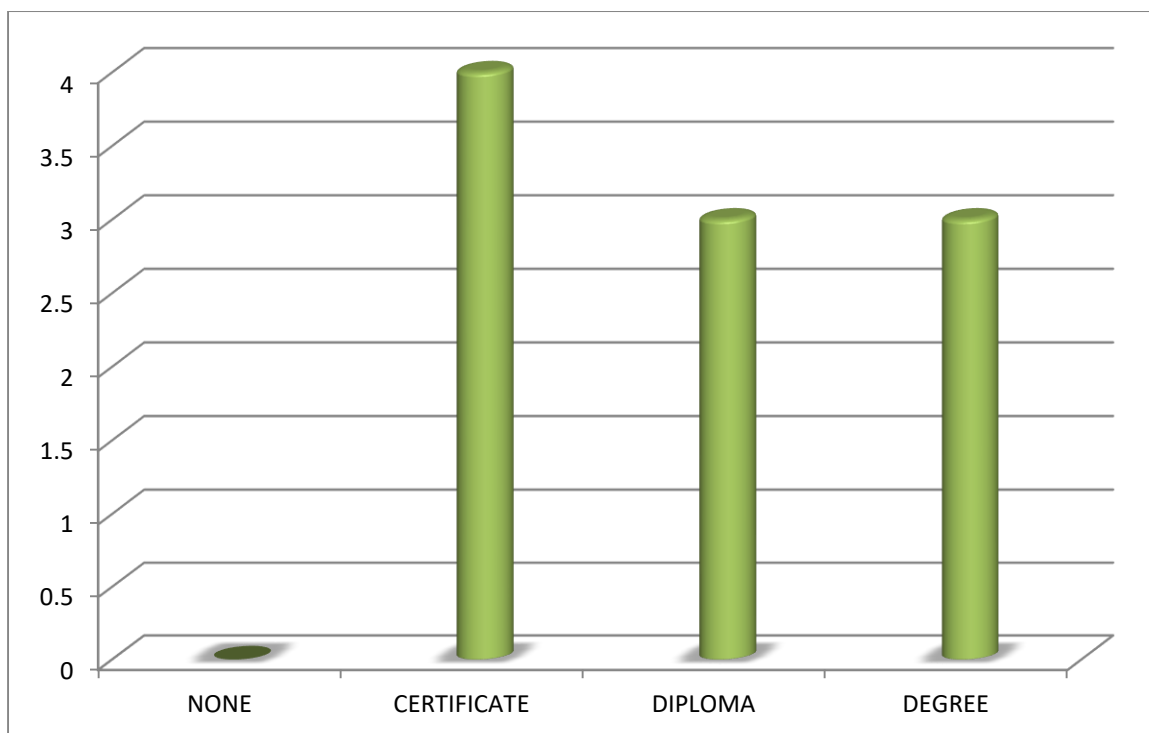


Figure 4. 6 Bar chart showing parents educational qualifications

The data in Figure 4.6 reflects that the parents of Advanced level Mathematics learners at the schools on which this study was carried out, there were three parents who are Degree holders (30%), while three of them (30%), hold Diplomas, and four parents (40%), were Certificate holders. The data above indicates that the parents used in this study had one qualification or another, and were conversant with the need to incorporate lessons outside school sessions when teaching the topic ‘Integration’ to Mathematics learners at Advanced level. Though the researcher was not concerned about the areas of specialization as regards the parents’ qualifications, the evidence was indicative that Zimbabwean parents were educated.

4.3 Advantages of teaching and learning of Advanced level Mathematics outside school sessions

4.3.1 Advanced Level Learners’ views

Table 4. 3 Showing the views of Advanced level learners (n = 20)

Possible advantage of lessons outside school sessions	SA	A	U	D	SD
- Learning environment without pressure	80%	10%	-	5%	5%

- They have focused attention	100%	-	-	-	-
- They eliminate unnecessary worry	15%	80%	-	5%	-
- They are personalized to suit individual learners	10%	75%	-	15%	-
- Source of encouragement	5%	95%	-	-	-
- Procure extra knowledge beyond textbooks	-	15%	-	80%	5%
- Enhance student interaction	85%	5%	5%	-	5%
- Improve rapport between teachers and students	-	5%	-	85%	10%
- Lead to self-discovery of concepts	-	-	-	25%	70%.
- They help to occupy idle learners	100%	-	-	-	-

Data from Table 4.1 is reflective that the learners strongly agreed that lessons outside school sessions focussed their attention (100%), occupied them most of the time (100%), enhanced peer interaction (85%), and provided a learning environment that was devoid of pressure (80%). Though not agreeing strongly, the learners agreed that extra classes were also beneficial as they gave them confidence by eliminating unnecessary exam worries (80%), suited individualized learning (75%) and were a source of encouragement and motivation (95%). These sentiments indicate that the learners were really aware of the merits they can derive from the conduct of lessons outside school sessions. Nonetheless, the learners strongly disagreed that extra lessons were contributory to discovery learning, hinting that they were a spoon-feeding approach that forced learners to follow pre-determined procedures when solving mathematics problems. The learners also disagreed, though not strongly, that lessons outside school sessions led to revelation of new content that was not commonly found in textbooks (80%) and that there was rapport among peers instituted by lessons outside school sessions (85%).

4.3.2 Teachers' views on the benefits associated with teaching and learning of Advanced level Mathematics lessons outside school sessions

The responses of the teachers regarding the merits of conducting extra lessons were varied, with the majority of the teacher indicating that extra classes were the best means of covering much ground on the syllabus, since learning time was being affected by COVID-19 induced lockdowns. The teachers were far from indicating that extra lessons were a means of fattening

their pockets, reflecting that the money they got from doing lessons outside school sessions was not commensurate with the effort they put to help their learners. Teacher A said that:

“Extra lessons are a means of gaining extra income but they are not that much profitable compared to the effort that I put through when delivering the lessons outside school sessions. I only carry them so as to assist learners who would be lagging behind and those that need extra attention.”

Again, the teachers highlighted that it was through lessons outside school sessions that they were able to attend to learners’ individual needs. The teachers indicated that during normal classes, they attend to as many as fifty learners in one lesson, a move that does not promote effective learning. Thus the teachers lamented at the extent of over-enrolment in schools, and offered that lessons outside school sessions were the best means to diagnose individual learners’ weaknesses and address them accordingly. Another group of teachers also indicated that extra lessons were beneficial as they gave teachers the rightful platform to provide learners with extra information that evaded textbooks but was found during assessment.

4.3.3 Parents’ views on the advantages associated with teaching and learning of Mathematics at Advanced level outside school sessions?

The study sought to establish the sentiments of the parents as regards the teaching and learning of ‘Integration’ during lessons outside school sessions, and on the advantages, the majority of the parents (80%) were of the opinion that extra lessons were really helpful for Advanced level learners as they greatly helped to eradicate idleness by occupying their children. The parents indicated that the COVID-19 pandemic brought some many months of no learning, and as a way to cover up for the lost time, extra lessons were the main option. Another group of parents (70%), also indicated that extra lessons served as a source of encouragement for all learners, even those who were average performers. These sentiments entailed that the parents felt that the one-on-one encounter that characterizes extra lessons was beneficial for instilling confidence that would boost interest to excel in Mathematics at Advanced level.

4.4 The challenges associated with teaching and learning of Advanced Level Mathematics outside school sessions

4.4.1 Learners' views on challenges teaching and learning of Advanced level Mathematics outside school sessions

Table 4. 4 Showing learners' views on challenges teaching and learning of Advanced level Mathematics outside school sessions (n = 20)

Possible challenge of lessons outside school sessions	SA	A	U	D	SD
- They are time consuming	-	5%	-	85%	10%
- They put students under a lot of pressure	15%	65%	5%	-	15%
- They over-burden students	-	10%	-	90%	-
- They are expensive	100%	-	-	-	-
- They can cause health problems	-	-	10%	90%	-
- They are illegal and not supported by policy	90%	10%	-	-	-

As shown in Table 4.2, the learners strongly agreed that the major challenges of lessons outside school sessions are their expensive nature (100%) as well as their illegal nature (90%). The learners also agreed, though not strongly, that extra lessons put them under a lot of pressure as they were more demanding than normal school sessions (65%), as they had to be attended consistently. The learners however disagreed that lessons outside school sessions were time consuming (85%), they overburdened them (90%) and they caused health problems.

4.4.2 Teachers' views on the challenges associated with teaching and learning of Advanced level Mathematics outside school sessions

The teachers also indicated that despite their numerous benefits, lessons outside school sessions came with their drawbacks. The major shortcoming highlighted by the teachers on lessons outside school sessions was that they were not supported by the Government of the day, and teachers had running battles with security details regarding the way they should be undertaken. Another teacher G also complained about the reaction of the government on conducting lessons outside school sessions and I quote:

“I conduct extra lessons as a means of assisting learners as well as earning a little more from these lessons. My major worry is on the reaction of the government towards the practice of conducting lessons outside school session as I am unable to conduct them publicly in fear of victimisation. Also securing a place for carrying these lessons is proving to be difficult as we will be hiding from the public hence creating a place that is not conducive for proper learning to take place among learners.”

The illegal nature of the extra lessons leads to teachers carrying them under closed doors, a situation that was not conducive for learners. Again, the teachers indicated that lessons outside school sessions were discriminatory in nature, as some of the parents were incapable of paying for their children. This means that lessons outside school sessions disadvantaged other learners who hailed from disadvantaged home backgrounds, among them: single parented learners, those learners from child-headed households, and those whose parents were unable to pay for them. The teachers did not however see extra lessons as time consuming.

4.4.3 Parents’ views on challenges characteristic with teaching and learning of Advanced level Mathematics outside school sessions?

As regards the possible challenges that can hamper effective learning of Advanced level concepts during lessons outside school sessions, the majority of the parents highlighted that the extra lessons were illegal and hence teachers were doing them clandestinely. These sentiments indicated that though the parents were footing bills of extra lessons, they were doing so knowing that there was no Government policy supporting them. The parents also indicated that the teachers involved in extra lessons were cashing in on parents as they continued to increase the fees depending on the level of education. Thus, extra lessons for Advanced level learners were construed as more expensive than those of lower classes. The parents also lamented at the lack of protection for their learners, especially the girl child, during lessons outside school sessions. Some of the parents highlighted that their children were taking advantage of the free time they were given during attendance of lessons outside school sessions to engage in love affairs with school mates, or any other members of the community. Thus, this group of parents felt that extra lessons put their female children at risk of sexual molestation, either by class mates, the concerned teachers, or any members of the community.

4.5 Strategies to be implemented to improve the teaching and learning of Advanced Level Mathematics outside school sessions

4.5.1 Learners on strategies that can be implemented to improve the teaching and learning of ‘Integration’ at Advanced level during lessons outside school sessions

Table 4. 5 Views of learners on strategies that can be implemented to improve the teaching and learning of ‘Integration’ at Advanced level during lessons outside school sessions (n = 20)

Possible strategy to improve use of extra classes	SA	A	U	D	SD
- First consider students’ abilities	15%	70%	-	15%	-
- Creating a Government-parent link	-	10%	80%	-	10%
- Parents should give children a break	10%	75%	5%	10%	-
- Closely monitoring students during extra classes	100%	-	-	-	-
- Introducing policy supporting extra lessons	10%	90%	-	-	-

As regards the strategies that can be implemented to improve the way extra lessons are carried out in Advanced level mathematics, particularly when teaching ‘Integration’, data in Table 4.3 is reflective that the learners strongly agreed that there was need to strictly monitor them during the exercise (100%) to avoid those mishaps associated with freedom of lessons outside normal school sessions. The learners were of the opinion that there is also need by concerned parents to even inspect the books that were used for extra classes, to ascertain if the lessons were being done as scheduled. The learners also agreed, though not strongly that sometimes there was no need for extra lessons (70%), learners needed adequate resting time (75%) and that the Government should legalize extra lessons to avoid running battles between law enforcement agents and Mathematics teachers. The learners were also undecided as to how a link between the Government and members of the parent community would be of any value in improving the way lessons outside school sessions are conducted.

4.5.2 Teachers’ views on techniques that can be implemented to improve the teaching and learning of Advanced level Mathematics outside school sessions

This finding means that the teachers agreed to the need for adequate remuneration to eradicate extra classes. The teachers indicated that if remunerations were to improve, extra lessons would take the form of remedial assistance, and only a few learners below average in terms of performance would attend. Teacher J was of the view that:

“If the government is to legalise the conducting of lessons outside school sessions, am sure it will improve the overall performance of learners at Advanced Level Mathematics.”

The teachers also indicated that they yearned for the legalization of the extra lessons, so that they will be done in ordinary classes, and they would not be as costly as they are today. These sentiments were that, due to their illegal nature, lessons outside school sessions were done through underhand means, and hence they were more expensive than they would be if there was a clear policy legalizing them. Teachers also hinted that parents were not supposed to succumb to pressure and unnecessarily send their children for extra classes, but they were supposed to weigh their performance first to establish if it was suitable to do so.

4.5.3 Parents’ views on techniques that can be implemented to improve the teaching and learning of Mathematics at Advanced level outside school sessions?

When asked as to what can be done to improve the way lessons outside school sessions should be undertaken, the bulk of the teachers opted for the ban of extra lesson, as they argued that their benefits were outweighed by the underlying consequences. The parents indicated that the best approach to curb the detrimental effects brought by partaking in lessons outside school sessions was for the Government to offer adequate remuneration to the teachers. The parents decried the meagre salaries given to teachers, in spite of their educational qualifications, their teaching experience and the level of classes they taught. The parents were quick to point out that extra lessons were prompted by poor remuneration packages offered to Advanced level Mathematics teachers, and if the employer would address this, extra classes would quickly disappear, and teachers would normally finish the syllabus during normal times. The parents also wished for the Government to legalize extra lessons, so that teachers would carry them out in classrooms, and consequently lessening those challenges like sexual abuse. .

4.6 Discussion of the findings.

The gathered data indicated that there were correlations and differences here and there. As regards the benefits brought by lessons outside school sessions, the sentiments by the learners that extra classes were beneficial as they gave them confidence by eliminating unnecessary

exam worries, suited individualized learning and were a source of encouragement and motivation are a reflection of the assertions of Wong et al. (2016), Ziaie (2020) and Osman (2020) respectively. Yet, when the learners strongly disagreed that extra lessons were contributory to discovery learning, hinting that they were a spoon-feeding approach that forced learners to follow pre-determined procedures when solving mathematics problems, are not in tandem with the ideas opined by Tsai and Chai (2017), who advocated for lessons outside school sessions as they were clinical in approach – hence propped up attributes of discovery. The sentiments of the learners when they disagreed that lessons outside school sessions led to revelation of new content that was not commonly found in textbooks, are much to the antagonism of sentiments by Paviot (2018) who avers that extra lessons bring about new content which may be known by examining bodies only.

In addition, the sentiments of the majority of the teachers indicating that extra classes were the best means of covering much ground on the syllabus (Mutambudzi, 2020), are substantial since learning time was being affected by COVID-19 induced lockdowns. That the teachers refuted that extra lessons were a means of fattening their pockets, reflecting that the money they got from doing lessons outside school sessions was not commensurate with the effort they put to help their learners, is however against the sentiments of Mapara (2019), who posits that teachers were cashing in on the extra classes. Again, the teachers highlighted that it was through lessons outside school sessions that they were able to attend to learners' individual needs, much to similar views by O' Hagan (2020), who concurs that extra lessons make teachers help struggling learners individually. The teachers indicated that during normal classes, they attend to numerous learners in one lesson, a move that does not promote attention to individual differences. Thus the teachers lamented at the extent of over-enrolment in schools, and offered that lessons outside school sessions were the best means to diagnose individual learners' weaknesses and address them accordingly (Pujari, 2020). Parents also offered that extra lessons greatly help to eradicate idleness by occupying their children. The parents indicated that the COVID-19 pandemic brought some months of no learning, and as a way to cover up for the lost time, extra lessons were the main option. This supports the ideas of Evans (2020), who hints that extra lessons cover up for the time lost due to COVID-19.

As regards the challenges associated with lessons outside school sessions, the learners indicated that the major challenges of lessons outside school sessions are their expensive nature (Tripod, 2017) as well as their illegal nature (Mutambudzi, 2020). The learners' reflections that extra lessons put them under a lot of pressure as they are more demanding than normal school

sessions echo the sentiments of Javaid and Vaishya (2020), who acknowledges that lessons outside school sessions added unnecessary pressure on learners. The learners however disagreed that lessons outside school sessions were time consuming, they overburdened them and they caused health problems and this differed with the sentiments of Paviot (2018), Thomas (2020) and Bray (2019) respectively.

The illegal nature of the extra lessons was reiterated by teacher respondents, who indicated that this leads to teachers carrying them under closed doors, making the girl child susceptible to sexual abuse. Again, the teachers indicated that lessons outside school sessions were discriminatory in nature, as some of the parents were incapable of paying for their children. This supported assertions of Mutambudzi (2020), who avers that lessons outside school sessions disadvantaged other learners who hail from disadvantaged home backgrounds. The majority of the parents highlighted that the extra lessons were illegal and hence teachers were doing them clandestinely. These sentiments indicated that though the parents were paying for extra lessons, they were doing so knowing that it is against Government policy.

On ways of ensuring effective undertaking of lessons outside school sessions, learners offered that there was need to strictly monitor them during the exercise to avoid those mishaps associated with freedom of extra lessons. The learners also opined that they needed adequate resting time and that the Government should legalize extra lessons to avoid running battles between police and Mathematics teachers. The majority of educators highlighted that if their remuneration would improve, they will be able to effectively execute their duties within the timelines indicated on the syllabus and consequently get rid of extra lessons. The teachers' sentiments indicated that if remunerations were to improve, extra lessons would take the form of remedial assistance, and only a few learners below average in terms of performance would attend, an assertion akin to Tokwe (2018). The teachers also indicated that they yearned for the legalization of the extra lessons, so that they would not be as costly as they are today.

The parents repeated calls by teachers and indicated that the best approach to curb the detrimental effects brought by partaking in lessons outside school sessions was for the Government to offer adequate remuneration to the teachers. Though not related to any earlier findings, the researcher found this to be helpful particularly in the light of the economic meltdown bedeviling the country. The parents decried the meagre salaries given to teachers, in spite of their educational qualifications, their teaching experience and the level of classes they taught (Mutambudzi, 2020; Sahu, 2020). The parents pointed out that the need for extra

lessons was caused by poor remuneration packages offered to Advanced level Mathematics teachers, and if the Government would address this, extra classes would quickly vanish. The parents also wished for the Government to legalize extra lessons, so that teachers would carry them out in safe environments, consequently lessening those challenges like sexual molestation of the girl child.

4.7 Chapter summary

This chapter presented the data that the researcher collected from questionnaires, oral interviews and focus group discussions. The data was displayed on statistical graphs such as: frequency distribution tables, bar graphs and pie charts. Thereafter, the researcher explained the meaning of the displayed information, and then gave analysis and interpretation of the findings in relation to the research objectives. Thus, the data gathered was analysed and interpreted to ascertain any correlations between the researcher's data and other earlier findings. The next section, Chapter 5, gives the summary of the entire study, conclusions drawn from the findings and recommendations proposed.

CHAPTER 5

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter gives the summary of the whole study, the conclusions deduced by the researcher using the data obtained, and the recommendations proposed basing on the researcher's findings.

5.2 Summary of the study

This study was done in 2022, and it was delimited to three high schools found in Zvimba District, Mashonaland West Province. The main purpose of carrying out this study was to examine the opportunities and challenges of carrying out lessons outside school session when teaching 'Integration' at Advanced level. The main objectives were to: establish the benefits associated with teaching and learning of "Integration" at Advanced level outside school sessions, determine challenges are characteristic with teaching and learning of 'Integration' outside school sessions, and propose techniques that can be implemented to improve the teaching and learning of 'Integration' at Advanced level outside school sessions.

The second chapter referred to ideas of authorities consulted on aspects related to use of extra lessons in teaching and learning of Mathematics concepts. The literature analysed: the merits of employing lessons outside school sessions in teaching and learning of 'Integration' in Advanced level Mathematics and the challenges that are encountered by educators and learners when carrying out lessons outside school sessions in Advanced Level 'Integration' lessons. Also scrutinized in the related literature were possible interventions that Advanced Level Mathematics teachers and learners can adopt in trying to improve the use of lessons outside school sessions in teaching and learning of 'Integration'.

A mixed methods research paradigm and a descriptive survey research design were preferred by the researcher to collect data for this study. The research design adopted by the researcher relied on oral interviews, questionnaires and focus group discussions as key research instruments used to gather data for analysis. The oral interviews were conducted with 10 teachers, focus group discussions were done with 10 parents and questionnaires were administered to 20 learners.

The data collected from questionnaires, oral interviews and direct observations was recorded and presented on pie charts, bar graphs and frequency tables. The data collected by the researcher indicated that No serious challenges were encountered by the researcher, save for time constraints and limited resources to effectively move around schools to carry out the study.

5.3 Conclusions

The researcher came out with the following conclusions

5.3.1 What are the opportunities associated with teaching and learning of ‘Integration’ in Mathematics at Advanced level outside school sessions?

The study sought to establish the sentiments of the participants as regards the teaching and learning of ‘Integration’ during lessons outside school sessions, and on the advantages, it was established that extra lessons were really helpful for Advanced level Mathematics learners as they greatly help to eradicate idleness, and since the COVID-19 pandemic brought some months of limited learning, extra lessons were the main option to cover up for the lost time. Data obtained also indicated that extra lessons served as a source of encouragement for all learners, even those who were average performers, and the one-on-one encounter that characterizes extra lessons was beneficial for instilling confidence that would boost interest to excel in Mathematics at Advanced level. In addition, the teachers highlighted that it was through lessons outside school sessions that they were able to attend to learners’ individual needs and due to over-enrolment in schools, lessons outside school sessions were the best means to diagnose individual learners’ weaknesses and address them accordingly. Parents also offered that extra lessons greatly help to eradicate idleness by occupying their children.

5.3.2 What are challenges characteristic with teaching and learning of ‘Integration’ at Advanced level Mathematics outside school sessions?

As regards the possible challenges that can hamper effective learning of Advanced level concepts during lessons outside school sessions, the participants highlighted that the extra lessons were illegal and hence teachers were doing them clandestinely. The parents indicated that the teachers involved in extra lessons were cashing in on parents as they continued to increase the fees depending on the level of education. Thus, extra lessons were construed as expensive for the parents who were already paying for their children’s fees. The participants

also lamented at the lack of protection for the learners, especially the girl child, during lessons outside school sessions. Parents highlighted that children were taking advantage of the free time they were given during attendance of lessons outside school sessions to engage in love affairs with school mates, or any other members of the community. Thus, participants felt that extra lessons put female children at risk of sexual molestation. Again, the participants indicated that lessons outside school sessions were discriminatory in nature, as some of the parents were incapable of paying for their children. This means that lessons outside school sessions disadvantaged other learners who hailed from disadvantaged home backgrounds who had no money to pay for them.

5.3.3 What techniques can be implemented to improve the teaching and learning of 'Integration' at Advanced level outside school sessions?

On sentiments as to what can be done to improve the way lessons outside school sessions should be undertaken, the bulk of the respondents opted for the ban of extra lesson, as they submitted that their challenges outweighed their perceived benefits. The participants indicated that the best approach to curtail the detrimental effects brought by partaking in lessons outside school sessions was for the Government to offer adequate remuneration to the teachers. The participants decried the meagre salaries given to teachers, in spite of their educational qualifications, their teaching experience and the level of classes they taught. The participants pointed out that the concept of extra lessons was precipitated by poor remuneration packages offered to teachers and the need to supplement these paltry salaries. The parents also wished for the Government to legalize extra lessons, so that teachers would carry them out in classrooms, and consequently lessening those challenges like sexual abuse. Teachers also hinted that parents were not supposed to succumb to pressure and unnecessarily send their children for extra classes, but they were supposed to weigh their performance first to establish if it was suitable to do so.

5.4 Recommendations

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

5.4.1 Parents should not send their children for extra lessons for the sake of just sending them, since it could be wastage of resources. They must gauge the need to do so.

5.4.2 The Government of Zimbabwe should come up with viable policies that permit the undertaking of lessons outside school sessions legally, to minimize the mouse and cat game that prevails

5.4.3 There is need to strictly monitor learners partaking in extra lessons to check if they are not going off the rail, and to nip in the bud any cases of mischief.

5.4.4 The Government of Zimbabwe should improve remuneration for teachers as a way to shun underhand dealings like lessons outside school sessions.

REFERENCES

- Agere, A. (2019). Implementing educational policies in Zimbabwe. World bank discussion paper no 91 Africa Technical Department Series.
- Barmidele, F. (2020) Confronting the shadow education system: What government policy for what private tutoring? UNESCO: Paris.
- Becta, C. (2014) The private lessons phenomenon in a form five girls' Mathematics classroom. Bed (Hons) dissertation. University of Malta.
- Basilaia C. & Kvakvadze M. (2020). Issues and challenges in special education: A qualitative analysis from teacher's perspective. Southeast Asia Early Childhood Journal, 37-49
- Bordbar, K. (2016). The preventive role of support mechanisms for pupils outside school. Informations Sociales
- Bray, M. (2017). Schooling and its supplements: Changing global patterns and implications for comparative education. Comparative Education Review, 469-491
- Bray, M. (2019) Adverse effects of private supplementary tutoring: Dimensions, implications and government responses. Paris: UNESCO
- Best and Khan (2013). Zimbabwe's education system: A solid foundation for undergraduate. Education. Harare: Public Affairs Section.
- Buabeng-Audoh (2017), Parental attitude and environmental in children education. A study on the parental aspiration among form five and six students in Selangor, International Educational Journal 6(1): 65-74
- Bourdieu, P. (2018) Practical subjects in basic education relevance at last or second-rate education? Lessons from 40years of experience. Sustainable Development Department. FAO
- Bukaliya, R. (2021). The impact of extra lessons on the political environment: A case study of the three urban day high schools in Chegutu, Zimbabwe. African Educational research Journal, 620-629
- Creswell, J. W. (2014). Research design, qualitative and quantitative and mixed approaches. Thousand Oaks, CA: Sage Publications

Chiromo, K. (2014). Ministry of Education, Sports, Art and Culture (Zimbabwe) Policy Circular No P77.

Delpont, J. and Dhlano, T. (2015) Learning out of school: Homework and tutoring- A research study in Luxembourg. Institut fur Psychologie, Friedrich Alexander University.

Eickelman, C. (2018) Impacts of urban economic factors on private tutoring industry. *Asia Pacific Education Review*, 13(2):273-80

Javaid and Vaishaya (2020) *The Impact of study support*. DfEE:London

Ihmeideh, M. (2019) *The hidden market place: Private tutoring in the former socialist countries*. Open Society Institute: New York

Kabanda, K. (2017) *Extra tuition as extra lessons in Zimbabwe*. Government Printers: Harare

Kwenda, S. (2017) Zimbabwe's school system crumbles. Retrieved from <http://ipsnews.net>

MacMillan & Schumacher (2018) "At school we don't pay attention anyway". *The informal market of education in Egypt and its implications*. *Sociologies*, 58(1): 27-48

Mapara, T. (2019) Effects of holiday lessons and financial pressures on low income families and households in Masvingo, Zimbabwe. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 2(6): 465-470

Manatsa, A. (2018) Exploring the practice of extra lessons as offered in Chinhoyi urban secondary schools, Mashonaland West Province, Zimbabwe. *Journal of Innovative Research in Management and Humanities*, 2(1): 26-35

Mustafa, P. (2020) Zimbabwe's school system crumbles. Retrieved from <http://ipsnews.net>

Masuku H. (2017) The politics of Mathematics in Zimbabwe, *STEM Matters*, 42:2, 248-263, DOI:10.1080/10228195.2011.581679.

Mupa, P., & Chinooneka, T. I. (2015). Factors contributing to ineffective teaching and learning. *Journal of Education and Practice*, 125-133

Mutambudzi M (2020). *Crisis! What Crisis? The Multiple Dimensions of the ZIMBABWEAN Crisis*. HSRC Press,

Ndlela, L. (2019) Educational provisions in Zimbabwe: Issues and challenges. Addis Ababa: OSSERA

O' Hogan (2014), Zimbabwe's public education system reforms: successes and challenges. *International Education Journal*, 6(1), 65-74s

Osman, T. (2020) Teacher as moral model- are we caring enough. *World. Journal of Education*, 5(6): 1

Paviot, T. (2018) The role of lead teachers in Instructional leadership: A case study of environmental learning in South Africa. *Education as Change*, 17(sup1): S123-S135.

Shizha, E. (2013). Restoring the educational dream. *Rethinking Educational Transformation in Zimbabwe*. Retrieved from <https://books.google.co.zw>

The Government of Zimbabwe, 2015. Memo from the secretary for primary and secondary education. Harare. Zimbabwe: Ministry of Primary and Secondary Education.

Thomas, J. (2020) Determinants of shadow education: A cross-national analysis. https://etd.ohiolink.edu/!etd.send_file?accession=osul259703574

Tokwe, S. and Bwititi, H. (2018). Extra "cash" lessons. *The Sunday Mail Newspaper*, 29 April 2018. Harare: Zimpapers.

Tsai T. & Chai C. (2017) *Education in a hidden marketplace: Monitoring of private tutoring*. Open Society Institute: New York

Yin R. K. (2019). *Case study research: Design and methods, applied social research methods series*. (3rd edition). Thousand Oaks: Sage Publications

Wong, T. Uche, A., Alysha B & Margaret, W (2016). *An Educational Calamity: Learning and Teaching during the Covid-19 Pandemics*

Zvobgo, E. (2014)

APPENDIX A: INTERVIEW GUIDE FOR TEACHERS

The researcher conducted face to face oral interviews with Mathematics teachers to establish their perceptions to opportunities and challenges associated with carrying out lessons outside school session in teaching ‘Integration’ at Advanced level.

Section A: Research Items

RESEARCH QUESTION 1: What are the benefits associated with teaching and learning of ‘Integration’ at Advanced level outside school sessions?

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

RESEARCH QUESTION 2: Which challenges are characteristic with teaching and learning of ‘Integration’ outside school sessions?

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

RESEARCH QUESTION 3: What techniques can be implemented to improve the teaching and learning of ‘Integration’ at Advanced level outside school sessions?

.....
.....

.....

.....

.....

.....

.....

APPENDIX B: FOCUS GROUP GUIDE FOR PARENTS

The researcher conducted face focus group discussions with parents of Advanced level Mathematics students to ascertain their perceptions to opportunities and challenges associated with carrying out lessons outside school session in teaching ‘Integration’ at Advanced level.

All the parents had children doing Advanced level Mathematics at the sample school, and were also paying for lessons outside school sessions.

Section B: Research Items

RESEARCH QUESTION 1: What are the advantages associated with teaching and learning of Mathematics at Advanced level outside school sessions?

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

RESEARCH QUESTION 2: Which challenges are characteristic with teaching and learning of Advanced level Mathematics outside school sessions?

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

RESEARCH QUESTION 3: What techniques can be implemented to improve the teaching and learning of 'Integration' at Advanced level outside school sessions?

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

.....
.....

APPENDIX S: QUESTIONNAIRE FOR STUDENTS

Section A: Introduction

My name is Mataruse Vimbai, and I am studying for a Bachelor of Science Education Degree at Bindura University of Science Education majoring in Mathematics. I am carrying out a study on teachers' and students' perceptions of opportunities and challenges of learning 'Integration' outside the school sessions in three high schools in Zvimba district in Mashonaland West Province, Zimbabwe. May you kindly fill in the questionnaire below to the best of your knowledge, and be assured that your opinions shall be solely used for educational purposes. Do not write your name on the questionnaire.

Section B: Research Questions

1. What are the advantages associated with teaching and learning of Mathematics at Advanced level outside school sessions?

Possible advantage of lessons outside school sessions	SA	A	U	D	SD
- Learning environment without pressure					
- They have focussed attention					
- They eliminate unnecessary worry					
- They are personalized to suit individual learners					
- Source of encouragement					
- Procure extra knowledge beyond textbooks					
- Enhance student interaction					
- Improve rapport between teachers and students					
- Lead to self-discovery of concepts					
- They help to occupy idle learners					

Key: SA – Strongly Agree; A- Agree; U–Undecided; D–Disagree; SD–Strongly Disagree

Other (specify)

.....

.....

.....

.....

.....

.....

2. Which challenges are characteristic with teaching and learning of ‘Integration’ in Advanced level Mathematics outside school sessions?

Possible challenge of lessons outside school sessions	SA	A	U	D	SD
- They are time consuming					
- They put students under a lot of pressure					

- They over-burden students					
- They are expensive					
- They can cause health problems					
- They are illegal and not supported by policy					

Key: SA – Strongly Agree; A- Agree; U – Undecided; D – Disagree; SD – Strongly Disagree

Other (specify)

.....

.....

.....

3. What strategies can be implemented to improve the teaching and learning of ‘Integration’ at Advanced level outside school sessions?

Possible strategy to improve use of extra classes	SA	A	U	D	SD
- First consider students’ abilities					
- Creating a government-parent link					
- Parents should give children a break					
- Closely monitoring students during extra classes					
- Introducing policy supporting extra lessons					

Key: SA – Strongly Agree; A- Agree; U – Undecided; D – Disagree; SD – Strongly Disagree

Other (specify)

.....

.....

.....

.....

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