



Use of Alternate Tests for Learners who Are Deaf in Botswana Primary Schools for the Deaf

A Thesis Presented to the School of Graduate of the University of Botswana in Partial
Fulfilment of the Requirement for Masters of Education Degree in Curriculum and
Instruction

By

Andina Thandi Wendy Ramokate

UB ID: 200204092

June 2015

Approval Page

This research project has been examined and approved as meeting the requirements and standards of scholarship for partial fulfillment of the required degree of Master of Education, Curriculum & Instruction.

Main Supervisor

Date

Co-Supervisor

Date

Internal Examiner

Date

External Examiner

Date

Dean of Graduate Studies

Date

Statement of Originality

The author, Andina Thandi Wendy Ramokate at the University of Botswana has completed her work in this research essay between January 2011 and July 2013. The study is original apart from where references have been included and neither has been nor will be submitted for the award of any other university. The researcher therefore, also accepts responsibility of any limitations that may be inherent therein.

Signature by the student: _____

Dedication

The study is dedicated to my family members, my sister Phikisani Ramokate , my brothers Mr Motlhalifi Ellion and Mr Gobusamang Tshekiso not forgetting my little Ekene.

Acknowledgements

Ms Andina Thandi Wendy extends her heartfelt thanks to her supervisors Dr. S. Mukhopadhyay and Dr E. Tafa for their unreserved hospitality, valuable guidance, scholarly criticisms, suggestions and persistent encouragement without the work would have been meaningless. These supervisors assisted me in all chapters and took time to intensively read my work.

Thank you my supervisors for staying with me to the end. I'm also grateful to my professor Henty Johnson Nenty who devoted his time in reading my manuscripts. Also a special word of thanks goes to University of Botswana Foundation for sponsoring me to accomplish my studies, and lastly my sister Phikisani Ramokate, brothers Motlhalifi Ellion and Gobusamang Tshekiso for giving me their moral support during this period.

I'm also very thankful to my God who led, guided and travelled with me though this journey of complete this study.

Table of Contents

Approval Page.....	i
Statement of Originality.....	ii
Dedication.....	iii
Acknowledgements.....	iv
Table of Contents.....	v
List of Tables of Figures and Tables.....	viii
Figures.....	viii
Tables.....	viii
Abstract.....	ix
Chapter 1.....	1
Introduction.....	1
Introduction and Background of the Study.....	1
Educational provisions for Learners with DHH in Botswana.....	4
Theoretical/Conceptual foundation.....	7
Social Justice Theory.....	7
Constructivist Theory.....	7
Statement of the Problem.....	10
The Purpose of the Study.....	11
Research Hypothesis.....	11
Research Questions.....	11
Significance of the Study.....	12
Assumption.....	13
Limitations.....	13
Delimitations.....	13
Definition of terms.....	14

Summary	15
Chapter 2	16
Literature Review.....	16
Introduction	16
Deaf Education.....	19
Summary of Literature	26
Chapter 3	28
Research Methodology	28
Introduction	28
Research Design.....	28
Research Setting.....	29
Participants and Sampling Procedures	30
Test Preparation, Design and Administration	31
Test Construction and Presentation.....	33
Alternate Test 1: Fill in the Blanks	33
Alternate Test 2: Teacher Sign and Students responded by signing	33
Alternate Test 3: Signed English Multiple Choice Test.....	33
Alternate Test 4: Teacher signed the passage students write the composition	33
Pilot Testing	35
Ethical Considerations.....	36
Data Analysis Plan	36
Summary	37
Chapter 4	38
Data Presentation, Analysis and Discussions of Results	38
Introduction	38
Analysis of Hypotheses.....	39
Hypothesis 1	39

Hypothesis 2	46
Hypothesis 3	46
Summary of Findings	46
Chapter 5	47
Summary, Conclusions and Recommendations	47
Introduction	47
Chapter Summary	47
Conclusion	47
Recommendations	48
References	50
Appendix 1	56
Standard test	56
Appendix 2	57
Adapted Curriculum Based Test for Standard 5,6 & 7 for Learners With hearing impairment Test 1	57
The Wedding I Once Attended	57
Appendix 3	59
Adapted Curriculum Based Test for Standard 5,6 & 7 for Learners With hearing impairment Test 2	59
The Wedding I Once Attended	59
Appendix 4	61
Adapted Curriculum Based Test for Standard 5,6 & 7 for Learners With hearing impairment Test 3	61
The Wedding I Once Attended	61
Appendix 5	63
Adapted Curriculum Based Test for Standard 5,6 & 7 for Learners With hearing Impairment Test 4	63

List of Tables of Figures and Tables

Figures

Figure 1 Map of Botswana showing locations of the two schools of deaf in Botswana _____ 28

Tables

Table 1 PSLE Percentage Pass Grades (A-C only) _____ 2

Table 2 One-Group Pretest-Posttest Design _____ 27

Table 3 Details About the Participants _____ 29

Table 4 Five tests which were administered _____ 30

Table 5 A Sequences on How Tests Were Presented _____ 30

Table 6 Hypotheses Testing Procedures _____ 34

Table 7 Demographic information _____ 36

Table 8 Dependent t-test of the Significance Between Traditional Test Scores and Alternate Test Scores _____ 40

Table 9 Comparison of Alternate Test Scores _____ 41

Table 10 Independent t-Test Analysis of Gender Influence on Performance _____ 42

Table 11 Independent t-Test Analysis of School and location influence on Performance of Deaf Education _____ 43

Abstract

This study was undertaken because of a concern that learners who are deaf and hard of hearing (DHH) in Botswana are performing poorly compared to their peers without DHH. The purpose of this study was to investigate if learners who are deaf and hard of hearing perform better in alternate forms of tests (sign language) compared to paper and pencil tests (standard tests). A one-group pre-tests-post-tests design experiment test was carried out to investigate if there is any significant difference between alternate test scores and standard tests scores. Five different tests were set from the same content, test 1 was Standard test: Written guided composition, test 2, Alternate Test 1: Fill in the Blanks, test 3 alternate test 2: Teacher Sign and Students responded by signing, test 4 alternate test 3: Signed English Multiple Choice Test and test 5 was alternate test 4: The teacher signed the passage while students wrote the composition. Tests were marked and percentage scores were coded and entered into SPSS version 20.0. Three hypotheses were proposed and were tested using independent t-test and dependent t-test at alpha level of .05. The findings reported that alternate test scores were higher than standard test scores. In short there is a significant difference between alternate test scores and standard test scores on performance of learners who are deaf. The major recommendation which can have a positive impact on this study is that deaf or hard of hearing learners need to be tested using alternate tests for them to have equal testing opportunities with the rest of the society.

Chapter 1

Introduction

This chapter argues for the use of alternate tests for hearing impaired learners in Botswana Primary schools for the deaf. This is the first chapter of the study. This chapter comprises of the background information of the study, statement of the problem, objectives of the study, the study hypotheses, significance of the study, limitations of the study, delimitations of the study and definitions of terms.

Introduction and Background of the Study

Providing equal access and participation has become one of the major policy agenda in Botswana education system (Government of Botswana, 2011). In order to achieve this goal, the educational provision for learners with Special Educational Needs (SENs) should align with the government mandates to ensure schools are providing adequate instruction and appropriate assessment techniques for all learners including those who are deaf and hard of hearing. Currently, learners who are deaf and or hard of hearing sit for national examinations in the language of the majority- English. It is well documented in the literature that learners who are deaf and hard of hearing lack proficiency in English therefore struggle to pass in national examination such as Primary School Leaving Examinations (PSLE) and Junior Certificate (JC) (Mukhopadhyay & Moswela, 2010; Lekoko & Mukhopadhyay, 2007). Table 1 enlightens students' performances on Botswana Primary School Leaving Examinations and other primary schools whose PSLE results were compared to the results of the two Deaf primary schools in Botswana. Other schools were chosen to compare with schools for the Deaf. *N* in brackets refers to the number of pupils who got grade A-C over the total overall number of students per school who wrote the examination that year.

Table 1

PSLE Percentage Pass Grades (A-C only)

School	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
R. C. D. E.	57 (n=4/7)	0 (n=0/12)	50 (n=6/12)	0 (n=0/12)	71 (n=5/7)	12 (n=2/17)	60 (n=6/10)	0 (n=0/10)	0 (n=0/16)	0 (n=0/11)
Mojadifé	100 (n=18/18)	81 (n=13/16)	100 (n=18/18)	100 (n=25/25)	76 (n=13/17)	70 (n=19/27)	71 (15/21)	91 (n=21/23)	46 (n=16/35)	63 (n=4/22)
O. L.D.	97 (n=116/119)	99 (n=132/134)	97 (n=124/128)	98 (n=134/137)	97 (n=136/140)	99 (n=133/135)	99 (n=134/136)	96 (n=126/131)	99 (n=133/135)	97 (n=120/124)
Ikhutseeng	96 (n=131/136)	97 (n=118/122)	98 (n=139/142)	92 (n=124/135)	94 (n=123/130)	93 (n=126/135)	93 (n=98/105)	93 (n=87/94)	90 (n=87/97)	97 (n=100/103)
F.C.D.E	25 (n=2/8)	30 (n=3/10)	50 (n=4/8)	14 (n=1/7)	9 (n=1/11)	15 (n=2/13)	14 (n=2/14)	0 (n=0/8)	7 (n=1/15)	13 (n=1/8)
Ben Thema	92 (n=125/136)	95 (n=102/107)	95 (n=138/146)	98 (n=142/147)	93 (n=129/139)	97 (n=143/147)	95 (n=143/149)	97 (n=141/146)	89 (n=130/146)	94 (n=144/154)
Boikhutso	90 (n=104/115)	95 (n=124/130)	93 (n=102/110)	93 (n=103/111)	90 (n=95/106)	88 (n=82/104)	83 (n=84/101)	86 (n=87/101)	84 (n=90/107)	71 (n=62/88)
Letšibogo	83 (n=25/30)	70 (n=38/55)	61 (n=32/52)	92 (n=22/24)	89 (n=25/28)	86 (n=35/41)	59 (n=17/29)	56 (24/43)	49 (n=21/43)	85 (n=23/27)

Key:

R.C.D.E.: Ramotswa

center for the Deaf

Education

F.C.D.E.- Francistown

Center for the Deaf

Education

O.L.D.- Our Lady of

the Desert

Alternate assessment has the potential to eliminate this barrier. Unfortunately little has been done in the area to seek alternative testing for learners who are deaf and or hard of hearing (DHH). Alternate assessment according to (Logsdon, 2013) refers to the replacement of different forms of assessment to accommodate a student's disability so as to reduce the impact of a student's disability on his/her ability to demonstrate what he/she understands. For example, the use of sign language to test the learners as opposed to traditional paper and pencil tests. These alternate assessments have similar materials as standard assessments but are presented in a way that children with disabilities are able to access the material (Johnson, 2012). An alternate assessment enables students to exhibit what they have learned while reducing the impact of their disability on their ability to respond. Alternative assessment is also used to ensure educational accountability for all students with disabilities and to evaluate the performance of students who are unable to participate in general state assessments even with accommodations (National Alternate Assessment Center, 2013). The National Alternate Assessment Center (2013) has proposed the following to be some of the alterative assessment types that are in special education: these include portfolios, on-rating scales, item-based tests and many others.

The Botswana Examinations and Council (BEC) have the following accommodations and modifications: exams are interpreted and exam times are extended (Okumbe,2006). Professionals in the field of deaf education suggested possible alternatives such as Signed Video examination to accommodate learners who are deaf in the assessment process in order provide valid results from competency tests. Therefore this research is initiated to find the effectiveness of Alternate Assessment when assessing DHH learners. In order to understand the alternate assessment for learners with DHH it is equally important to comprehend the current educational provision for learners with DHH in Botswana. The following section highlights the educational provisions for learners with DHH in Botswana

Educational provisions for Learners with DHH in Botswana

Botswana has a history of having less individualized comprehensive assessment that is based on the child's learning needs. As such, this has an impact on deaf children hence many stop at a Junior Certificate level because at Standard 7, they are passed to Form 1 even if they did not do well in Standard 7. A few usually go to Senior Secondary with a C Grade pass. This is due to the fact that students with hearing impairments follow the National Curriculum without any modifications and adaptation and use the same textbooks and sit for same examinations (Mukhopadhyay & Sison, 2006). However the policy makers have realized the importance of curriculum adaptation. Yet, nothing has been done in line with this realization (Kisanji, 2003; Ministry of Education, 2004).

According to Lekoko and Mukhopadhyay (2008) and; Mukhopadhyay and Sison, (2006) historically, educating children with DHH in Botswana started around 1970 by Christoffel Blinden Mission from Germany. It was started by some Non-Governmental Organization. At that time, Botswana government showed little interest in educating children with exceptionality as this was not measured 'sound investment of resources'. People did not care about taking Deaf children to school before the private sector started. The situation changed after the education of Botswana reformed. The government declared the National Policy on Education (1994) which emphasized 'Education for All', including education for people with disability. Since then, the situation changed and that is when the government joined the private sector on the education of DHH learners (Abosi and Kandjii-Murangi, 2000) and all efforts were made to enhance open access (Mukhopadhyay & Sison, 2006).

Culturally, the researcher has observed that most of Botswana men show less involvement in the education of DHH learners. It has been realized that most parents who attend to school business are female parents.

Consistent with the researcher's observation, below performance of DHH learners is likely to be due to the fact that 90% of these learners are born to hearing families and therefore are not introduced to sign language which is their only language at school. This means children with DHH are exposed to language when they start learning at school. In schools, emphasis is employed on content more than language whereas deaf learners are disadvantaged and this puts them at high risk of school failure. Another aspect is a marathon by teachers to complete the syllabus due to the current examination driven curriculum and performance based service of Botswana education system. Their focus is more on preparing students for examinations than content retention. Teachers are firmly wedded to the lecturer methods which are not suitable for deaf learners, largely because these learners are the products of the system. But the Revised National Policy in Education (1994) states that to achieve effective instruction and assessment, the teaching and learning of subjects should be based on a learner centred approach. This entails more use of practical –oriented for students and less of teacher – centred approach. For example, if one is a learner who is deaf, it means that sign language provides more meaning; therefore assessment could be relevant when sign language is used instead of written exams.

Tafa (2001) confirmed that in the Botswana education system, the idea of learner-centred pedagogy remains firmly on the back burner as no more than a forgotten slogan. This needs proper assessment for DHH learners to cope with the system. Therefore, deaf children are identified later, as their parents do not know sign language, which leads to communication mismatch and delay. Therefore it is important to do early intervention because late intervention disadvantages DHH learners.

Hearing is an important aspect of speech and language development, communication and learning are expected. If one learns the language at school level, some delays in communication and learning. To further reiterate this point, hearing loss results in delayed

development of receptive and expressive communication skills (speech and language). The language deficit causes learning problems that result in reduced academic achievement. Besides, communication difficulties often lead to school isolation and poor self-concepts. Sometimes through hearing loss one may have impact on vocational choices, unemployment and compromised quality of living.

Early intervention is therefore, essential as it will influence literacy. DHH learners have poor reading skills. This is so because of late intervention where they are introduced to language at school.

Another problem that influences academic underperformance of DHH learners is instructional strategies by teachers that have to be aligned with the goals and objectives. However vision 2016 has one of its pillars as access and equity on education. Instructional methods do not cater for the ‘disability’ especially the ‘deaf’. In addition, this view is consistent with Tafa’s (2001) argument that teachers are stuck in the behaviourist groove method of instruction which means instruction are mostly teacher centred. On the other hand a study by Lekoko and Mukhophadhyay (2008) revealed that DHH learners performed poorly in PSLE. All Schools for the DDA we have in Botswana underperformed due to various reasons. These were; inappropriate curriculum, lack of skilled sexist, parent’s negligence, lack of comprehension of DHH learners, lack of resources and the amount of time available to teach students with hearing impairment for the whole syllabus and also the way they are assessed for their examinations being different from the way they are taught this places them at a disadvantage. All these caught the researcher’s attention and raised interests in the researcher’s mind hence gave rise to the current study: Alternate Testing to Learners Who are Deaf in Botswana Primary Schools for the Deaf.

However, the Revised National Policy of Education RNPE (1994), has stated that particular attention will be given to areas where access to primary education is less than the

national average in order to achieve equity in the provision of primary education. The policy recommends the following goals of special education:

- to ensure that all citizens of Botswana including those with special needs have equality of educational opportunities
- to ensure a comprehensive assessment that is based on the child's needs, and not on group norms, and which is followed by individualized instruction and also
- to ensure the support and active participation of the children's parent and community through an education and information campaign.

(Government of Botswana, 1994, p.38)

Up until now, there seem to be laxity in the implementation of this policy as DHH learners still write standardized/paper and pencil examinations like any other student without special needs.

Theoretical/Conceptual foundation

Learners who are deaf are not homogeneous and testing them is not only complex but also needs specialised skills. In order to capture the complexities of testing these learners Social Justice Theory and Constructivist Theory were used in this study. These theories provided a comprehensive framework to investigate the problems of this research.

Social Justice Theory

Social justice is defined as "... promoting a just society by challenging injustice and valuing diversity." It exists when "all people share a common humanity and therefore have a right to equitable treatment, support for their human rights, and a fair allocation of community resources" (Robinson, 2013). Social justice theory, argues that people are "not be discriminated against, nor their welfare and well-being constrained or prejudiced on the basis of gender, sexuality, religion, political affiliations, age, race, belief, disability, location, social class, socioeconomic circumstances, or other characteristic of background or group

membership" (Robinson,2013) Two major people who talk about social justice are; 1) John Rawls' for Justice as Fairness and
2) David Miller's for Principles of Social Justice.

According to Rawls (2003), social justice is about guaranteeing the protection of equal access to liberties, rights, and opportunities, as well as taking care of the least advantaged members of society. As a result, whether something is just or unjust depends on whether it promotes or hinders equality of access to civil liberties, human rights, opportunities for healthy and fulfilling lives, as well as whether it allocates a fair share of benefits to the least advantaged members of society.

Rawls' conception of social justice is developed around the idea of a social contract, whereby people freely enter into an agreement to follow certain rules for the improvement of everyone, without considering the implications of these rules for their own selfish gain. Rawls posits that rational, free people will agree to play by the rules under fair conditions and that this agreement is necessary to assure social justice because public support is critical to the acceptance of the rules of the game (Robinson, 2013).

According to Miller (2003) social justice deals with the distribution of good (advantages) and bad (disadvantages) in society, and more specifically with how these things should be distributed within society. Some of the advantages relevant for social justice include money, property, jobs, education, medical care, child care, care for the elderly, honors and prizes, personal security, housing, transportation, and opportunities for leisure. Some of the disadvantages include military service, dangerous work, and other hardships. Keep in mind that Miller's theory applies to both public goods as well as private commodities (Robinson, 2013). Whether something is just or unjust thus depends on whether advantages and disadvantages are distributed appropriately in society. Miller explains that when "we attack some policy or some state of affairs as socially unjust, we are claiming that a person,

or more usually a category of persons, enjoys fewer advantages than that person or group of persons ought to enjoy (or bears more of the burdens than they ought to bear), given how other members of the society in question are faring." The current study adds value to this theory as the study argues that learner who are deaf are not given equal opportunities compared to their colleagues who are not deaf. This unfairness therefore leads to underperformance of deaf learners. Unless use of alternate assessment is considered during their testing, equal opportunities is still far in Botswana education system.

Constructivist Theory

Savery and Duffy (2001) viewed constructivist theory in three parts which are; they believe that understanding is in our interactions with the environment. That is to say, one cannot talk of learnt things in separation from how it is learnt.' An implication of this proposition is that cognition is not just within the individual, but rather is part of the entire context, that is how; it is distributed. This is where one can think of a learner who is deaf and born to parents who are not deaf. He/she can hardly learn anything from the environment at home for the first six years before moving to a deaf nursery school. For that reason, instead of the learner learning the concept in school he/she is busy struggling to learn sign language itself.

Cognitive puzzlement is another area in constructivist theory which talks about the stimulus for learning and determines the organization and nature of what is learnt. In a learning environment, there is a goal/stimulus for learning and the learner has a reason for being in that environment. The prior experience he/she brings to class is very important as a result there is a high possibility that a learner who is deaf coming from a family of deaf parents is more experienced or knowledgeable than the one whose parents are not deaf. This is likely to be due to the fact that right from birth parents of a learner who is deaf start

interacting with their child hence teaching him or her lots of things including sign language as opposed to the one who will start interacting well at a school level.

The final area of the constructivist theory is that knowledge evolves through social and through the evaluation of the viability of individual understandings. To support the above statement Savery and Duffy (2001) altered that social environment is important for individual development and understanding as well as the development of knowledge. That is to say at individual level, other individuals are a primary mechanism for testing our understanding. This goes back to the issue of two learners who are deaf but born to different parents (parents who are deaf and who are not deaf). A learner who is deaf but born to Deaf parents develops a body of knowledge at an earlier stage than a deaf learner born to hearing parents. In a nut shell, new things are learnt everyday because of interactions with other people.

Statement of the Problem

Despite the government's support and initiatives put in place to improve and promote education, there has been a recognizable trend of clear cut slow and poor execution of special education. This has really compromised the growth of special education and resulted in special needs learners (especially DHH learners) remarkably underperform lower than their age mates in Botswana (See Table 1). It appears that under performance of DHH learners is a global problem. Black (no date) undertook a study to investigate the fact that the outcomes of education for most school leavers who are deaf in Northern Ireland are weak in literacy skills and below average reading of their age mates.

The problem investigated by this study is that Schools for the Deaf in Botswana are academically underperforming. This could be so because of the following factors; instructional methods used by teachers during instruction delivery, content overload, assessment methods. Hence the researcher's interest to investigate the assessment procedures.

If this trend continues unattended, deaf learners will continue to underperform and stop at Junior Secondary Certificate level, hence, producing low quality DHH learners and having no role models for the young ones. This can also create over flooding of unemployed youths who are deaf. In addition, this is also likely to make Deaf people in Botswana develop negative attitudes toward the government and also cause the reputation of Botswana especially worldwide to be affected and thus will impact negatively on the economy.

The Purpose of the Study

The purpose of the study was to find out if the Use of Alternate test for DHH learners could be a significant impact to their academic performance over writing standard tests.

Research Hypothesis

This study was guided by the following hypotheses;

Hypothesis 1: There is a significant difference between test scores made through the use of alternate tests and those from standard tests.

Hypothesis 2: There is an overall significant difference between the two schools of the deaf, (Ramotswa and Francistown) in Botswana in performance of DHH learners.

Hypothesis 3: There is a significant difference on performance in 1. Alternate tests, 2. Standard tests between boys and girls in deaf education.

Research Questions

The study was informed by the following research questions;

- To what extent do alternate tests impact on DHH learners compared to standard tests?
- To what degree does gender influence performance of DHH learners?
- To what extent does school location influence performance of DHH learners in Botswana?

Significance of the Study

It was hoped that the results of the study which DHH learners could be assisted to reduce the problem of underperformance at school for instance; taking alternate tests by deaf learners could have a significant impact on their performance. The results also would be used in new curriculum development and improvement of the quality of assessment based on the individualized assessment. This could also help the Special Department of Special Support Services Education to notice that there is need to ensure the support and active participation of children, parents and the community through an education and information campaign.

The results of the study also intend to provoke policy makers to implement their recommendation in the Revised National Policy of Education which aims at preparing children with special educational needs for special combination by integrating them as far as possible with their peers in ordinary schools. The findings may perhaps be used as workshop materials for curriculum designers, sensitizing them on the importance of providing special services. For example, the services could include moulding instructional and assessment methods for students with hearing impairment that will in turn help these learners reach their full potential hence eliminating the problem of school failure.

Also, it is the opinion of the researcher that the problem of deaf learner's poor performance could be reduced only when the instructional methods and assessment methods are modified to suit their specific needs. Sign language may also extend to regular schools just for exposure and recognising the presence of deaf people in the society. Finally, the study also serves as a basis from which aspiring researchers can make further research on other alternative assessment to learners who are deaf and come up with the recommendations which the researcher did not cover.

Assumption

Standard tests were set to best satisfy the needs of every learner.

Limitations

1. One of the biggest limitations for this study was the negative attitudes some teachers had towards special schools and Botswana Ministry of Education and Skills development.
2. Teachers were not so pleased with education system which seemed not to favour Deaf Education such that even if they were supposed to give genuine answers they are likely to be subjective. This led to limited information being got from schools.
3. The other hindrances were also encountered in this research; since the researcher worked with Deaf learners through the use of the interpretation of test items, as such a lot of subjectivity might have been encountered thus bias in the side of the researcher.
4. An obvious barrier was the communication between a deaf person and a non-deaf person, just that communication which had the potential of making the researcher subjective regarding responses given by the deaf learner hence a limitation in data to be collected since the researcher interpreted the information the way she understood sign language yet the deaf learner might have meant something else.
5. The other one is lack use of an educated interpreter or the interpreter with an educational background.

Delimitations

There are a number of factors associated with under performance of Deaf learners in Botswana primary schools. This study was delimited to the Influence of alternative assessment/testing methods on performance DHH learners during test taking. The study was also delimited to primary schools for the deaf only not secondary schools hence the results being based on the findings of primary schools for the Deaf. The findings are generalized to the population under study. Only upper classes standard 6 and standard 7 classes were used.

The researcher assessed upper classes only to avoid not being familiar with sign language by lower classes as an extraneous variable.

Definition of terms

Alternative Assessment: Kirk, Gallagher, Coleman and Anastasiow (2009), defined alternative assessment as some approaches such as performance assessment, authentic assessment, real-life assessment which appeared to supplement the standard achievement tests.

Curriculum: The set of broad decisions about what is taught and how it is taught, that determines the general frame work within which lessons are planned and learning takes place (Gwarinda, 2010). The curriculum embraces aims and objectives, the content, methods, assessment procedures and evaluation procedures of an educational system.

Deafness

Kirk, Gallagher, Coleman and Anastasiow, (2009) define deafness as a hearing impairment that is severe enough that the child cannot process linguistic information, through hearing, even when using implication or hearing aids.

Deaf and hard of hearing (DHH)

In this study student having bilateral hearing loss more than 70dB and predominantly used sign language were considered as deaf (Martin & Clark, 2006). This terminology will be used throughout the study to refer to all levels of hearing loss.

Sign Language Interpreter: A person signing and finger spelling presentation of another person's spoken communication (Kirk, Gallagher, Coleman & Anastasiow, 2009).

Lower Primary: this is made up of Standard 1- 4

Performance Task: A performance task is an assessment activity that requires students to demonstrate their achievement by producing an extended written or spoken

answer, by engaging in group or individual activities, or by creating a specific product (Nitko & Brookhart, 2011).

Sign language: A mode of instruction, communication and interpretation of test items. (Riekehof, 2004) further stated that, sign language is a language that uses manual symbols to represent ideas and concepts.

Upper Primary: this includes standard 5-7.

Summary

DHH learners have problems in performance which has serious consequences such as lack of employment and limited educational opportunity. Therefore alternate assessment has a potential to correct this problem. The purpose of this research was to find out if alternate testing has any significant influence on performance of learners who are deaf.

This chapter has presented the aspects of the study which it set out to present. It has presented a detailed introduction and background of the study. The theoretical frameworks that underpin the study are also articulated. Also, the chapter presented the statement of the problem which the study tends to address. Other preliminaries are all presented in the chapter.

The next chapter presents an interrogation of relevant empirical literature in the subject matter.

Chapter 2

Literature Review

Introduction

This chapter focuses on the discussion of alternate assessment articulated in empirical literature. The discussion synthesizes the methodology, conclusions, and recommendations of studies that have interrogated alternate assessment. For clarity purposes, the literature review is sectionalized under the following subtitles: what is assessment, assessing DHH learners, alternate assessment, alternate assessment for the Deaf, sign language test versus the traditional paper and pencil, education in towns versus education in villages and general performance of boys and girls at schools in deaf education.

What is Assessment?

Educational assessment is the process of documenting, usually in measurable terms, knowledge, skill, attitudes, and beliefs in order to appraise or evaluate learners to check the effectiveness and potential in these learners (Vallely, 2013). On the other hand Ontario (2002) lists forms of assessments as: classroom presentations, conferences, essays, exhibitions/demonstrations, interviews, learning logs, observation, performance tasks, portfolios, question and answer (oral), quizzes, tests, examinations, response journals, selected responses, students self-assessments etc. on the other hand Pierce (2015) views assessment as Assessment is “the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving student learning and development. Pierce (2015) continued to say in assessment one defines program goals/mission, establishes learning outcomes, determines opportunities for students to demonstrate learning, establishes a research question or goal and collect pertinent evidence, evaluates and interpret student evidence, based on results, creates and implements a plan to

improve the program and student learning and also communicates results in an annual assessment report

Assessing Deaf Learners

Berent (2001) study on English for Deaf learners disputes that Deaf learners generally experience tremendous difficulty in acquiring spoken languages in contrast to their natural and effortless acquisition of signed languages. Without full access to the sounds and intonations of a spoken language, the acquisition process for deaf learners is often strenuous and unnatural and occurs at a much slower rate than for hearing learners. The above argument is supported by Paul (2009) when he discussed that it is important to understand how interpretation can be used in assessment; that is to say interpreters with deaf educational background would be preferred during assessment of DHH learners. The authors debates that it is because it could be more challenging to ascertain what procedures or tools are appropriate, useful and even fair to DHH learners and even looking at the degree of deafness, age especially at the commencement/start of deafness, aetiology (cause), mode of communication, family background information, use of audition and vision, ethnic and cultural status together with the presence of additional disabilities. Therefore, all these traits are of great importance for determining whether a particular assessment is important.

Alternate Assessment

According to Job (2011) alternate assessment measures performance in forms other than traditional paper and pencil short answer tests. The author emphasizes that alternate assessment includes: essays, portfolios, presentations/demonstrations, authentic assessment, etc. the authors highlights that these assessments focus on what learners can do without emphasizing their weaknesses especially in test taking skills. On the other hand Almond and Case (2004) argue that alternate assessment vary from state to state and may include observations, checklists, individually administered tasks or collections of classroom work.

From the argument of the three authors, even though their examples of alternate assessment are different, they still arrive at the same conclusion that alternate assessment is another form of assessment apart from traditional paper and pencil writing. This shows that a list of alternate assessment is endless as it varies from one assessor to another as long as at the end of the day the assessment is not paper and pencil. Furthermore, Paul (2009) concurs with Job (2011) and Almond and Case (2004) that portfolios are one of the alternate assessment

Alternate Assessment for the Deaf

Just like the researcher, Paul (2009) agrees for bilingual/second language/sign language assessment as one of the alternate assessments for DHH learners. He argues that one of the most neglected/needed areas of study is the development of reliable, authentic measures of signing in DHH learners. Other alternate assessments which Paul (2009) called for are: self-evaluation checklists, portfolios, observations of a student's classroom performance e.g. debates, answering questions orally, storytelling, role playing etc.

Burman, Evans, Nunes and Bell advocated for story pictures for as one of alternate assessment for DHH learners. These authors did a study on the validation of an analytic instrument aimed at assessing deaf primary school children's writing and at contributing to the design of IEPs with 167 DHH learners in the age range 6y6m to 13y11m, who were attending special schools or mainstream schools with units for the deaf; orally educated deaf children fully integrated in mainstream schools were not included. The writing samples were elicited by means of a story picture sequence. The dimensions of analysis included 16 items related to aspects of grammar and story development. A single and reliable scale was formed by these items, generating one score with a normal distribution. High inter-judge reliability, high test-retest correlation and a high correlation with reading comprehension were observed. The conclusion was that the assessment is a useful, reliable and valid instrument for analysis of deaf children's writing.

Deaf Education

The first study by the “First Annual survey of Assessments and Accommodations for students who are Deaf or hard of Hearing” provided a preliminary look at nationwide trends in alternate assessment use with students who are deaf or hard of hearing (SDHH) (Cawthon, 2009). A total of 71 mixed schools participated meanwhile, schools with severe or profound hearing loss served an average of 58% while the schools that did not have students participate in an alternate assessment served an average of 40% of students with a severe or profound hearing loss. The study had provided the evidence for concluding that deaf learners have similar cognitive potential to hearing learners. With the establishment of the principle that DHH learners have the same range of cognitive potential as hearing learners, a number of studies occurred during the 1980s and 1990s that looked at the enhancement of cognitive development of the deaf learner. The studies used several different programs of cognitive-strategy instruction to investigate the effect of explicit and systematic classroom focus on the teaching of higher-order cognitive strategies and their application to school subject matter.

As a group, these studies demonstrated that the ingredients of promoting advances in the thinking skills of deaf students are: adopting a classroom program which uses specifically designed materials; teachers who are appropriately trained on how to teach thinking strategies; and regular (several-times-per-week) activities on strategies for problem solving. These three elements, when used in combination, result in measurable effects on cognitive skills in deaf learners when compared to DHH learners who do not have this classroom experience. One study that showed this result was an experiment with high-school-age DHH learners which was designed to examine the effects of a specific intervention using materials adapted from the Instrumental Enrichment (IE) program for deaf students. Six IE cognitive sets of exercises were used over a two-year period with an experimental group of secondary-level deaf students. The exercises gave students the chance to acquire active understanding of

such areas as parts-whole relationships, comparison, symmetry, projection of visual relationships, spatial relations, following and composing directions, and classification.

At least twice per week, the specially trained teachers incorporated a series of visual, verbal, and geometric activities from these cognitive activities into the regular subject matter of daily lessons; helped students solve these problems; and conducted metacognitive discussions. Then they discussed how the students' mental strategies within these problems would be used in subject matter. The group that did these activities performed significantly better than a comparison group in general reasoning; thinking habits as measured by observation; real-world problem-solving skills; and performance on the mathematical concepts, mathematical comprehension, and reading comprehension subtests of the Stanford Achievement Test (Hearing-Impaired).

While the cognitive potential of DHH learners have been demonstrated to be generally equivalent, it must also, be remembered that differences in cognitive style continue to exist. These differences make it all the more essential that cognitive education become a part of teacher preparation in the field. It is equally important to remember that the tests used to determine the cognitive functioning of DHH learners in many cases still lack validity and appropriateness, thus requiring careful attention to the interpretation of results for such cognitive tests (Martin, 2013).

Doherty (2012) did an experimental comparative study in Northern Ireland and Sweden titled Policy and practice in deaf education: views and experiences of teachers, and of young people who are deaf in Northern Ireland and Sweden. In Northern Ireland, oral and total communication forms of instruction are employed in their education and compared with those of Sweden where a sign bilingual is used in education. Just like the researcher's concern, due to the fact that the outcomes of education for most school leavers who are deaf in Northern Ireland are weak literacy skills and below average reading ages, Doherty (2012)

conducted a study to analyse the situation. The fact dominant instruction for these students is total communication (TC, a combination of speech, lip reading, sign-based English and finger spelling), which is based on speech (Doherty, 2012). She speculated that many of the students leave school with weak literacy skills, their reading ages being at just over half their mental age. The other speculation was that, since most of DHH learners are born to hearing parents they have received limited support for early language acquisition and therefore, have limited or no sign language foundation prior to school (Doherty, 2012). The early language experiences of children who are deaf are critical and if these are not in place, there can be recurring problems throughout their education, and students may be unable to reach their full potential.

Over a decade later, another study reported that on leaving school, students who were deaf in Northern Ireland had fewer achievements compared to hearing children (NIDYA 2002). Sweden, on the other hand, was the first country to introduce sign bilingualism (sign language followed by Swedish in its written/spoken form) since the early 1980s (Bagga-Gupta & Domfors 2003). This bilingual form of education, for DHH learners, uses sign language first, with Swedish in written and/or spoken form being introduced subsequently as a second form of communication. Visual modalities in the teaching environment have been reported to be the approach, that pupils who are deaf make better progress academically and socially (Doherty, 2012).

According to Paton (2013) despite the urban advantages, children attending schools in British villages are outperforming their inner-city peers. The UK is among only five countries worldwide to record better results in the countryside compared to those seen in large towns and cities, it emerged. The Organisation for Economic Development and Co-operation (OECD) found an “urban advantage” in almost every nation. That is to say: On average,

pupils in the inner-cities are the equivalent of a year ahead of rural children based on the results of reading exams sat at the age of 15.

Urban schools usually have a wealthier student body, exercise more control over their own funding, have better qualified teachers and are less likely to experience shortage of teachers. Yet the study found that Britain bucked the trend by registering better results in schools in villages and small towns. The National Sample Survey (2002) reports that US, German, Belgium and Denmark also witnessed improvement of scores in rural communities. Figures from the report also show that current enrolment ratio per 1000 DHH learners between the ages of 15-18 in ordinary schools is higher in rural areas (475) than in urban areas. But about 11% of DHH learners between the ages of 5-18 years were enrolled in special schools in the urban areas compared to less than 1% in the rural areas (NSSO, 2002 quoted in Cawthon, 2009). In total, by the year 2001 about 4958 of learners who have hearing impairment were enrolled out of a total of 67306 of other disabilities like visual impairments, orthopaedic handicaps, mental retardation and others were enrolled in schools both in rural and town schools of India. Among the total of 4958 of DHH learners are about 43972. The study also showed that learners who are in villages tend to do a lot better than the ones in towns because of inclusive education yet we see a lot of resources in towns. The study recommended inclusive education whereby learners with hearing impairments are taught in the same school with learners who do not have hearing impairment.

Bryant (2013) agrees that girls perform better than boys especially at GCSE for the following reasons:

1. Changing Attitudes: He explains that girls changed their attitudes towards education, work and marriage dramatically over the last century and corresponds to the involvement women have in society. According to the author a study was done by Sharpe to compare new attitudes of working class girls in London schools in the 1970's and 1990's. He

found out that girls of the 1990's were more confident, more assertive, more ambitious and more committed to gender equality than the 1970's girls whose main priorities were love, marriage and having husbands and children. New research from the University of Georgia and Columbia University published in the current issue of *Journal of Human Resources* suggests that it is because of their classroom behavior, which may lead teachers to assign girls higher grades than their male counterparts (Weeks, 2013).

2. Changes in the Adult World: Many women are now working. Therefore, girls are more likely to work harder to achieve their ambitions and become independent women rather than following in their mothers' footsteps. Gye (2013) further supported this view in a study of children's performance in school from the age of six which according to him revealed that marks are determined not just by academic ability but also by attributes such as attentiveness and good organization. Since girls are perceived as portraying many of these characteristics, they have a natural advantage over boys of a similar level of intelligence. The discrepancy begins as early as primary school and its effect could last all the way through to university level.

3. Changes in Schools: one of the changes in the school system is the disappearance of sex discourse. This is often known as sexism. Sexism has died out in schools. Since teachers recognized it and preferred to teach girls than boys. Bryant (2013) even further cited (Social trends, 2003) over the past 20 years that revealed that there has been a growing proportion of females choosing to study in further or higher education than in previous years. Another study by Collins (2013) showed that boys perform worse at school due to stereotypes about boys being intellectually inferior to girls which affect children during the first years of primary school and prevent them from fulfilling their potential. Teachers should assure boys that they are just as academically gifted as girls and avoid doing anything which could make them feel inferior such as splitting classes by gender. Around twenty years ago, it was the

norm to expect young intelligent females to leave education at the earliest opportunity (age 16) to commence generally low paid jobs like typing field of work, which they hoped would prepare them for marriage and motherhood.

Recently, improvements of choices for many female students have increased considerably. Girls even spend more time studying than boys and since success in academic work like success in sports, needs more time investment and effort. The more you practice, the better you become, hence girls do well (Twalker, 2013). All these inspired many young females to concentrate now on education and employment hence forgetting about being housewives dependent on their spouses. There are now more appealing routes available into employment. These include areas such as the service industries, media industry, and information technology which each gender is free to build a career in. These new opportunities provide a 'workplace paradise' for the young women of today who are no longer discriminated against as much as before. There are widening opportunities in a new improved genderless, barrier-free world of employment and no preference for a fully-male employment system (Bryant, 2013).

The messages driving women as a whole to strive for such differences in the education and employment systems are displayed in the form of iconic female figures such as 'Lara Croft' in Tomb Raider. 'Lara Croft' can be considered as a strong, independent, no nonsense role model for the women in today's society. The influence of 'Girl Power' drives women on in their quest for equality and identity in employment.

Furthermore, governments have introduced girl-specific courses into schools to encourage their interest in subjects that were seen as being traditionally for boys: 'Girls into Science and Technology' [GIST] and 'Women into Science and Engineering' [WISE] are two of the most prominent. Also up to 2011, many exam courses at GCSE level had an element of coursework attached to them and research clearly indicates that girls are better at

coursework at a general level when compared to boys (Capelli, 2013). According to Capelli (2013) may be the changes in the school and the methods of teaching that may be adding to this situation. The school changes included that nowadays students begin school as early as 6 years old and by this age it is believed that girls are the only ones who will be mature for school hence to their advantage of doing well at school than boys. On the other hand a girl child practices reading and refines the skills further at standard 1.

Studies have also shown that boys learn much easier with hands-on activities than from written materials. Many schools have cut down on recess and recreation time to enable the students to learn all the information that is required. Boys are more active than girls, and may have difficulty sitting still for these extended periods of time. The fact that most of this sitting time involves a boy doing written work that he is not equipped to do leads to frustration and a general dislike for anything to do with learning (Capelli, 2013).

Zorigian and Job (2003) in their study reported that boys mature more slowly than girls and thus have a more difficult time adapting to the educational environment. This difficulty in adaptation may cause a higher rate of referral for special education services. According to Bayhan (2002), this is consistent relationship between gender and deaf education. Bayhan (2002) carried out a study on attitude of related Turkish deaf students towards computers and computer use. The results of the study showed that girls are less interested in computers than boys, since girls get help from boys in their daily use of computers and are also prepared to accept direction than boys on computer use. The study also reported that boys were more confident than girls about using computers at home and at school. This is due to the fact that girls enjoyed using computers less than boys. Therefore, this led to girls knowing little about technology.

Coming to Botswana setting Mukhopadhyay and Sison (2006) advocated that in Deaf education use of total communication with the combination of American Sign Language with

English manual code for difficult words (convectional signs). The two argued that such practices made learning easier for the DHH learners in the two residential Schools for the deaf in Botswana. This was also supported by Berent (2001) when he said Deaf learners generally experience tremendous difficulty in acquiring spoken languages in contrast to their natural and effortless acquisition of signed languages. Without full access to the sounds and intonations of a spoken language, the acquisition process for deaf learners is often laboured and unnatural and occurs at a much slower rate than for hearing learners.

Summary of Literature

According to Paton (2013) despite the urban advantages, children attending schools in villages are outperforming their inner-city peers. Despite the existence of several studies in special education, there still exists a gap in literature. It is such gap that the current study will fill in. For example a lot of scholars discuss gender issues in education regarding learners who are not deaf and even on school location they discuss school location and education in general not specific to deaf education. Therefore, my study is needed. The literature also revealed that sign language has a significant impact on performance of learners who have hearing impairment over traditional paper and pencil. The literature showed that boys mature slowly than girls hence making their school performance results to lower than those of girls (Zorigian & Job, 2003).

Furthermore, a lot of literatures illustrate portfolios, structured on-demand tasks, naturally occurring or typical performance tasks, and simulations etc. as alternate assessment tests. That means sign language as part of testing is not yet practised. As a developing country, especially in special education, Botswana is still practising general testing/standard testing to deaf learners. This testing method is putting learners who are deaf in a tight corner of underperformance. Interrogated studies have so far shown that there is need for alternate assessment for students are deaf. This is especially imperative in the case of Botswana.

The next chapter discusses the methodological approach that the current study has adopted to collect and to analyse data for the study.

Chapter 3

Research Methodology

Introduction

This chapter provides an overview of the methodological approach and research design in the study of alternative testing of DHH learners. A methodology is a general approach consisting of several methods involved in the process of finding valid answers to the research questions. This includes the design for the study, the sample, the population, the research settings, the data collection and analysis techniques and the ethical considerations.

The following research questions were used in this study:

1. To what extent do alternate tests impact on learners who are deaf compared to standard tests?
2. To what degree does gender influence performance of learners who are deaf?
3. To what extent does school location influence performance of learners who are deaf in Botswana?

Research Design

The purpose of this research was to compare the performance of DHH learners in standardized tests to alternate tests (using sign language). This study is guided by quantitative research paradigm whereby pure numbers were used to collect data. Collection of data was done through written test scores and analysis of data used statistical techniques. This qualifies the study to be a quantitative study. The design of the study is classified as one group pre-test-post-test of pre-experimental design because it does not provide little or no control of extraneous variables. The experiment involved in administering of the pre-test with standard test and then post-test with alternate test. The design is shown in Table 2.

Table 2

One-Group Pretest-Posttest Design

Pretest	Posttest
Y ₁	Y ₂

KeyY₁; Standard testY₂; Alternate tests***Research Setting***

The study was carried out in two Schools for the Deaf in Botswana. These schools are Francistown Centre for the Deaf Education and Ramotswa Centre for the Deaf education. These are the only two residential schools in Botswana where we can find DHH learners at primary level. Francistown Centre for the deaf is far north of Botswana and it admits students from the central part of Botswana up to the whole north whereas Ramotswa Centre for the Deaf is far south of Botswana and it admits DHH learners from central to the southern part of Botswana (see map of Botswana on page 29). The majority of these learners were diagnosed as having Bilateral Severe to profound Sensorineural Hearing Loss and they used sign language as the second language.

Both schools use total communication as the predominant mode of communication in classrooms and the medium of instruction is English. The two schools are residential schools but there is still one or two who are day learners in each school. There is a total number of five preschool classes for early intervention (one in Francistown and four in Ramotswa), and 32 classes from standard 1-7 (19 in Francistown and 13 in Ramotswa). Each class has an average of seven pupils. The primary school classes use national curriculum with adaptations in the mode of instruction to make up for the loss of hearing, a major sensory-perceptual

channel in learning. In addition, children are taught the formal or conventional Botswana sign language in English (Mukhopadhyay & Sison, (2006).

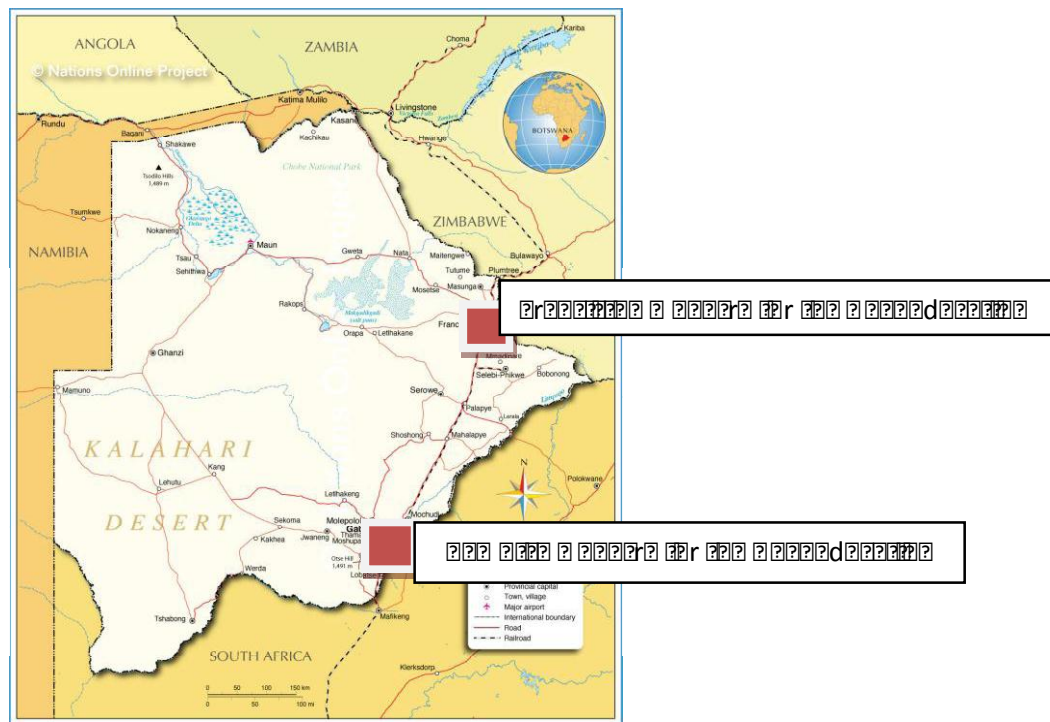
Participants and Sampling Procedures

In this study, the population of interest or the desired population for the experiment were the learners who were deaf and or hard of hearing in the primary schools of Botswana. As explained in the earlier section, there are only two residential primary schools for the learners who are DHH in Botswana, one in the northern part of Botswana and one in the southern part of Botswana. Ramotswa Center for the Deaf Education and Francistown Center for the Deaf Education were purposively selected since they are the only two residential primary schools in Botswana for DHH learners.

All learners of Standards 6 & 7 from both schools were recruited using convenient sampling technique. They were purposively selected because of their knowledge and fluency in sign language as they have been in school and have been using sign language for a longer time than their junior counterparts. Forty-five students participated in this study. The details of the participants are given in Table 2.

Figure 1

Map of Botswana showing locations of the two schools of deaf in Botswana



Source: <http://www.google.co.bw/search?q=map+of+botswana&source=lnms&tbn=is>

Table 3

Details About the Participants

Centre	Std	Male	Female	Total
RCDE	Std 6	5	9	14
	Std 7	8	4	12
FCDE	Std 6	2	4	6
	Std 7	5	8	13
Total		20	25	45

Test Preparation, Design and Administration

The objective of this research was to compare the performance of students' marks on alternate test scores versus standard test scores or alternate test scores versus standardized test scores. Five different tests were set from the same content (The Wedding I once Attended)

from Home Economics from CAPA subject and each test scoring fifteen marks. Table 2 provides details of these tests.

All the tests had a space of one month because they were written as part of school monthly tests. The researcher chose these times as they were best times to grasp learners at a test mood time. All the tests were written in an hour apart from Teacher signed passage test which was written in a space time of ten to fifteen minutes. All tests were marked and compared to check the correlation using quantitative analytical techniques in order to draw inferences from the data obtained regarding existing relationships. The researcher had these tests as per the school time-table so as not to create an atmosphere of fear among the students and this helped a lot because many students wrote their tests in a relaxed atmosphere; therefore, the test was not a surprise to them.

Table 4

Five tests which were administered

Standard Tests	Alternate Tests		Scores
	Mode of Presentation	Students' Response	
Composition Test	Written/(guidelines provided)	Written	15
	Adapted (Fill in the Blanks)	Written (Fill in the Blanks)	15
	Signed English Multiple Choice	Filled the blanks	15
	The passage signed by the teacher	Writing the composition	15
	Teacher Signed the passage	Signing and videoed	15

The tests were presented in following sequences.

Table 5

A Sequence on How Tests Were Presented

Tests Orders	Name of the Test	Duration of the Test
1	Standard test: Written guided composition	1 hour
2	Alternate Test 1: Fill in the Blanks	1 hour
3	Alternate Test 2: Teacher Sign and Students responded by signing	10-15 minutes
4	Alternate Test 3: Signed English Multiple Choice Test	1 hour
5	Alternate Test 4: Teacher signed the passage students write the composition	1 hour

Test Construction and Presentation

A composition test (The Wedding I Once Attended) (Appendix 1) was specifically designed from the upper class primary Home Economics component of Creative & Performing Arts (CAPA) curriculum. Guidelines and instructions were written in question papers for all participants and they were normally read just before students started to write the tests. Marking guidelines were developed and used to mark the tests. The purposes for the study and instructions for answering the questions were also made clear from the onset. The test was given to four teachers (Two Standard 5 teachers from each school). These teachers were given the passage to find out the suitability of the test. The original standard test consisted of the following guidelines taken from the past PSLE Paper (2011).

1. When was the wedding?
2. Where was the wedding?
3. What did you see?
4. What did you eat?
5. What did you like/dislike about the wedding?

6. What is your general feeling about the event?

The test was also marked out of 15. The test was marked by a specialist teacher. The teacher marked all 45 exam scripts. In order to reduce bias, students' names were removed from the test scripts. The test was then adapted into four different presentation levels. They are displayed in Table 4 as alternate tests.

Alternate Test 1: Fill in the Blanks

The same composition test was adapted. In this test students were asked to fill in the blank spaces (see Appendices 2). The test had 15 blank spaces and an answer sheet that composed of 15 answers was also prepared for learners to choose the correct answers from. Each correct answer scored one mark. The test was administered by the same class teacher in each centre. All learners were placed in one classroom and the teacher explained the composition activity. The same procedure was followed. The test was one hour long. After the test, the researcher collected those scripts and marked them.

Alternate Test 2: Teacher Sign and Students responded by signing

In this test, the teacher signed the original passage and the learners were supposed to sign the responses. The test was administered by the class teacher in each centre. All Standard 6 students were put in one class and the teacher explained the composition activity. The same procedure was followed for Standard 7 students in each school. As soon as the teacher finished signing the passage all learners were sent to a different room. Students were called one by one to sign the responses. A professional video-technician was engaged to capture students' answers. The test and answers were translated by a sign language interpreter and marked by the researcher. Each learner was given ten to fifteen minutes to sign the whole composition.

Alternate Test 3: Signed English Multiple Choice Test

The same test was then prepared using sign language pictorial form (see Appendix 3). Each word was changed into sign language, including the instructions and the probable answers to fill in the blank space composition. Learners were given 1 hour to complete the test. All papers were collected after an hour for grading. A specialist teacher was also engaged to mark all the test papers for both learners in all schools. Learners names were removed from the test scripts and only numbers 1-45 were assigned to learners. These learners maintained these numbers until all the tests were administered. The test was also graded out of 15 since it was exactly the same fill in the blanks type of test but adopted to sign language.

Alternate Test 4: Teacher signed the passage students write the composition

After a month during monthly tests in schools, the learners were given Alternate Test 1 to write. The only difference was that the teacher signed the passage for students to fill in the blanks. Instructions were given to all learners before the test started. The instruction was that when a teacher signs a test, they must write everything the teacher signed. Then papers were collected and the test was also marked out of 15 by the researcher. This was deliberately done in order to check if students were able to remember to spell well all the answers observed/ spell previously on the fill in the blank space or in Alternate Test 1.

□□□□□□□□□□□□□□□□

Pilot testing was carried out to measure reliability and validity of the tests. All tests were developed and pilot tested on Standard 5 classes in both schools. Traditional paper & pencil tests were done in English (as English is the medium of instruction) and Sign language tests were administered in sign language. The test was administered to 25 Standard 5 students. A test –re-test was carried out to check the reliability. The pilot study also helped

the researcher to check if the video was of a good quality or whether it needed some high professional operations for a quality video.

Ethical Considerations

Through the assistance of the supervisors, Ministry of Education and Skills Development, and the University Of Botswana Office Of Research Development (ORD) permission was sought i.e. in line with acceptable codes of ethics. With the help of my supervisors a consent letter was written to the Ministry of Education and Skill Development and UB Office of Research and Development. The Ministry of Education and Skill Development granted a permission letter then the letter was sent to the school regions by the researcher. The Regional Principal Officers issued letters to the School Heads of the two schools. The researcher took the letters to the schools. A consent letter was also developed by the researcher and signed to DHH learners in the presence of their teachers to ask them for permission to involve them. Learners then in the study agreed through appending their signatures on the letter.

Data Analysis Plan

Both descriptive and inferential statistics were used to analyse the data. Five tests were marked and compared to check correlation using quantitative analytical techniques in order to draw inferences from the data obtained regarding the existing relationships. Table 4 displays the hypothesis and the tests that were used.

Table 6

Hypotheses Testing Procedures

Hypothesis	Variables		Data Analysis Method
	Independent	Dependent	
H1: There is a significant difference between test scores made through alternate test and those from standard test scores.	Type of Test	Test scores	Dependent t-test
H2: There is an overall significant difference between the two schools for Deaf learners, (Ramotswa and Francistown) in Botswana in performance of learners who are deaf.	School location	Performance	Independent t-test
H3: There is a significant difference in performance in 1. alternate test, 2. Standard test between boys and girls in deaf education.	Gender	Type of test scores	Independent t-test

Summary

This chapter dealt with research methodology that includes a brief description of research design, an inferential research type of design was chosen to analyse how alternative assessments could improve academic progression of deaf students in Botswana. The subject of population and its sampling procedures were also discussed. The research instrument that was used was discussed together with data collection and analysis plan. The chapter has also detailed in clear terms how the data for the study was collected. The next chapter is the data Presentation, Analysis and Discussion of results.

Chapter 4

Data Presentation, Analysis and Discussions of Results

Introduction

This chapter focuses on the experimental data presentation, interpretation and analysis. It is presented in three sections. The first section presents the demographic data. Both sections of results of hypotheses tests and data analysis was done simultaneously. The discussion was based on the analysis of the data that compared alternate test scores to standard test scores of learners who are deaf in Botswana primary schools. Also, the discussion section was presented in three sections which are; the difference between standard test scores and alternate test scores in performance of deaf learners; the influence of standard test scores and alternate test scores on the performance of boys and girls who are Deaf, together with the influence of education in towns or villages on the performance of learners who are deaf. Evidence from literature and theories was also used to support the arguments and results.

Table 7

Demographic information

Centre	Std	Male	Female	Total
RCDE	Std 6	5 (36%)	9 (64%)	14
	Std 7	8 (67%)	4 (33%)	12
FCDE	Std 6	2 (33%)	4 (67%)	6
	Std 7	5 (38%)	8 (62%)	13
Total		20 (44%)	25 (56%)	45

Forty-five learners with bilateral profound sensorineural hearing loss participated in this study. There were 20 males and 25 females. At Ramotswa Center for the Deaf

Education there were 14 Standard 6 learners who participated, five were male while nine were female. At Francistown Center for the Deaf Education, there were two male learners while four were females. At FCDE there were male five learners while were eight females learners in Standard 7 classes. Each class had two strings in all schools apart from Standard 6 class in FCDE which had only one string.

Analysis of Hypotheses

The researcher proposed 3 hypotheses to determine if alternative assessment had any significant influence on the performance of DHH learners. The following three hypotheses were tested.

Hypothesis 1: There is no significant difference between alternate test scores and standard test scores.

Hypothesis 2: There is no significant difference on performance of boys and girls.

Hypothesis 3: There is no overall significant difference between the schools of the deaf looking at town schools and village schools.

Hypothesis 1

There is no significant difference between test scores in alternate and traditional paper and pencil test scores.

In order to test this hypothesis, the researcher used a dependent t-test Table 6. The percentage mean of traditional tests was found to be 4.78 while the mean value for alternate tests was 15.91. The dependent t-test compared the mean achievement of DHH learners based on their traditional paper and pencil test scores and alternate test scores. This was tested at a critical value of 2.02 of significant level of .05 and the analysis gave t-values of -16.08. Therefore, null hypothesis was rejected since the absolute value of the calculated t-value was higher than the expected t-value indicating a significant difference between alternate test scores and standard test scores. This means there is sufficient evidence to indicate that DHH

learners perform significantly higher in alternate tests than in standard tests. This means that the null hypothesis is rejected.

Alternate test scores have been found to have significant influence on the performance of DHH learners over the usual standard test scores. This confirms the importance of alternative testing methods in the assessment of learners who are DHH. A full justification of the results shows that alternate test scores have a significant influence and the analysis gave t-values which were higher than the null hypothesis: There is no significant difference between alternate test scores and standard test scores.

Alternate testing is the best tool in general assessment of the DHH learner, as also shown by Doherty (2012) on Policy and practise in deaf education: views and experiences of teachers, and of young people who are deaf in Northern Ireland and Sweden. Doherty (2012)'s findings suggested that schools should include the following: early sign language instruction, official sign language training and deaf awareness courses for teachers, back-up support service to include role models who are deaf and also school counsellors trained in sign language.

Sign language is the best tool in deaf education as early as possible throughout the students' entire life to assessment. This is supported by Savery and Duffy (2001) when they argue that constructivist theory has three parts and one of them is that: understanding is in interactions with the environment. In nut shell, cognition is not just within the individual but is part of the entire context. As the literature suggests that deaf learners who are born to deaf parents tend to perform significantly better than those born to parents who are not deaf since the ones born to deaf parents interact with their environment at home as early as possible and improve their literacy skills. By the time they reach the school going age they excel at school while learners who are deaf and born to hearing parents begin to learn the language (sign language) at school. That means sign language (part of alternate assessment) itself has a lot of

exposes these learners to the environment. Additionally if the student who is deaf is tested using sign language he/she is able to interact with the teacher better than when he/she is writing a traditional paper and pencil test.

In a nut shell, this shows that the reason why learners who are DHH significantly perform lower than their age mates is that there is injustice when it comes to methods of assessment. They are tested the same way as DHH learners. Though, they are not equal in term of senses. Rawls' conception of social justice is developed around the idea of a social contract, whereby people freely enter into an agreement to follow certain rules for the betterment of everyone, without considering the implications of these rules for their own selfish gain. Rawls posits that rational, free people will agree to play by the rules under fair conditions and that this agreement is necessary to assure social justice because public support is critical to the acceptance of the rules of the game (Robinson, 2013). Assuming fairness was practiced underperformance of DHH learners would be minimal.

The other important part of constructivist theory is that knowledge evolves through social interactions and through the evaluation of the viability of the individual understanding. Savery and Duffy (2001) argued that social environment is vital for the individual development, understanding as well as development of knowledge. This goes back to the argument that a child born to deaf parents tends to develop the language faster than the other as sign language is mostly interaction with the environment compared to writing. In effect, sign language involves more interaction with to the environment than any other language.

Table 8

Dependent t-test of the Significance Between Traditional Test Scores and Alternate Test

Scores (n=45)

Variable (Tests)	Mean	Std. Deviation	Std. Error of the Mean	Mean Difference	Std.Error of Dif	t- value	Df	Sig. (2- tailed)
Traditional	4.78	2.44	0.36	-11.13	.69	-16.08	44	.000
Alternate	15.91	6.19	0.92					

A further analysis was done to check the mean within the types of alternate assessment test just to determine which one had more impact than the other. Table 7 displays information on further analysis on test scores of various alternate tests and mean average of the alternate test scores. The mean scores of all four alternate tests were compared to traditional tests.

The mean and standard deviation of both tests are Alternate Test 1(Fill in the blanks) mean was 1.31 while standard deviation is 1.47; Alternate Test 2 (Teacher sign and students responded by signing) mean was 2.71 while its standard deviation was 1.84; Alternate Test 3 (Signed multiple choice test) mean was 3.00 and had standard deviation of 2.37; Alternate Test 4 (teacher signed the passage while students wrote the composition) had the mean of 3.53 and standard deviation of 2.09. In order to find if the differences of the means were statistically significant or not t-test was run. The test came out to be significant between the following tests only; between alternate test 1&2, 1&3, 1&4 and 2&4 whereas between 2&3 the test was not significant. See table 9 in the next page.

Table 9

Comparison of Alternate Test Scores

Tests	N	Minimum	Maximum	Mean	Std. Deviation
Alternate 1	45	0	6	1.31	1.47
Alternate 2	45	1	10	2.71	1.84
Alternate 3	45	1	14	3.00	2.37
Alternate 4	45	1	8	3.53	2.09

Hypothesis 2

There is no significant difference on performance of boys and girls.

Hypothesis 2 was tested by carrying out an independent t-test analysis Table 8 and the test analysed and compared the mean achievement gap of males and females among standard tests scores and alternate tests sores. At critical t-value of 2.021 of alpha level 0.05, the analysis gave t-values of 2.86 (standard test). Due to the high absolute value, the null hypothesis was rejected. Therefore there was a significant difference in the performance of boys and girls on standard test. Further analysis was done on alternate test at the same critical value and alpha level; the analysis gave 2.29 t-value. The fact that the t-value was greater than the critical value hence the null hypothesis was also rejected, that means there is significant difference on performance of girls and boys. The test showed that in both tests girls performed higher than boys and this shows that gender has influence of performance.

The null hypothesis posited and tested was that there is no significant difference between alternate test and standard test scores. The analysis compared the mean achievement gap of DHH learners based on their standard test scores and alternate test scores. The test proved that there is significant difference between test scores in alternate test scores and standard test scores among boys' and girls' performance. Girls performed significantly better than boys especially on standard tests. The findings are also in resonance with the findings of Bryant, (2013) who contends that girls perform better than boys for the following reasons:

1. Girls mature earlier than boys
2. Teachers favour girls than boys at school
3. Girls listen to teachers most of the time and are willing to change and correct their school work when told to do so by their teachers, while on the other hand boys do not want to do school work. Boys prefer hands on assignments which are not many at school below GCSE unless at tertiary level.

Table 10

Independent t-Test Analysis of Gender Influence on Performance (female: n=25 & Male: n=20)

Variables	Gender of Respondents	Mean	Std. Deviation	Std. Error Mean	Mean Difference	Std. Error Of Dif.	t.value	Df	Sig.
Traditional	Female	5.64	2.78	0.56	1.94	0.68	2.86	43	.007
	Male	3.70	1.34	0.30					
Alternate	Female	17.72	7.05	1.41	4.07	1.78	2.29	43	.027
	Male	13.65	4.04	0.90					

Hypothesis 3

The location of the school does not have significant influence on learners who are deaf performance.

The hypothesis was also tested by carrying out an independent t-test analysis Table 9 and the test analysed the influence of school location among Ramotswa Centre for the Deaf Education and Francistown Centre for the Deaf Education using standard tests scores and alternate tests scores. At critical t-value of 2.021 of alpha level .05, the analysis gave t-values of -0.96 for the traditional paper & pencil test score. Due to the fact that the absolute value is lower than the expected one, the null hypothesis was retained. Therefore, standard test scores school location does not have any significant role on performance of DHH learners.

Further analysis was done on an alternate test at the same critical t-value of 2.021 and alpha level of .05; the analysis gave a t-value of 0.71. The fact that the t-value was less than the critical hence the null hypothesis was retained, that means just like standard test scores, school location has no significant role in performances of learners who are deaf when analysing alternate test scores.

Table 11

Independent t-Test Analysis of School and location influence on Performance of Deaf Education

Variables	School Location	N	Mean	Std. Deviation	Std. Error Mean	Mean Difference	Std. Error Of Dif.	t.value	Df	Sig.
Standard	Francistown	19	4.37	1.80	0.41	-0.71	0.74	-0.96	43	.34
	Ramotswa	26	5.08	2.81	0.55					
Alternate	Francistown	19	16.68	6.10	1.40	1.34	1.88	0.71	43	.48
	Ramotswa	26	15.35	6.32	1.24					

The null hypothesis test here was school location which has no significant influence on performance of learners who are deaf. Despite the urban advantages, children attending schools in villages are outperforming their inner-city peers. The UK is among only five countries worldwide to record better results in the countryside compared with those seen in large towns and cities. The Organization for Economic Development and Co-operation (OECD) found an "urban advantage" in almost every nation. The researcher's findings showed that there is no significant difference on performance of learners who are deaf on school locations. Yet, one would think that FCDE would have better results since the school is in a city where a lot of resources are found. It maybe that resources are available but not relevant to learners who are deaf. This goes to the issue of social justice theory, the issue of promoting a just society by challenging injustice and valuing diversity." It exists when "all

people share a common humanity and therefore have a right to equitable treatment, support for their human rights, and a fair allocation of community resources." (Robinson, 2013).

Assuming justice has been exercised by assessing learners who are deaf using alternate assessment, their performance could be better.

Summary of Findings

A dependent t-test analysis test Table 6 was done to investigate if there is any significant difference between standard test scores and alternate test scores. The findings reported that alternate test scores are higher than the standard scores. Further independent t-test was performed to analyse and compare mean scores of the same test scores among boys and girls and the results showed that girls performed significantly higher than boys especially on standard scores. The last analysis which was done was based on the two school locations of the deaf. The other school is located in town and the other one in a village. Therefore, independent t-test was run to check the school location on the performance of learners who are deaf. The results showed no significant difference among school locations on both scores.

In short, school location was the only one which reported no significant difference on performance of learners who are deaf while analysis between standard test scores and alternate test scores showed there is a significant difference. Girls also performed significantly higher than boys even though it was on standard test scores only.

Chapter 5

Summary, Conclusions and Recommendations

Introduction

This chapter presents the summary of findings, overall conclusions of the study and the recommendation for the future action.

Chapter Summary

Alternate testing has been found to be more useful when testing DHH learners. This is due to the fact that alternate test scores tend to be higher than those of standard test scores. This is proved by the researcher's results from the experiment together with other researchers like Bryant, (2013) and Doherty (2012). Furthermore girls perform better than boys at schools especially on tests which are not practical. According to the results of the current study location of the school has no influence of performance of learners who are deaf, even though schools in towns are likely to be having a lot of advantages. For example, there are many teachers in towns, text books are more in towns and other resources reach towns before the villages.

Conclusion

This study has outlined the differences between standard tests and alternate tests. The findings of the study showed that alternate test has significant impact on learners who are deaf since in all alternate tests, students performed significantly better than in standard tests. The school location had no impact on learners who are deaf.

As for the variable gender, girls' mean scores on both alternate test scores and standard test scores were higher than those for the boys. In fact, in all the tests girls performed better than boys and this is and this is also confirmed by literature.

The two Centres for the Deaf were located in two different areas. One is in a town; the other is in a village. The literature supports that town schools have advantages over village

ones in terms of number of teachers per school, equipment and books. The researcher found it fit to analyse her study in terms of school location. Yet, the results show that there is no significant difference in performance on learners who are deaf in terms of school location. The researcher thought that this was due to the fact that these schools were not practising inclusive education.

Recommendations

The findings of this study could be helpful to the Ministry of Education & Skills Development, special education teachers, learners who are DHH and the community at large. Considering the findings of this study, the researcher recommended that:

1. Language policies in Botswana schools should be reviewed. At least everyone in the country should have an introduction to sign language as early as primary level. For example, sign language should be studied like Guidance and counselling subject which is slotted once in every week for 40 minutes.
2. Let sign language be slotted 40 minutes per week also in every standard from primary till secondary. This can help in promoting early sign language in the following way. Everyone will have sign language, this means mothers who are not deaf who will give birth to deaf children will be able to talk to their children as early as possible to their kids. DHH learners will be able to acquire language as early as possible and be able to cope well at school.
3. Extensive staff training, including cultural and language development, should be introduced between teachers of Deaf Children and regular education teachers. Deaf staff can also be recruited and deaf students should be regularly involved in extracurricular activities.
4. Special education teachers who are in mainstream schools can also start a bilingual classroom setting. The teacher could learn sign language if he/she did not specialize in

deaf education at school and encourage all the children he/she is teaching to do so.

This can motivate hearing students and help in spreading sign language across the school. This will even help by reducing the cost and number of interpreters in school since other students will be interpreting for the deaf students. As long as hearing students will be taught to respect the deaf culture but not totally removing interpreters in the classroom. Regular visits would be arranged as long as it is planned well.

5. Inclusive education is better than special schools on learners who have hearing impairment as we see them in Indian Inclusive schools performing a lot better than the ones in special schools. In Botswana we find learners who have hearing impairment at most in Special schools may be if we can encourage inclusive education it can have a positive impact on them since they will learn more by interacting with their counter peers both in classes and outside class.
6. Parents, families, units, and communities should be made partners of the education of hearing impairment learners.

References

- Bayhan, P. (2002). *Gender differences in Turkish deaf students' attitudes towards computer and computer use*. Retrieved from www.aace.org/conf/site/.../presentation_3030_21608.ppt
- Beauchemin, A. (2011). *Research on theory of mind in deaf education*. Retrieved from http://digitalcommons.wustl.edu/cgi/viewcontent.cgi?article=1619&context=pacs_capstones&seiredir=1&referer=http%3A%2F%2ch=%22theories%20deaf%20education%22
- Berent, G. P. (2001). English for deaf students: Assessing and addressing learners' grammar development. In D. Janáková (Ed.), *International Seminar on Teaching English to Deaf and Hard-of-Hearing Students at Secondary and Tertiary Levels of Education: Proceedings (pp.124-134)*. Prague, Czech Republic: Charles University, The Karolinum Press.
- Bryant, L. (2013). *Why are girls succeeding at school?* Retrieved from http://www.historylearningsite.co.uk/girls_school_success.htm
- Burman, D., Evans, D., Nunes, T., & Daniel Bell, D. (2008). Assessing deaf children's writing in primary school: Grammar and story development. *Deafness and Education International Deafness Educ. Int.* 10(2): 93–110. DOI: 10.1002/dei.238. Retrieved from www.interscience.wiley.com
- Capelli, S. (2013). *Boys and school – reasons that boys do more poorly than girls*. Retrieved from <http://www.eslteachersboard.com/cgi-bin/articles/index.pl?page=5;read=3077>
- Cawthon, S. W. (2004). Schools for the deaf and the no child left behind Act. *American Annals of the Deaf*, 4, 314-323. Retrieved from http://sitemaker.umich.edu/356.silverstein/history_of_deaf_education
- Chipunza, C., & Gwarinda, S. A. (2010). Transformational leadership in merging higher education institutions : a case study : original research. *SA Journal of Human Resource Management*, (8)1, 1-10. Retrieved from http://reference.sabinet.co.za/sa_epublication_article/sajhrm_v8_n1_a6

- Clack, K. (2011). *Exploring assessment alternatives for deaf students*. Seattle, Washington.
Retrieved from <http://www.pepnet.org/confpast/1996/pdf/clack.pdf>
- Collins, N. (2013). *Boys 'worse at school due to stereotypes'*. Retrieved from
<http://www.telegraph.co.uk/education/educationnews/9862473/Boys-worse-at-school-due-to-stereotypes.html>
- Department of Education, U.S. (2003). *Alternate standards and assessment for students with the most significant cognitive disabilities*. Retrieved from
<http://www.cehd.umn.edu/nceo/topicareas/alternateassessments/altAssessFAQ.htm>
- Doherty, M. (2012). Policy and practice in deaf education: Views and experiences of teachers and young people who are deaf in Northern Ireland and Sweden. *European Journal of Special Needs Education*, 27(3), (29-34).
- Edwards, O. (2006). *The importance of literacy. Edutopia's Brain Based Learning Guide*. Retrieved from <http://www.edutopia.org/editors-note-importance-of-literacy>
- Gye, H. (2013). *Girls get higher marks than boys in school 'because they are better behaved'*. Retrieved from <http://www.dailymail.co.uk/news/article-2257018/Girls-higher-marks-boys-school-better-behaved.html>
- Harmer, L. M. (1999). Health care delivery and deaf people: Practice, problems, and recommendations for change. *Journal of Deaf Studies and Deaf Education*, 4(2),73-110. Retrieved from <http://jdsde.oxfordjournals.org/content/4/2/73.full.pdf>
- Johnson, P. (2012). The benefits and administration of alternative assessments. *Johns Hopkins School of Education*, 6(1), 1-3. Retrieved from
<http://education.jhu.edu/PD/newhorizons/Journals/Winter2012/Johnson>
- Ketumile, K. (2011, September 14). Literacy important. *DailyNews Newspaper*, p. 3.
- Kirk, S., Gallagher, J.J., Coleman, M.R., & Anastasiow, N. (2009). *Educating exceptional children*. Belmont, USA: Wadsworth Cengage learning.

Lasasso, C. J. (2002). *Critical literacy issues in deaf education in the United States*.

Retrieved from <http://www.acfos.org/publication/ourarticles/pdf/acfos2/lasasso.pdf>

Lekoko, N., & Mukhopadhyay, S. (2008). Practice and preferences of sign languages in the

instruction of deaf students: Some reflections on the mainstream secondary schools of

Botswana. *Asia Pacific Disability Rehabilitation Journal* 19(3). Retrieved from

http://www.dinf.ne.jp/doc/english/asia/resource/apdrj/vol19_2008/sign_languages_botswana.html

Logsdon, A. (2013). *Alternative assessment-what is an alternative assessment*. Retrieved

from

http://learningdisabilities.about.com/od/learning_disability_terms_A/g/alternative_assessment.htm

Luckner, J.L. (2012). Issues in education of students who are deaf or hard of hearing.

Retrieved from http://www.unco.edu/ncssd/resources/issues_dhh.pdf

Mayberry, R. I. (2002). Cognitive development in deaf children: the interface of language

and perception in neuropsychology. In S.J. Segalowitz & I. Rapin (Eds.), *Handbook of*

Neuropsychology, 2nd Edition, Vol.8 Part II. Retrieved from

<http://idiom.ucsd.edu/~rmayberry/pubs/Mayberry-CogDev-Hndbok.pdf>

Mac Lain, B. & Pennucci, A. (2002). *Washington school for the deaf: Models of education*

and Service delivery. Retrieved from <http://www.wsipp.wa.gov/rptfiles/wsd.pdf>

Mayer, C. (2009). Issues in second language literacy education with learners who are deaf.

International Journal of Bilingual Education and Bilingualism, 12(3), 325-334.

Retrieved From <http://www.tandfonline.com/doi/abs/10.1080/13670050802153368>

Mukhopadhyay, S., & Moswela, E. (2010). Inside practice of science teachers for students

with hearing impairments in Botswana primary schools. *International Journal of*

Special Education 25 (3). Retrieved

from http://scholar.google.com/scholar?q=assessment+of+deaf+learners+in+botswana&hl=en&as_sdt=0&as_vis=1&oi=scholar

Mukhopadhyay, S., & Sison, W. (2006). Natural sign language and proficiency in learning setswana sign language and curriculum content among students with hearing impairment in Botswana. *Asia Pacific Disability Rehabilitation Journal*, 17(1), 61-72. Retrieved from <http://www.aifo.it/english/disability/apdrj/apdrj0106/signlang-botswana.pdf>

National Center on Educational Outcomes. (2013). *Alternative assessment for students with disabilities*. Retrieved from

<http://www.cehd.umn.edu/nceo/topicareas/alternateassessments/altAssessFAQ.htm>

NCEO, N. (2013). Alternate assessment for students with disabilities. Retrieved from

<http://www.cehd.umn.edu/nceo/topicareas/alternateassessments/altAssessFAQ.htm>

New Zealand Ministry of Education Special Education, Scoping support for New Zealand sign language Users Accessing the Curriculum. (2010). *Part 1: an International Literature*. Retrieved from

http://www.educationcounts.govt.nz/__data/assets/pdf_file/0003/87042/ScopingSupportNZSL-UsersPart-I-13122010-nw.pdf

Nitko, A.J., & Brookhart, S. M. (2011). *Educational assessment of students*. (6th ed).

Boston, USA: Pearson Education, Inc.

Okumbe, M. A. (2006). Accommodating learners with special educational needs in Botswana: a challenge to educational psychologists and special educators.

Singapore 32nd annual conference paper. Retrieved from

<http://www.iaea.info/papers.aspx?id=68>

Okumbe, M. A., & Tsheko, G. N. (n.d.). *The need for curriculum modifications for special needs learners in Botswana*. University of Botswana, Department of educational

- foundations, Gaborone, Botswana. Retrieved from
http://www.iaea.info/documents/paper_1162a204e4.pdf
- Ontario, C. (2002). *Assessment Strategies Companion*. Retrieved from
<http://onlinelibrary.wiley.com/doi/10.1002/dei.204/abstract>
- Paton, G. (2013). *Village schools 'outperforming those in inner-city areas'*. Retrieved from
<http://www.telegraph.co.uk/education/educationnews/10041683/Village-schools-outpe>
- Perry, D.G., & Bussey, K. (1979). The social learning theory of sex differences: imitation is alive and well. *Journal of personality and social psychology*, 37(10), 1699-1712.
Retrieved from <http://psycnet.apa.org/journals/psp/37/10/1699.pdf>
- Pierce, G. (2015). Assessment overview. Retrieved from
https://scholar.google.com/scholar?as_ylo=2015&q=what+is+assessment&hl=en&as_sdt=0,5
- Robinson, M. (2013). *What is social justice?* Retrieved from <http://gjs.appstate.edu/social-justice-and-human-rights/what-social-justice>
- Rowland, C. (2009). *Assessment communication and learning in young children who are deaf, blind or who have multiple disabilities*. Retrieved from
<http://www.designtolearn.com/uploaded/pdf/DeafBlindAssessmentGuide.pdf>
- Singleton, J.L., Morgan, D., DiGello, E., Wiles, J., & Rivers, R. (2004). Vocabulary use by low, moderate and high ASL-Proficient writers compared to hearing ESL and monolingual speakers. *Journal of Deaf Education*, 9(1), 86-103.
- Start ASL (2011). *History of sign language: Deaf history*. Retrieved from
<http://www.start-american-sign-language.com/history-of-sign-language.htm>
- Teaching, L. (2012). *Teaching literacy to deaf students in Nicaragua: A common sense two-step approach*. Retrieved from <http://www.signwriting.org/archive/docs2/sw0162-NI-Teaching-Literacy.pdf>

Twalker, W. (2013). *Why girls are outperforming boys in school*. Retrieved from <http://neatoday.org/2013/03/05/why-girls-are-outperforming-boys-in-school/>

Vallely, P. (2013). *Assessment*. Retrieved from <http://dictionary.reference.com/browse/assessment>

Weeks, M. (2013). *New UGA research helps explain why girls do better in school*. Retrieved from <http://news.uga.edu/releases/article/why-girls-do-better-in-school-010212/>

Zorigian, K. & Job, J. (2003). *Gender in special education*. Retrieved from <http://www.learnnc.org/lp/pages/6817>

Appendix1***Standard test***

Surname _____ First name _____

Age _____ School _____

Gender _____ class _____

Hearing loss _____

Instructions:

- a) Write a composition about 'The Wedding I Once Attended'
- b) Use provided questions to help you narrate your story well
- c) The composition will be marked out of 15

Guided questions

1. When was the wedding?
2. Where was the wedding?
3. What did you see?
4. What did you eat?
5. Did you like/dislike about the wedding?
6. What is your general feeling about the event?

*Appendix 2**Adapted Curriculum Based Test for Standard 5,6 & 7 for Learners With hearing impairment Test 1**The Wedding I Once Attended*

Surname _____

Name _____

Age _____

Class _____

Gender _____

School _____

Hearing Loss _____

Instructions:

- a) The teacher is going to sign this passage to students and students write exactly what they see as the teacher signs
- b) Then the teacher collects scripts at the end to go and mark
- c) The test is out of 15

It was on the 25th December 2012 when we gathered on a tent for a wedding ceremony. We patiently waited for the bride and the groom to arrive. It was around 10 am when they march into the tent. The bride was wearing a white dress and the groom wearing a black suit. The bride and the groom came in dancing and sat down. Then the pastor started the service with a prayer. Then the pastor talked to the people in the tent. Then the bride and the groom wore rings. After that people started dancing to welcome the couple and everyone who came for the wedding. Finally lunch time came. They served rice, meat and salads. After lunch people danced until night. We finally left them busy dancing as we went home. The celebration was really joyful.

Appendix 3

Adapted Curriculum Based Test for Standard 5,6 & 7 for Learners With hearing impairment Test 2

The Wedding I Once Attended

??r?? ????r??

?r?? ? ????r??

??

? d?r??

?r??

?????r??

? r??r?? ????r????????????????????????????????????

Instructions

- A) Students read and sign the passage to the teacher individually
- B) The test will also be marked out of 15

It was on the 25th December 2012 when we gathered on a tent for a wedding ceremony. We patiently waited for the bride and the groom to arrive. It was around 10 am when they march into the tent. The bride was wearing a white dress and the groom wearing a black suit. The bride and the groom came in dancing and sat down. Then the pastor started the service with a prayer. Then the pastor talked to the people in the tent. Then the bride and the groom wore rings. After that people started dancing to welcome the couple and everyone who came for the wedding. Finally lunch time came. They served rice, meat and salads. After lunch people danced until night. We finally left them busy dancing as we went home. The celebration was really joyful.

□□□□**d**□□

Adapted Curriculum Based Test for Standard 5,6 & 7 for Learners With hearing impairment Test 3

The Wedding I Once Attended

Surname _____

First Name _____

Age _____

Class _____

School _____

Hearing Loss _____

Instructions:

- a) Study the passage below and answer the questions by filling in the blank spaces using answers provided below
- b) Where the word '**date**' is supposed to be used please write the actual date not the word '**date**'.
- c) The test is out of 15 and each mark carries a weight of 1 mark.

It was on the _____ (1) when we gathered on a tent for a wedding ceremony. We patiently waited for the bride and the _____ (2) to arrive. It was around _____ (3) when they marched into the tent. The bride was wearing a _____ (4) dress and the groom wearing a _____ (5) suit. The bride and the groom came in dancing and _____ (6) down. Then the _____ (7) started the service with a _____ (8). Then the pastor talked to the people in the _____ (9). Then the bride and the groom wore _____ (10). After that people started _____ (11) to welcome the couple and everyone who came for the wedding. Finally lunch time came. They served _____ (12), meat and salads. After lunch people danced till _____ (13). We finally left them _____ (14) dancing when going home. The _____ (15) was really joyful.

Marking Key/Guide

- | | |
|-------------|-------------|
| 1. Date | 9. Tent |
| 2. Groom | 10. Rings |
| 3. Time | 11. Dancing |
| 4. White | 12. Rice |
| 5. Black | 13. Evening |
| 6. Sit | 14. Busy |
| 7. Pastor | 15. Wedding |
| 8. Prayer | |
| 9. Tent | |
| 10. Rings | |
| 11. Dancing | |
| 12. Rice | |
| 13. Evening | |
| 14. Busy | |

Appendix 5***Adapted Curriculum Based Test for Standard 5,6 & 7 for Learners With hearing Impairment Test 4***

Surname????????????????????????????????????

Name????????????????????????????????????

Age_____

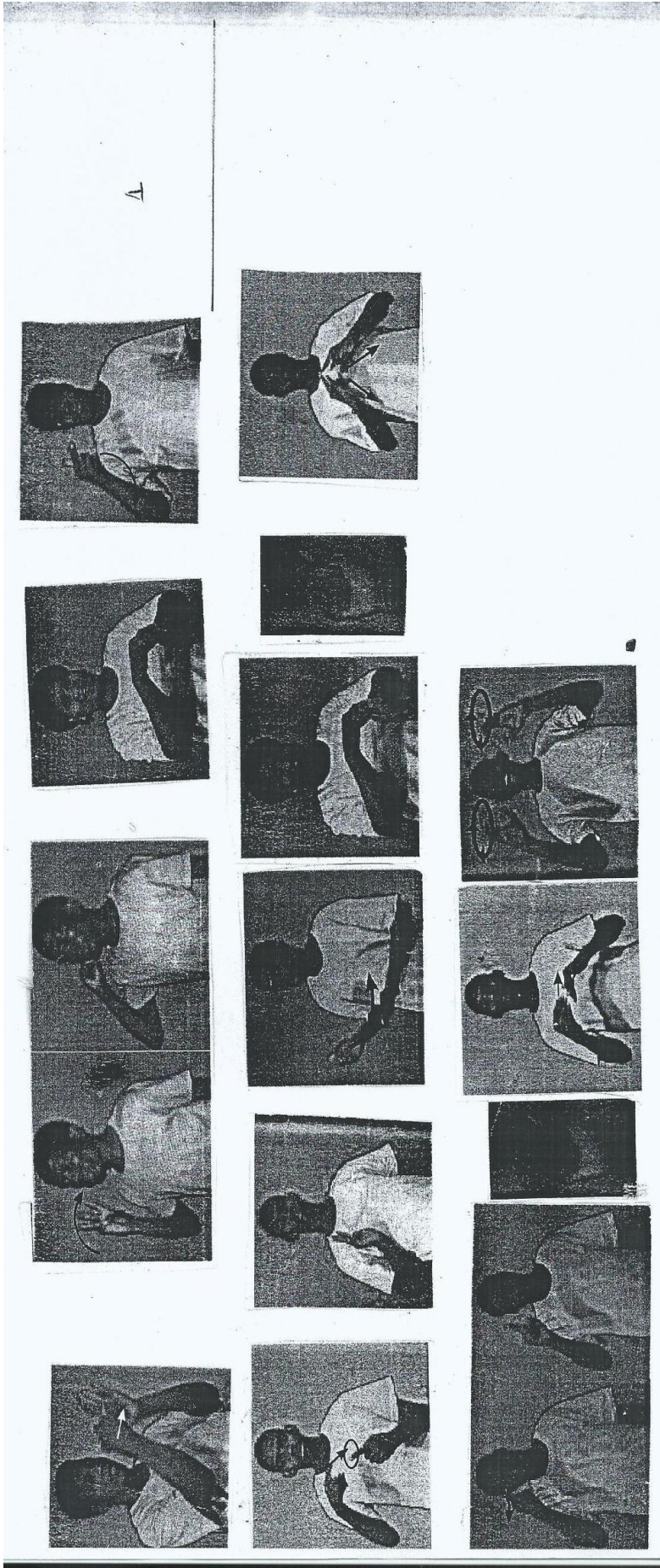
Class_____

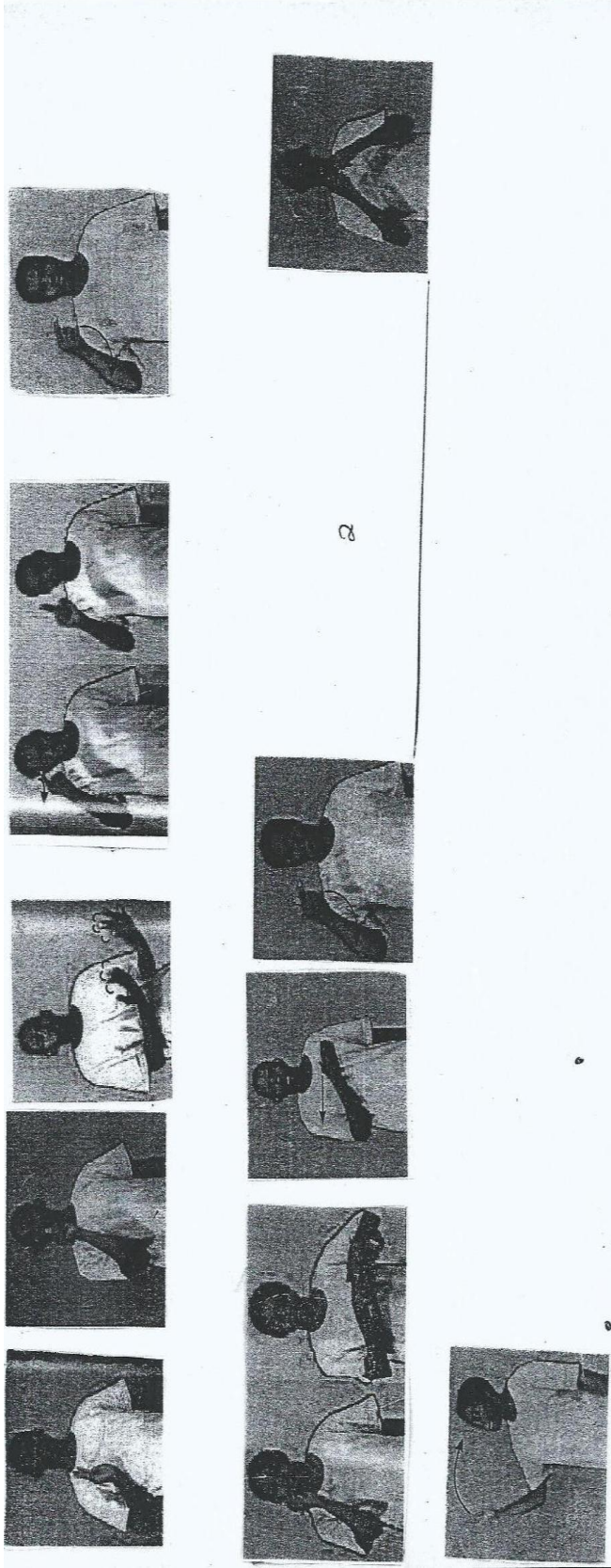
School_____

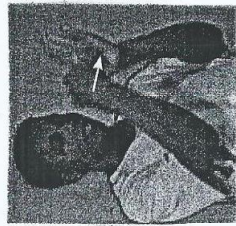
Hearing Loss_____

Instructions:

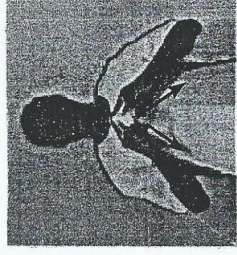
- a) Study the sign language passage below and answer the questions by filling in the blank spaces using answers provided below
- b) The answer sheet is also in sign language and word for form, you are required to use an alphabet attach to the answer as your answer since you can't draw a sign in the provided time
- c) Where the word 'date' is supposed to be used please write the actual word date.
- d) The test is out of 15 and each mark carries a weight of 1 mark
- e) Answer sheets will be provided for you to circle the correct answer

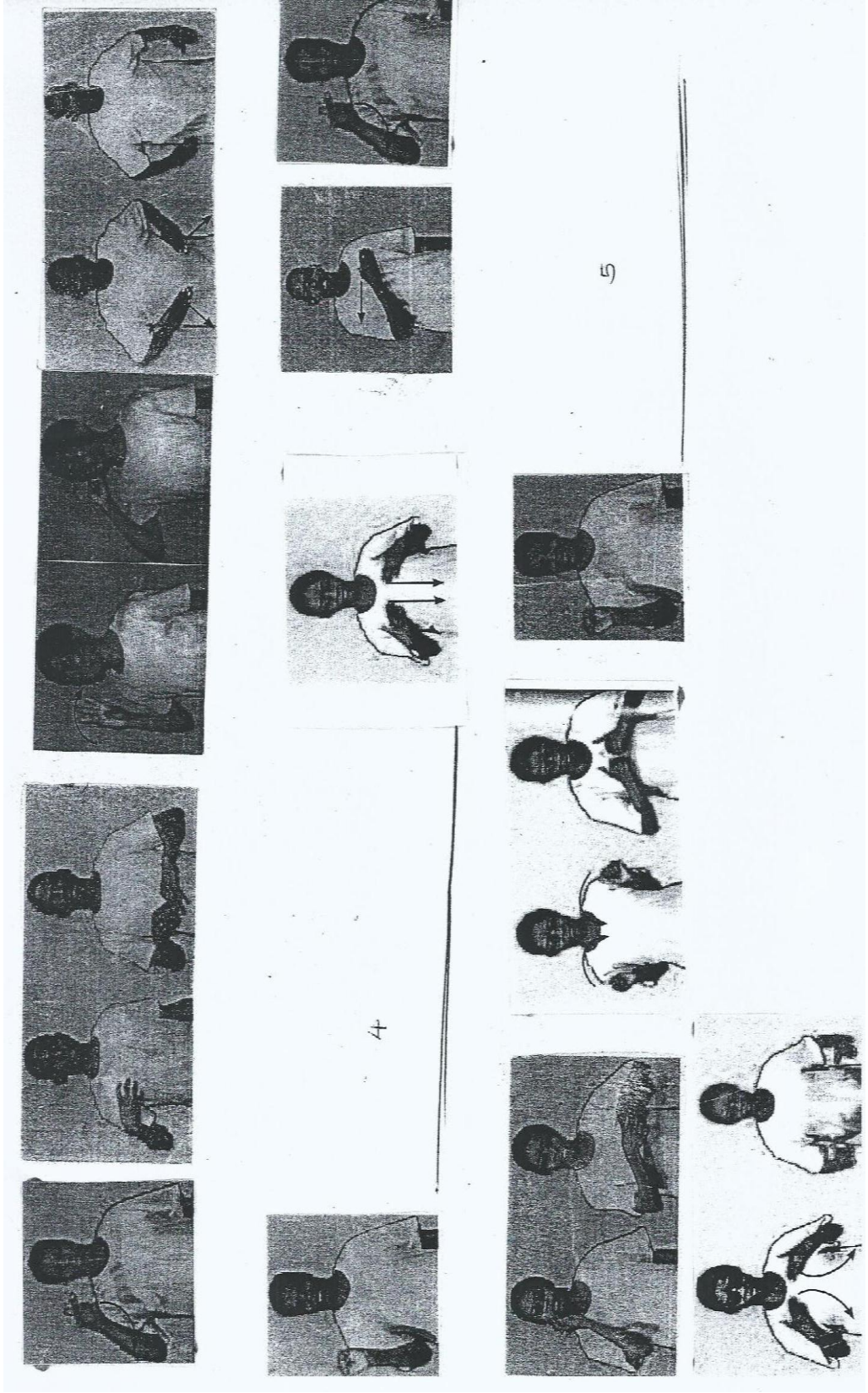


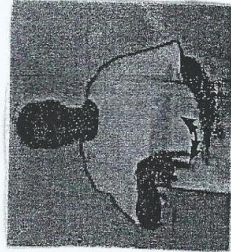
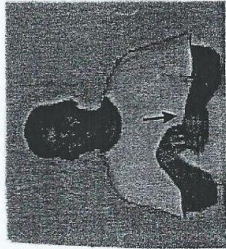
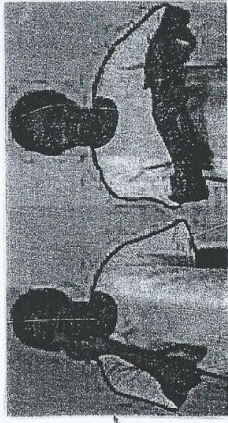
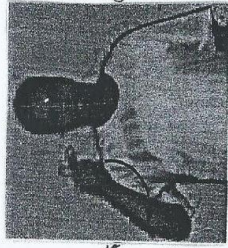
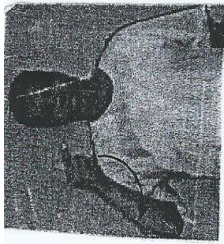




79

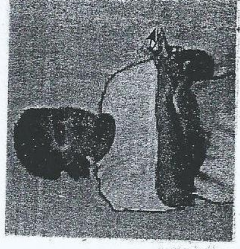
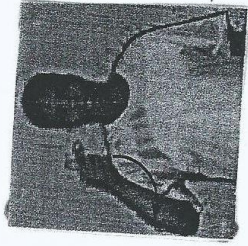




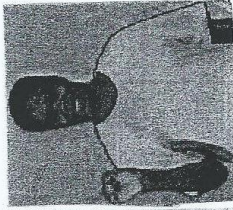
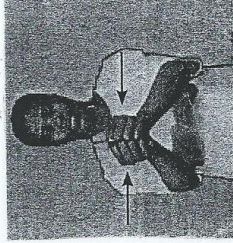
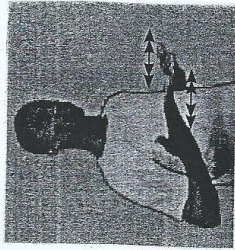
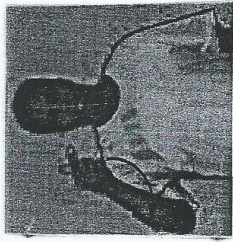


6



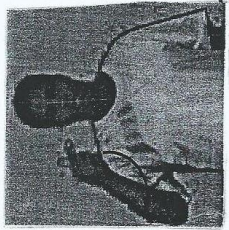
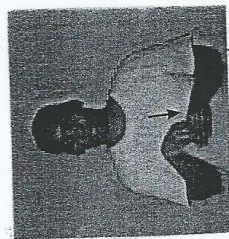
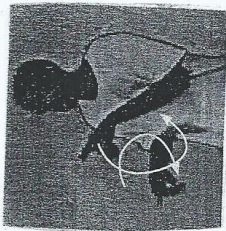
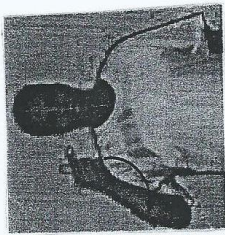
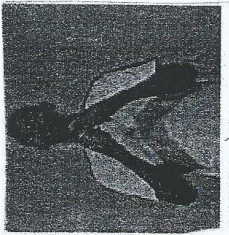
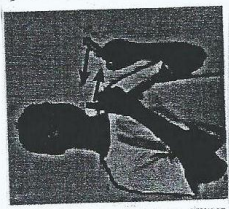
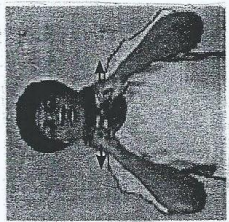
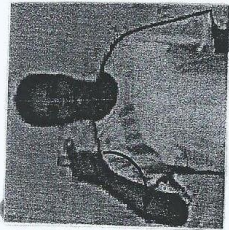


7



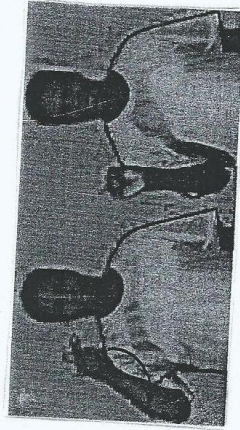
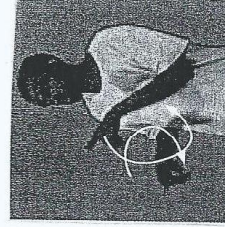
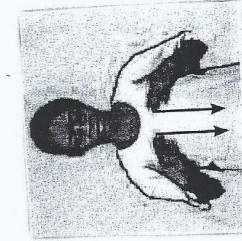
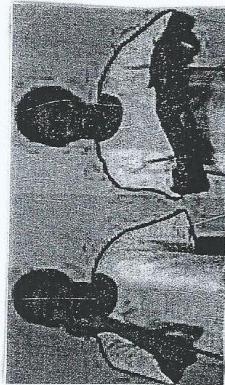
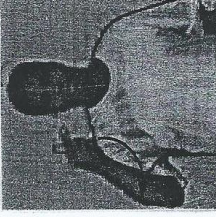
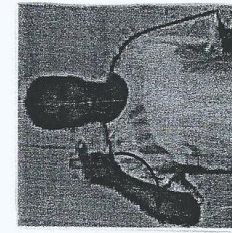
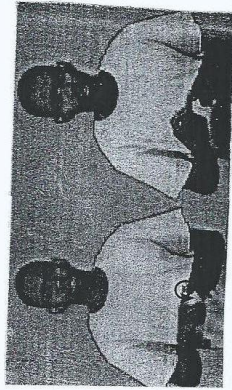
8

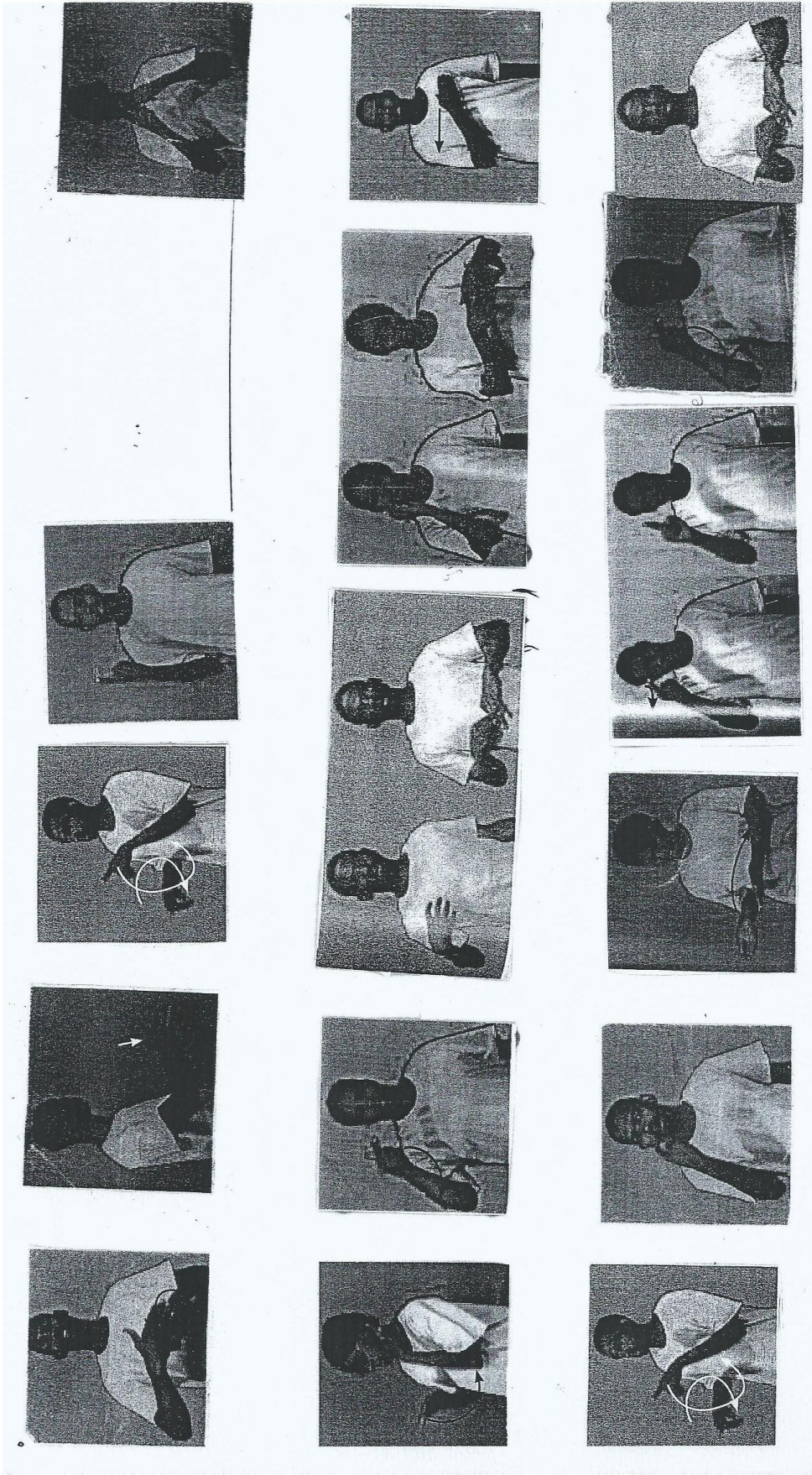
9

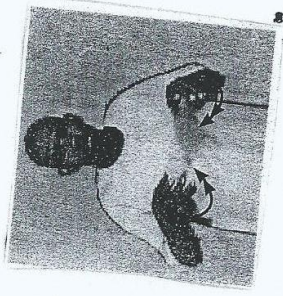
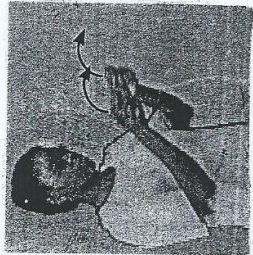
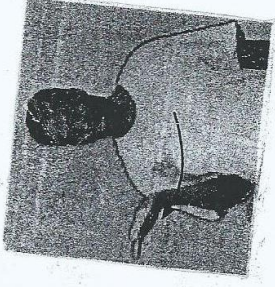
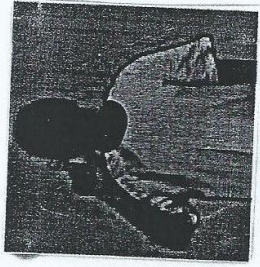
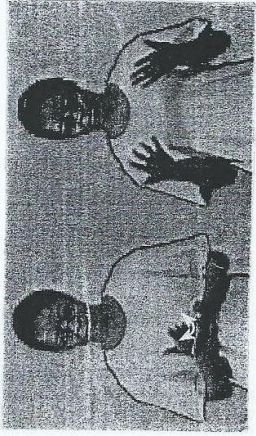


9

8



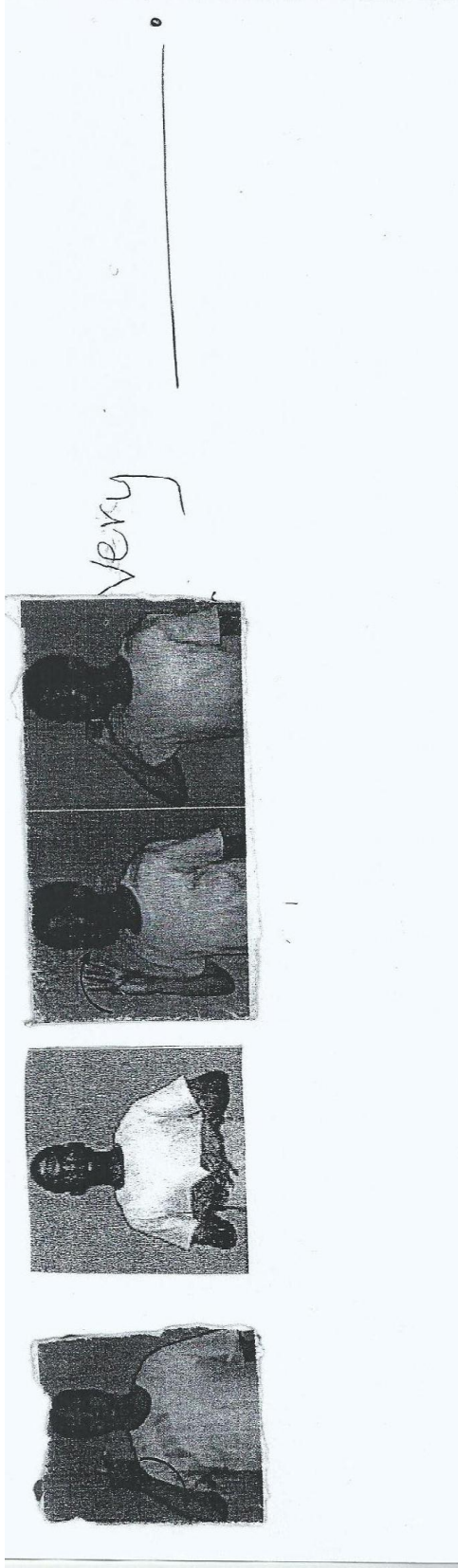




_____)

Handwritten text: Bill

The page displays 15 small, square photographs arranged in three rows of five. Each photograph shows a person in a white shirt performing a different task. The tasks include: holding a small object, holding a circular object, holding a rectangular object, holding a long thin object, holding a pair of glasses, holding a small object, holding a small object, holding a small object, holding a small object, holding a small object, holding a small object, holding a small object, holding a small object, holding a small object, and holding a small object. The photographs are arranged in a grid-like fashion, with some overlapping. The background of the page is white with some faint markings and a handwritten name 'Bill' at the top left.



Choose correct answers from the following words and put in the provided spaces in the passage

a) People



f) Time



k) Dancing



b) Congratulate



g) Date



l) Black



c) Prayer



h) Bride



m) Sit



d) Busy



i) Pastor



n) Night



o) Rice



p) Good



q) White



Marking key sign language test by A. T. W. Ramokate

Select the correct answer from the following signs and write a letter or word next to the sign

Name: _____ Class _____ School _____ Age _____

1. a b c d f g h i k l m n o p q

2. a b c d f g h i k l m n o p q

3. a b c d f g h i k l m n o p q

4. a b c d f g h i k l m n o p q

5. a b c d f g h i k l m n o p q

6. a b c d f g h i k l m n o p q

7. a b c d f g h i k l m n o p q

8. a b c d f g h i k l m n o p q

9. a b c d f g h i k l m n o p q

10. a b c d f g h i k l m n o p q

11. a b c d f g h i k l m n o p q

12. a b c d f g h i k l m n o p q

13. a b c d f g h i k l m n o p q

14. a b c d f g h i k l m n o p q

15. a b c d f g h i k l m n o p q