

**THE INTEGRATION OF HEARING IMPAIRED LEARNERS
IN JUNIOR SECONDARY SCHOOLS**

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D.S.E., B.Ed (Hons)

**Mini-dissertation submitted in partial fulfilment of the
requirement of the degree of**

Master of Education (Special Education)

in

The Department of Foundations of Education

Faculty of Education

NORTH WEST UNIVERSITY

Mafikeng

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2006



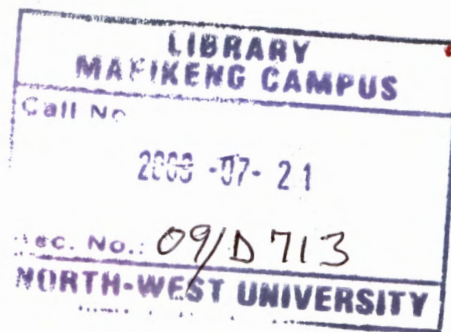
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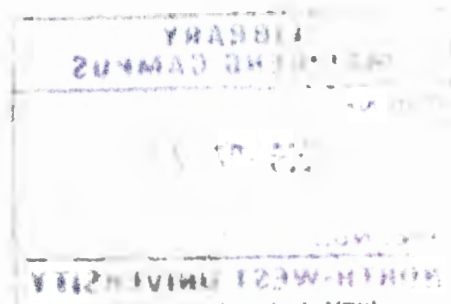
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DECLARATION

I declare that this mini dissertation for the degree of Masters of Education at the North West University hereby submitted, has not been previously submitted by me for a degree at this or any other university, that it is my own work in design and execution and that all materials taken from other sources contained herein have been duly acknowledged.





DEDICATION

This piece of work is dedicated to hearing impaired learners and to teachers who teach them.

CERTIFICATE OF ACCEPTANCE

This dissertation entitled “The integration of hearing impaired learners in Junior Secondary Schools” written by Phelloeng Pele Gabotshwane is hereby recommended for acceptance for examination.

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APPROVAL PAGE

This mini dissertation has been examined and is approved as meeting the required standards of scholarship for partial fulfillment of the requirements for the degree of Masters of Education.

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ACKNOWLEDGEMENTS

A study of this nature could never reach completion were it not for the help and assistance of many. For all those who have helped it has meant a sacrifice of precious spare time and the writer wishes to express his sincere appreciation of their cooperation and interest.

I am particularly indebted to Dr I.M Loate who supervised me through out the entire project. Her openness and infinite empathy make working with her at any time a source of great pleasure.

I am also indebted to the following people:

The staff of the Department of Foundations of Education, NorthWest, who gave the nod to the undertaking of this study.

To Education Officers, School Heads and Teachers who participated in this study. They did provide necessary information needed for this study.

To my family, for providing unfailing encouragement and support during data collection and analysis as well as cheering me up when the enormity of the task started to let me down.

Finally, many thanks also go to Oshinka, Ntsere, Gaone and Thusoetsile for their forbearance, meticulous proof reading and assisting in analysis.

ABSTRACT

The purpose of this study was to investigate the integration of hearing impaired learners in Community Junior Secondary Schools in Botswana, with particular reference to curriculum adaptation, teacher training and support services available.

The research was confined to the only two existing Community Junior Secondary Schools (CJSS) offering education to the hearing impaired learners, namely Ramotswa CJSS and Tashata CJSS. In total there were twenty two respondents. Eighteen teachers and two school heads responded to the questionnaire and the researcher interviewed two education officers responsible for the education of the hearing impaired.

The research includes both literature review and empirical techniques. Qualitative data were gathered using questionnaire and interview. The nature of instruments used compelled the researcher to seek for qualitative data i.e. interview was semi structured and the whole of part two of the questionnaire contains open ended questions. Findings were analysed and presented in four sets. Tables were used to present and illuminate findings.

The study revealed the following: hearing impaired learners do not have their own specially designed curriculum, teachers ensure curriculum access through curriculum adaptation and modification, schools do not prepare individual educational plans, government provide resources for teaching and learning though they are not enough, sign language interpreters have been employed and schools have links with outside agencies and professionals. The predominant form of integration taking place in schools is joint social/sporting activities.

The conclusions and recommendations in this study were drawn based on the findings.

Abbreviations

C J S S -	Central Resource Centre
D S E -	Division of Special Education
G o B -	Government of Botswana
H I -	Hearing Impairment
I E P -	Individual Educational Plan
M o E -	Ministry of Education
N D P -	National Development Plan
N G O -	Non Governmental Organisation
R N P E -	Revised National Policy on Education
S E N-	Special Educational Needs
S I D A -	Swedish International development Agency

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CHAPTER ONE

PROBLEM ORIENTATION

1.1 Introduction

Integration has been advocated for, and widely employed as an alternative to segregated schools for learners with special educational needs (Thomas, 1996:66). The philosophy behind this movement has been that of equality of opportunity and equal rights for all. The implication is that segregated schools (special schools) discriminate learners with special educational needs from the community, hence the move towards integration as supported by inclusive education (cf. par. 2.2). Education in such a way emphasizes that success is fostered for all learners by dealing with barriers that serve to marginalize some individuals or groups according to race, gender, language, ability, health status and social class (Kruger & Adams, 1998:234). The assumption that the best place for a child with special educational needs to be educated is in a mainstream school has grown rapidly during the past twenty-five years (Hegarty, 1993:195).

1.2 Statement of the problem

Even if integration can be of benefit to hearing impaired learners, in assisting them academically, emotionally and socially, certain factors can militate against this process of integration, thus rendering it problematic (Power, 1996c: 111). These factors as identified by Culatta, Tompkins and Werts (2003:256) are the curriculum, teacher training and support services.

1.3 Background of the study

The background of the study will briefly discuss the role of non-governmental organisations (NGOs) before and after independence in Botswana. The researcher included the role of NGOs in Botswana because they have played a very vital role in provision of services to children with special educational needs and they are still continuing to do so. It is the NGOs who started providing educational services to children with special educational needs in Botswana. Furthermore, it is through their assistance that Botswana has special units all over.

It will further cover development of the first policy on special education which actually gave some recognition to the acceptance and placement of children with special needs, integration of hearing impaired children in Botswana and education of the hearing impaired children in Botswana within the context of the Revised National Policy on Education of 1994 (R N P E '94).

1.3.1 The role of non-governmental organisations

Special education in Botswana has a very short history. Like in many developing countries, its development is attributed to the efforts of non-governmental organisations (NGOs). The first provision was started in the late sixties (1969) by the Dutch Reformed Church in Mochudi, in which a resource room for the blind was established at Linchwe Primary School (Government of Botswana, 1993). The blind children were taught for two years in the resource room and then integrated into regular class (GoB, 1993). Thus unlike developed countries, Botswana's first provision was one in which children were mainstreamed instead of being segregated into special schools.

The other development that followed took place in the 1970's, still initiated by NGOs, in which a school for the physical and mentally handicapped was established at Otse (Government of Botswana, 1993). Furthermore, in 1981/1982 Swedish International

Development Agency (SIDA) assisted Botswana in setting up a Division of Special Education (DSE) within the Ministry of Education (MoE) (Abosi & Kandjii-Murangi, 1996). The DSE, which was established in 1984 was given the following responsibilities;

- Policy coordination and leadership.
- Liaises with relevant departments of the ministry (MoE) on matters related to the curriculum, pre-service and in-service programs, examinations and placement of children and youth with special educational needs.
- Actively support and coordinate the management and distribution of equipment for children and youth with special educational needs (Abosi et al., 1996: 272-273).

1.3.2 The Ministry of Education's first policy on special education

Botswana developed her first policy on special education in 1984. The policy promoted equality of educational opportunities, integration and early identification (Government of Botswana, 1984). The National Development Plan VI (1985- 1991) placed emphasis on mainstreaming and integration, as such the government began to give some recognition to the acceptance and placement of the disabled children in regular schools. Furthermore, The Revised National Policy on Education of 1994 (RNPE '94) also recommended integration in all levels of education as the best way of educating children with disabilities.

1.3.3 Integration of the hearing impaired in Botswana

In Botswana, integration of the hearing impaired children started in the 1970's when a unit was attached to Mokgosi Primary School in Ramotswa, with the assistance of Lutheran Church (Zindi, 1997:12). This was still an initiative of the NGO. Ever since the 1984 Policy on Special Education, a lot of hearing impaired children have been integrated into regular schools. For example, in 1993 a unit was established at

Makolojwne Primary School in Serowe (Abosi et al., 1996:271). Apart from “unit system of integration”, a lot of schools practices “total integration in regular classes” whereby the Division of Special Education is expected to provide support. This is supported by Abosi et al. (1996: 273) when stating that “over 18 primary schools and secondary schools are offering such services to the hearing impaired children throughout the country.” The first unit to be established in Community Junior Secondary Schools (CJSS) was in 1996, at Ramotswa CJSS. The second unit was established in 2003 in the northern part of the country in a school called Tashatha CJSS in Tati.

1.3.4 Education of the hearing impaired children in Botswana within the context of The Revised National Policy on Education of 1994 (RNPE’94)

R N P E ’94 provides for a ten year education in which a child who enters standard one is sure of progressing to Junior Certificate level in form three. It does not single out individual disabilities for attention. It generalises on all disabilities and addresses key areas of educational concern. The content of the recommendations applies to all disabilities including hearing impaired children.

The R N P E ’94 has ten broad recommendations on special education, central to that is a policy to provide for children with special educational needs in mainstream schools. These recommendations have been accepted by the government and the believe is they are being implemented as they are meant to bring about improvements in relevance, quality and access to education. The recommendations adopted have a direct or immediate implication for educational and curricular access for the hearing impaired children whose greatest difficulty in learning is communication.

The R N P E ’94 document recognises the fact that persons with disabilities have in the past by and large been excluded from education (para 11.1 of RNPE’94). It directs, as a matter of policy, that the size of the problem need to be established by developing a statistical data base, equalisation of educational opportunities should be ensured, school places should be increased and free, and children with disabilities

should be provided with special devices adapted for their needs free of charge and “as far as possible” be educated in regular schools and classrooms, with a proviso that there should be early identification, comprehensive assessment and support from parents and professional support services (Recommendation 88-93).

Recommendations 93-96 strengthen the Central Resource Centre (CRT) which is part of the Division of Special Education (DSE) and spell out its key roles as;

- Educational assessment.
- Assisting and supporting schools and children with disabilities in regular schools.
- Production of teaching and learning materials.
- Organising seminars and workshops for teachers and support staff and services.
- Setting up a workshop for repair and maintenance of equipment.
- Coordination of efforts by parents, medical staff and other support services to ensure that education is provided to all children with disabilities.

Recommendations 94 and 95 deal with staff training and development and professional networking for quality management and teaching. It directs that all teachers should be introduced to effective management of special learning needs and teaching approaches and methods that are effective to all learners including those at risk of experiencing difficulties in learning. School support staff, such as classroom assistants should undergo in-service training and special training to enable them to discharge their duties effectively. Teachers should also undergo in-service training and special training to help children experiencing difficulty and career structured developed for them.

R N P E '94 also discuss the curriculum in respect to children with disabilities and point out that teaching programs for children with special educational needs should emphasise specific objectives and competencies. It lays out nine principles that should apply and among them include;

- The teaching program must show clear responsibility to the knowledge, which is already in place. As knowledge increases, programs must be reviewed and changed.
- Educational programs should be based on data gathered during the assessment of the student's needs, the educational environments and the resources available.
- The teaching methods and materials, which have been consistently successful, are those that should be used.
- The curriculum should in no way diminish the self-esteem of disabled children (Report of the National Commission on Education, 1993:326).

The R N P E '94 has as well identified twelve barriers to education in respect of disabled children (hearing impaired included) and among them includes;

- Inadequate teacher training in special education.
- Inappropriate curriculum.
- Poor collaboration between relevant bodies.
- Inadequate resources.
- Few placement opportunities.
- Poor facilitation of early identification and intervention (Government of Botswana, 1993).

These are not only barriers to education of special needs children but to their integration as well. As stipulated earlier, the recommendations are being, or are to be implemented and problems identified addressed so as to improve education and facilitate access as well as integration.

1.3.5 Pilot study conducted in Ramotswa Community Junior Secondary School

In 1999 the above mentioned school, which was piloting the integration of hearing impaired children, wrote a report to the Ministry of Education outlining their findings about integration of these children. The researcher opted to include this report so that

readers could get the insight view of those who were piloting the integration of the hearing impaired in Community Junior Secondary School. Below is a summary of the report in relation to the curriculum, support services and teacher training (Ramotswa CJSS Report, 1999).

(a) Curriculum

It is inappropriate and not possible to modify the syllabus to suit student's language levels if they are expected to access the same final examination. The language levels of nearly all of the available printed materials are too complex for the students. They are unable to comprehend most abstract concepts or to read any of the set texts independently with meaning. Specialists are willing to try but it would take time to access facilities. It may be more appropriate to create new syllabi with alternative accreditation.

(b) Resources and Materials

Those available for use are not enough e.g. visual resources, reading books, videos and reprographic facilities. Hearing impaired students learn best through a multi media approach to learning.

Hearing aids: Many of the students do not have hearing aids and they could benefit from them. The school needs more accessible links to audiologists and on site equipment to solve this problem.

Speech therapy: Many of the students want to develop their language and speech but at present there is no provision or time for this to happen.

(c) Staffing

High turn over of teaching staff causes problems as they do not have knowledge of the hearing impaired and even with specialist staff support there is not enough time to train these teachers. Training can be given, but it is very difficult for non-specialist or for the administration to timetable as the staff has many other classes to teach or meetings to attend.

Teacher's expectations are not realistic due to lack of understanding about students learning and sign language. Many teachers think that if something is translated into sign then the students will understand the work.

(d) Time constraints

The role of the specialists is not clear nor is it easy to put into practice all that needs to be done. This is for a number of reasons:

- There are not enough qualified staff to teach the students. It is often a mistaken belief that if a teacher can use sign language then this is enough. Teachers need understanding of child development, child psychology, language acquisition, modifying resources, optimum use of residual hearing, reading levels and good communication skills at least at basic levels in order to begin teaching hearing impaired students.
- Specialist staff are not given liaison time to meet, plan or evaluate lessons, teaching styles and aims. At the same time there are many areas that the staff has to cover thus a great deal of liaison time is needed. Mainstream teachers have other commitments, as for many, the class of hearing impaired students is only one of their considerations other students also have the right of their attention and to the development of their expertise in their specialist subjects.

- There is not enough time allocated for the training of staff or the expertise to be decimated.
- There is not enough time for specialists to write alternative curricula in all subjects' areas unless they have a reduced teaching function.
- There is not enough time/opportunities for liaison with other professionals associated with the field i.e. audiologists, speech therapists, counsellors and other specialists in the field of special needs.

(e) Teacher training

The experience of many of the teachers in mainstream environment has not equipped them with enough of the basics on which to build and develop an understanding of the fundamentals for teaching the hearing impaired students. Although specialist staff can impart knowledge this is not easily done given the starting point from which they have to work and the time constraints under which they are expected to deliver instructions. None of the staff has been approached for advice from the ministry with regards to this area of development despite some members being specifically recruited to support this area of growth.

(f) Educational interpreters

Teachers of the deaf are not interpreters nor are they translators but they are increasingly being used as such at present. Furthermore, there is lack of understanding of the role of the interpreter in an educational setting. While a complex speech can be accurately translated into sign language if the audience do not have the internal language to understand the meaning of those signs then the interpretation may just as well be in spoken French for the level of the knowledge that it would impart to the observer.

(g) Integration

Many of the students lack social skills necessary for good integration and therefore often express wishes that they should have a separate school for the deaf. The majority of students have not mastered any level of fluency in Setswana, which also hinders integration. They have additional stresses as a result of their attempts to integrate such as coping with negative images of deafness and disability and teasing from their peers and from the community at large. Although this is changing, these students are the pioneers of change and as a result will therefore encounter the greatest levels of cultural opposition and ignorance.

It is worth noting that language has changed between the Revised National Policy on Education of 1994 and the National Development Plan 9 (NDP 9) from that of integrated education to that of inclusive education. Education strategy for NDP 9 (P279, 15.44) states that “one such challenge is the need to pay further attention to the area of special education in terms of expansion of educational programs for special needs learners as well as increasing access to this level of education. This is important if the country’s education system is to be inclusive.” Therefore, before Botswana could think of inclusive education it is worth finding out how far she has gone with integrated education and whether hearing impaired children has benefited from it.

1.4 Research Questions

1. Does the Division of Special Education assist schools in integration of hearing impaired learners?
2. Is the adaptation of the existing secondary school curriculum modified to make it accessible to hearing impaired learners in an integrated setting?
3. Are teachers trained for hearing impaired learners?
4. Are support services available to hearing impaired learners?

1.5 Purpose of the study

The purpose of the study is to investigate the integration of hearing impaired learners in Community Junior Secondary Schools with particular reference to the following;

- Curriculum adaptation.
- Teacher training.
- Support services available.

1.6 Significance of the study

The research is of importance because it will benefit hearing impaired children and Ministry of Education (MoE) in dealing with schools teaching the hearing impaired. Schools and MoE will realise the need for having clear policy on integration, as this will be a guide to them on how to integrate children as well as what to base on when integrating children e.g. age, category of hearing loss or communication methods. Curriculum developers are expected to benefit more, because they will become aware of the fact that it is important to adapt and modify the curriculum, so there is need for effective teacher training. Furthermore, they are to develop curriculum that will suit students needs in an integrated setting.

1.7 Delimitation of the study

The study was confined to the two existing Community Junior Secondary Schools in Botswana, offering education to the hearing impaired learners. One such school is in the southern region of the country, namely Ramotswa Community Junior Secondary School and the other in the northern region, called Tashata Community Junior Secondary School.

1.8 Research design

The research includes both the literature review and empirical techniques.

1.8.1 Literature review

The literature review will attempt to give the reader a holistic picture of integration of exceptional children. Thereafter, it will focus on the integration of hearing impaired children with particular reference to curriculum adaptation, teacher training and support services.

1.8.2 Empirical techniques

The empirical techniques will indicate procedures to be employed in the collection of data.

The study is a descriptive survey, which used both questionnaire and interview. The researcher opted for a descriptive survey because “it simply outlines (describes) what has been observed, answering the question; what is happening here?”(Walsh, 2001: 6). This type of research according to Allison (1996: 14) seeks accurate and adequate description of activities, objects, process and persons. (cf. par. 3.4.1 & 3.4.2)

Qualitative data was gathered. The researcher opted for qualitative approach because of the nature of instruments that were used in data collection. The qualitative approach provides data that is more rich and full of meaning unlike quantitative data that is more accurate but superficial (Bell, 1999:07).

The qualitative approach allows respondents to give out more information about the topic of investigation. It is more open and responsive to its subjects, hence seeking complete understanding. Mursh and Keating (1996: 109) emphasise that “it is a more subjective approach whereby the researcher aims to understand and interpret the

experience of the individuals involved.” The researcher was also influenced by the fact that the application of the qualitative method to investigate special needs and disability issues has grown over the last twenty years or so (Hamersley, 1985:78, Hegarty, 1988:89, Barnes, 1992:106, Halberg & Carlson, 1993:76). The interview was semi-structured and the whole of Part two of teachers and school heads questionnaire contains open-ended questions, thus seeking for qualitative information.

Data collection was cross-sectional, whereby the researcher collected data on a single occasion (Walsh, 2001:58). That is the respondents were visited only once.

1. 8. 3 Ethical Considerations

In research ethical issues are pervasive and complex (de Vos, Strydom, Fouche' & Delport, 2005:57). No researcher can just demand access to an institution, an organisation or to materials. Permission to carry out an investigation must always be sought at an early stage (Bell, 199:37). The researcher started by introducing himself and requesting for permission from regional education officer and school heads to carry out the study in their respective schools. Permission was also requested from the Head of the Division of Special Education to interview education officers in charge of hearing impaired children's education. A letter from Head of Department (Foundations of Education), North West University (appendix c) also supported the introduction of the researcher. This was to ensure that indeed, the researcher is a student at the university and that it is a requirement for him to conduct the research.

The objectives of the study were fully explained by the researcher to school heads and the head of the Division of Special Education before permission was granted. After it was granted, the researcher got an opportunity to do the same for education officers and teachers. It was during these explanations that some of ethical issues such as confidentiality, anonymity, legality and professionalism were explored. The main reason behind this was that “people will be doing you a favour if they agree to help, and they will need to know exactly what they will be asked to do, how much time

they will be expected to give and what use will be made of the information they provide,”(Bell, 1999:37). Participants have the right to withdraw if sufficient information is not shared with them, hence the researcher is compelled to see to it that every information is communicated to them. This was done to ensure that respondents know what is expected of them, understand the need of taking part in the study as well as the purpose of the study and for them to have trust in the researcher.

1.9 Targeted population

The targeted population of the study was school heads, teachers, and Division of Special Education personnel i.e. education officers in charge of hearing impaired children’s education. They are targeted because they have direct contact with hearing impaired learners and therefore can provide reliable and meaningful information. Furthermore, they have the responsibility of seeing to it that students with special educational needs are integrated in regular schools.

Because of the size of the population, the researcher did not sample but used the whole population. In Botswana, there are only two Community Junior Secondary Schools with units offering education to the hearing impaired, as a result few teachers are attached to those units. That is the main reason why the researcher did not sample.

1.10 Definition of terms

Integration

- The process of bringing different groups that have been previously segregated (Wilson, 2003:183).
- The process of educating all children, with or without handicaps, in the same setting to their maximum extent possible (Striefel, 1985:07).

Therefore basing on the definitions, in this study integration will be defined as a process of educating all students regardless of their physical or mental handicaps along with their non-handicapped peers.

Hearing impairment

- Any disorder of hearing, regardless of their nature, causes or severity (Boothroyd, 1988:02).

Two other terms in popular use are deaf and hard of hearing; they mainly describe how an individual uses hearing.

Deafness

- An adjective describing a person, whose hearing is not used as the primary modality for speech perception and acquisition, though it may be used as supplement to vision or touch (Boothroyd, 1988:03).

Hard of hearing

- An adjective describing a person whose hearing, though impaired is used as the primary modality for speech perception and acquisition (Boothroyd, 1988:03).

Basing on the definitions above, in this study hearing impairment is when a person experiences difficulty with his/her hearing.

1.11 Chapter Planning

Chapter One- Problem Orientation

Chapter Two- Literature Review

Chapter Three- Research Methodology

Chapter Four- Data Presentation and Analysis

Chapter Five- Summary, Conclusion and Recommendations.

1.12 Conclusion

The next chapter focuses on the literature review, giving the reader a holistic picture of integration of exceptional children and then focus on the integration of hearing impaired children with particular reference to curriculum adaptation, teacher training and support services.

CHAPTER TWO

LITERATURE REVIEW: INTEGRATION OF HEARING IMPAIRED CHILDREN

2.1 Introduction

This chapter seeks to give a detailed analysis of literature relevant to the purpose of the study. The researcher will start by giving the reader a holistic picture of the integration of hearing impaired learners, which shall be covered under the following sub-headings:

- The move to integration
- Benefits of integration
- Prerequisites to integration of hearing impaired children
- Models of integration
- Observational studies
- Views of those who are against integration

Thereafter the focus will be on the integration of hearing impaired children with particular reference to the purpose of the study, that is curriculum adaptation, teacher training and support services. Lastly the review will focus on the research carried out in Botswana concerning the integration of the hearing impaired, with the aim of giving the reader a clear picture of how the process has been going.

2.2 The move to integration

The discussion here will focus on reasons for the move to integration, that is, on integration in general rather than being specific to hearing impairment. This is meant to give the reader background information about the rationale behind integration. The literature has provided a host of reasons for the increased pressure to integrate

literature has provided a host of reasons for the increased pressure to integrate exceptional individual into mainstream of society, and most particularly, to integrate exceptional students into regular education. The core foci of integration, when it came to the agenda in the 1960's and 1970's, was first of all an attempt at system reforms (Hegarty, 2003:19).

2.2.1 The demand to school and education

Integration demanded the right to school and education for disabled children. Although all children at the time were said to have the right to education, "there were groups of children in most countries who did not have this right" (Hegarty, 2003:20). Due to their disability they were either provided for in other institutions (social, medical) or not in any institution at all, by category excluded as educable (Hegarty, 2003:20). Howarth (1983) and Biklen (1985) as cited by Hayes (1989:21) stated that, "the above demand was due to the civil rights movements, which has challenged the placement of minorities in special classes and schools as significantly out of proportion to the population in general." As a result court actions have accelerated changes by proclaiming the right to a free and appropriate education.

2.2.2 The right to education in local schools

The other demand was the right to education in local schools. Disabled children were originally formulated as an attack on the centralised institutions normally established as special schools for designated category of disabled children e.g. the separate special school system (Hegarty, 2003:20). Educating children with SEN in regular classroom is based on "the philosophy of equal educational opportunity that is implemented through individual planning to promote appropriate learning, achievement and social normalisation"(Adam, 1990:07). The belief is education has improved the capacity of serving exceptional children through a broadening range of programs and staffing and with improved technical aids, instructional programs, and instructional approaches, hence the right to education in local schools. Diversity in the

same educational setting has been encouraged by the philosophical belief that the program content and curriculum should be built upon individual differences rather than upon the deviation from the norm as implied by medical labels (Howarth, 1983 & Bender, 1987 cited by Hayes, 1989:21).

2.2.3 The principle of normalisation

Other reasons are based on social values, basing on the principle of normalisation and acceptance of individual difference. Morally and ethically, there has been an acceptance of the belief that appropriate educational services should be in integrated setting. Labels have been increasingly rejected in the belief that they negatively influence the perceptions of exceptional individuals by others and by exceptional children themselves (Hayes, 1989:21). Furthermore, the belief has developed that integration maximises handicapped children's potential, social and language skills, and provides opportunities for interaction so that the non-handicapped learn to understand and accept the handicapped.

This move to integration, based on reasons discussed, was aimed at emphasizing that special education should be viewed as part of, not apart from, regular education.

2.3 Benefits of integration

Effective implementation of integration calls for appropriate support services to hearing impaired children, teachers and mainstream schools. It also calls for absolute planning, provision of specialists and appropriate resources as well as teaching strategies aimed at meeting the child's needs (Stakes & Hornby, 2000:02). The benefits of integration will as well depend on the above mentioned factors.

Integration if properly implemented can be of benefit to hearing impaired learners as it can assist them academically, socially and emotionally. Wolfendale (1997:108) in supporting the above stated that;

- Children with special educational needs can benefit from the experience and qualification of special education teachers, especially in schools with units.
- There are usually support services employed to assist students with special educational needs in mainstream schools. The support may be from an itinerant teacher, an occupational therapist, a speech-language therapist, an audiologist, a physiotherapist etc. They can give advice to regular classroom teacher on how to manage particular problems and improve instructions.
- Integration helps to promote awareness of and more positive attitude towards disability. Hence promoting change of attitude within the school set up.

The social aspect of integration has been stressed since its inception, the notion that it conveys benefits on all concerned. The child with special educational needs becomes part of the group and is not isolated by being in special provision and other children come to understand and accept a wide range of individual differences.

Apart from the advantages mentioned above, Kirk et al. (2003:391) also stated that there is modification of the curriculum, content and instruction so that the program meets the needs of the child. Here individualised instructions are adopted. They further stated that appropriate resources (both human and non-human) are provided. The other benefit is that student's interpersonal skills can be developed, thus developing self-esteem. It is also worth noting that students with special educational needs/hearing impairment can benefit more academically from the assistance of non-handicapped peers. Culatta et al. (2003:258) also mentioned that integration brings with it normalisation (creation of normal learning and social environment), deinstitutionalisation (moving away from confinement of residential institutions into their local community) and mainstreaming (integration of exceptional children with non-exceptional children in educational setting).

Hearing impaired learners, through interaction with hearing students, can develop their speech and will as well have access to "a richer and wider curriculum" than that available in special schools (Mittler, 2000:102).

Below are some of the positive points advanced by teachers in Botswana who were involved in piloting the integration of hearing impaired children, despite problems they encountered.

- The overall response of the hearing students towards their deaf peers is good.
- Students participate well in co-curricular activities in the afternoons in integrated settings.
- The attitude of the mainstream staff is very positive, they may not have the expertise or understanding but they display concern and willing positive attitude.
- The students have high aspirations for further education
- The Ministry of Education is training Batswana and specialist teachers are being recruited (Ramotswa CJSS Report, 1999:5-6).

2.4 Prerequisites to integration of hearing impaired children

Integration allows hearing impaired learners the right capacities to receive a part or the whole of their schooling in groups made up of children with no hearing impairment. Integration is “complete when the hearing impaired child receives the whole of his or her schooling in groups of children with no hearing impairment and it is partial when the hearing impaired child has to receive a part of his or her schooling in a specialised establishment or group”(Gesves, 1985:01). Gesves (1985) further indicated that integration is a process complementary to special needs education, but is not a substitute for it since it is suited only to certain hearing impaired children and not all. Therefore, the objectives of equal educational opportunities for children with hearing impairment can only be reached if certain prerequisites are met. According to Gesves (1985:1-2) and Mitter (2000:02) parameters to be taken into account for possible integration of a hearing impaired child in a class made up of children with no hearing impairment are:

- 2.4.1 Audiological characteristics of the child with or without hearing aid, which include; the extent of hearing loss, the type of hearing impairment, the child's

age at the onset of hearing impairment, the nature, development or not, of the hearing impairment and the efficacy of the hearing aid.

2.4.2 Date when the hearing impaired child was first taken into care of a specialised audiophonology team. The follow up to this care.

2.4.3 Medico-psycho-pedagogic profile of the hearing impaired child drawn up by the team which has been in charge of the child, including;

- Intellectual faculties; development of abstraction capacity, psycho-affective equilibrium and sensitive-motor development.
- Absence or presence of related disorder.
- Personal motivation for education and possible integration.
- Particular aptitude; for oral language (comprehension and expression) both in its articulatory aspects and its lexicological, grammatical and syntactic aspects, for lip reading alone or with manual help, for the use of residual hearing capacity, for written language (comprehension and expression) and for any other means of expression or reception of the linguistic message.
- Pedagogic acquisition level.

2.4.4 The hearing impaired child's environment, that is family environment and social environment.

2.4.5 Conditions for introduction into non hearing impaired children's school and extracurricular activities;

- Recognised general teacher training for teachers in receiving groups.
- Specific preliminary information followed by active commitment by the receiving team to the experience proposed.

- Presence of an educational team composed for each child of representatives of the specialised audiophonological team, representatives of the receiving structures and the parents of the child concerned.

This team has a number of strategies as it ensures constant collaboration and in particular the necessary link ups by means of meetings, visits to classes, advice given and interventions made. It also organises appropriate support and assesses periodically the efficacy level of the integration process under way. It can, if need be, make it more flexible, modify or even propose terminating it, and advise different orientation while endeavouring to maintain effective guidance.

2.5 Models of integration

Integration can take different forms, but they all involve the provision of educational services to children with special educational needs in the regular school system. According to Abosi et al. (1996:265), Spires (1997:6) and Culatta et al. (2003:269) there are three models of integration and these are; environmental/physical integration, social integration and educational integration. But many factors go into consideration when it comes to deciding educational placement as well as what constitute the least restrictive educational environment for any given child with hearing impairment. The next discussion will briefly give a summary of these options.

2.5.1 Environmental/Physical integration

This involves full or part time placement of children with special educational needs in an environments attended in or part by non handicapped children (Abosi et al., 1996: 267). It takes different forms, as described below;

- Special education classrooms situated among regular education classrooms (special units).
- Groups of special education students placed among regular education classrooms.
- An individual special education student placed full time in regular class.

- An individual special education student placed part time in regular classroom and part time in a segregated classrooms or resource room for individual instruction.
- Community based instruction in which training is conducted in the natural environments (streets, stores, and recreation areas) where behaviours being taught are eventually expected to be performed.

(a) Regular Classroom Placement

Culatta et al. (2003:269) asserts “depending on the severity of the loss and the child’s ability to compensate for the hearing loss, regular classroom placement must be considered as an option. Learners with mild to moderate hearing loss may be able to function in a regular classroom with appropriate support.” This support may consist of special seating that will help the learner hear the majority of what the teacher present, and hearing aids or other amplification systems such as FM amplification systems that allow teachers wearing transmitting microphones to broadcast what they are saying to students wearing special receivers. Learners might require the services of speech-language therapists to help them use speech and language to their maximum potential (Kirk et al., 2003:390). In some instances, educational interpreters or note takers may accompany a child to regular classrooms and the regular classroom teacher may need to periodically consult with an itinerant teacher of the deaf for information on how to present and modify lessons to help the child. “Regular classroom placement does not mean putting students with hearing impairments into regular classroom and ignoring the hearing loss, thereby placing the burden for compensation solely on the students and their families”(Culatta et al., 2003:269).

(b) Part Time Regular Classroom Placement and Part Time Special Class Placement

“Students who are hard of hearing may spend a part of their school day in a special resource room where special educators address their unique needs, and the rest of the day in a regular classroom that has been modified”(Gregory et al., 1998:137). This

type of placement requires coordination between the regular and special education teachers to make sure that they are working in concert to maximise learning.

(c) Special Class in Regular Schools

Hearing impaired students may spend most of their school day in a special education class but may be included in one or more academic classes in a regular classroom, perhaps with the help of an interpreter (Culatta et al., 2003:270). Special classes in regular schools also allow for participation in non-academic activities with hearing peers. Students in special classes may be taught with special educational approaches and be exposed to separate curricula (Culatta et al, 2003:270).

2.5.2 Social integration

In this form of integration special needs children (hearing impaired included) interact incidentally or in an organised manner, or on a full/part time basis with non-handicapped students (Spiers, 1997:06). Various types of social relationship that can emerge are as follows;

- **Proximal:** In this case, regular and special education students perform side by side in one or more of the following situations, arrival and departure from school, assemblies, meal time, bathrooms, playgrounds, in passage ways through out the school and in extra curricular activities, but may not directly interact with each other.
- **Helping relationships:** The relation is such that students who are not handicapped provide various types of direct assistance (social, physical and academic) to special needs students.
- **Reciprocal relationship:** In this particular scenario, students having handicaps and non handicapped ones perform more equal roles (non helping) and complement each other in various activities such as playing a game (Abosi et al., 1996:266).

2.5.3 Educational integration (Functional)

According to Abosi et al., (1996:266) several forms of educational integration are:

- Regular programme: Students with special educational needs (hearing impaired) are taught the same knowledge/skills and use the same curriculum materials, methods of instruction and methods of instructional delivery as do the non handicapped students.
- Modified knowledge and skills: What happens here is that some high level skills are eliminated in the programme for students with special educational needs/hearing impaired. Such a programme is less theoretical but instead it is more practical. Specialised adaptive skills may be introduced.
- Modified curriculum materials may be used: Here more concrete examples and more practice may be provided. A different curriculum may be employed.
- There may be modified instruction, which may involve more frequent individualised assistance. A modified place of instruction increases opportunities for review and peer tutoring.

There are usually support services employed to assist students with special educational needs / hearing impaired in mainstream schools (Culatta et al, 2003:269).

2.6 Observational studies conducted with the hearing impaired in relation to integration

Studying the research on integrated provision for hearing impaired children indicates the limited empirical base and poor data that is available on to base principled placement decisions. One way of adding to this data is to conduct detailed observational studies of hearing impaired children in mainstream classroom so that we can understand more clearly what these particular children are gaining from the context. Some of the observational studies that were carried out during late 1980's

and mid 1990's will be the basis for the discussion (Gregory & Bishop, 1989:168, & Monkman, 1995:98).

2.6.1 Interaction of individually integrated five and six year olds with their teachers

Gregory and Bishop (1989:168) observed the interaction of individually integrated five and six year olds with their teachers. They found that in general the children and teachers failed to understand each other. The teachers appeared not to appreciate the limitations of the children's language and the children developed strategies to respond and to give the appearance of understanding. Studying facial expression for clues and responding by guesswork to questions worked sometimes but not always. The ability of these hearing impaired children to use non-verbal cues in an attempt to respond appropriately was shown frequently.

Even more worrying, perhaps, were the teachers' attempts to maintain the illusion that communication was taking place suggesting that the child was teasing rather than not understanding. What became clear from this study was that while normal language and wide curriculum were available within the classroom the hearing impaired children did not have means to access it and the mainstream teachers were not able to fully understand or deal with the situation (Gregory & Bishop, 1989:168).

2.6.2 Moderate to severe hearing losses

Monkman (1995:98) undertook a detailed observational study of three children with moderate to severe hearing losses who were individually integrated in mainstream nursery settings. She looked at the subjects' play and interaction and compared this to that of hearing children in the same contexts. She found that for most of the time the normal language which was being used in the nursery, and which could be one reason for placing a child in this context, was inaudible due to background noise. The majority of hearing impaired children's interactions was with an adult (over three

quarters of the observation time for two of the children) and fewer than half of the interactions with peers was classed as positive. Play was largely parallel and there was limited pretend play. She argues “they had neither full access to information, nor interpersonal interaction on an equal basis” (Monkman, 1995:98).

These observational studies support the importance of collecting detailed information regarding individual child’s participation. It would be quite possible for a child to be relatively segregated while in mainstream classroom or to be learning skills in a segregated provision which would enable him or her participates more fully in the mainstream at a later date. Integration has become equated entirely with location whereas we should, perhaps, be considering the process rather than the placement.

2.7 Views of those who are against integration

There are two schools of thought, those for and those against integration. Though the preferred type of educational provision has shifted from special schools to integration in units and classes, some professionals in hearing impaired education consider this move unrealistic. Kisanji (2002:30) argues that this is mainly because deaf education has been viewed by teachers and through them, by parents as a technical area in which only specialists know best what is good for the hearing impaired child. The specialists can offer their services best where hearing impaired children are in their special school or class. Lane (1992:112) presents powerful arguments in favour of special schools for the hearing impaired, according to him “they are very important when it comes to the development of sign language and deaf culture.” Advocates of non-oral instruction fundamentally disagree about the extent to which learning spoken language is necessary. Culatta et al. (2003:279) said “they are sceptical about the value of spending so much time teaching students who are impaired to express themselves through speech and attempting to perceive the communication of others through speech reading and the use of residual hearing.” They argue that greater than ever numbers of hearing people are learning sign language and finger spelling. Therefore, special schools are the better place for the hearing impaired.

For most exceptional students, the least restrictive educational environment translates into mainstreaming and the opportunity to take part in as many regular classroom and school activities as are feasible. However, this may not be the case for many students who are hearing impaired. "Some feel that, due to the low incidence and resulting small number of students who are hearing impaired, integration in regular classrooms is really exclusion and results in isolation" (Culatta et al., 2003:280). The authors further argue that if students who are hearing impaired are placed in an environment where they are unable to communicate with their peers and with most of the education staff, this isolation might lead to loneliness and depression. Perhaps residential schools for the hearing impaired with staff and peers able to communicate with the child are in fact less restrictive (Bowe, 1991 cited in Gregory et al., 1998:77). Any setting, including a regular classroom, that prevents the child who is hearing impaired from receiving an appropriate educational experience, including communication, may not be the least restrictive environment for the child. Special services might also be more readily accessible when more students who are hearing impaired are in one central location. Inclusion in a regular classroom does not always guarantee that all support services will be automatically supplied (Culatta et al., 2003:280).

For the hearing impaired child, studies looking at the social development, friendships, emotional development and self-concept tend to offer a gloomy picture for mainstream experience. Summarising American Research in this field Musselman, Mootilal and MacKay (1996:53) writes "deaf students in the mainstream tend to be socially isolated and to feel lonely, to have lower self esteem and to be less well adjusted than those in segregated settings."

"At a hearing school you always have to work towards being the same as others, but you will always be different so you never get there no matter how hard you try." (15 year old deaf pupil from NDCS, 1990:19). This quotation indicates a major difficulty with integration policies in that often the aim has been seen as assimilation or normalisation rather than the acceptance of differences. This is why Ladd (1991:88)

believes that mainstreaming is the most dangerous move, against the early development of a deaf person's character, self confidence and basic sense of identity.

Placing hearing impaired children in a mainstream school does not make them hearing, nor necessarily able to learn effectively in a hearing context. Studies of integrated practice suggest that it is the child with special educational needs who has to adapt, fit in, to have extra help when unable to do the task as set. The onus is on the child to take up what is offered. A teacher in one research study commented, "Well surely you've lost the point of integration if you give them special attention. When they are in here I think they should be one of us, treated in the same way as everyone else. I don't want to give any special treatment"(Lynas, 1986:113). This suggests that hearing impaired children's needs are currently not being met in mainstream classrooms and that integrated education in practice is not providing equal opportunities for cognitive, social and emotional development.

Surveys of pupils' opinions and reflections by hearing impaired adults on their schooling show a huge range of experiences and views (Gregory, Bishop & Sheldon, 1995:66). Of the seventy one hearing impaired young adults interviewed by Gregory et al. (1995) about a quarter favoured integrated provision but very few thought placement of one hearing impaired child in a hearing school was inappropriate. "There shouldn't be one deaf pupil on their own in a class of hearing pupils but four or five in each class. I know the feeling of being on my own- my tension and frustration." (Philip 19 years from Gregory et al., 1995:64). They should go to a hearing school but with lots of deaf pupils. It should be a mixed class, deaf and hearing (Darren 22 years from Gregory et al., 1995:64).

On the other hand proponents of oral communication argue for integration of hearing impaired children in regular schools and classes (Lynas, 1994:210). Many students who are hearing impaired cannot communicate effectively with their hearing family members or hearing peers. Advocates of oral/aural communication believe that their

way of teaching helps the student who is hearing impaired integrate better into mainstream society.

Supporters of sign bilingualism do not seem to mind where hearing impaired children are educated provided sign language is used as a basis for learning an oral language (Culatta et al., 2003: 165).

The debate now shifts to issues of concern when integrating the hearing impaired in regular schools.

2.8 Can the hearing impaired access the curriculum easily in integrated schools?

2.8.1 Hearing impaired children's language development

Children with all levels of hearing loss are at the risk of experiencing problems in learning basic literacy and numeracy skills and this may lead to them being withdrawn or disruptive in schools (Stakes & Hornby, 200:19). It should be noted that their "special learning needs are due to the slow rate of developing oral language skills of reading, writing and speaking which lead to communication difficulties" (Gregory, Knight, McCracken, Powers & Watson, 1998:70). Parents-child interactions in the home have been found to foster acquisition of language in children born into hearing impaired families. However, even these children have been seen to receive insufficient input and their language falls far behind that of their peers. According to Kisanji (2002:33) four possible explanations may be advanced for the delay and difficulty in or reduced learning a spoken language. The explanations are as follows:

- First, hearing loss results in spoken language being distorted, with some, most or all sounds being missed out.
- Second, learning of spoken language is dependent on direct interaction, incidental learning or overhearing is very difficult if not impossible.

- Third, for learning to take place, adapted adults strategies are sometimes needed.
- Fourth, manually coded forms of spoken language are artificial and are at times presented inaccurately.

In addition, sign language, if used, is different from spoken language and, therefore, a conscious effort needs to be made to make the hearing impaired child aware of the differences between them (Strong & Prinz, 1997:37). It is evident, therefore, that most hearing impaired children begin going to school when their language is still immature. For instance, studies of pre scholars, found four year old hearing impaired children producing language of two year old hearing children. Lewis and Gallaway (1995:91) argue therefore, that the school assuming responsibility for hearing impaired children serves two purposes; “to serve general pedagogic aims and simultaneously to support the language acquisition process.”

Mainstream teaching relies heavily on the learners understanding and using oral language, yet language and communication development are the main areas which are affected by hearing impairment (Westwood, 2003:49). Hearing impairment means that a child will have greater difficulty in perceiving the range of sounds that people with “normal” hearing uses to develop their language and conceptual skills. Because of this the hearing impaired child’s linguistic ability in spoken/English language may be severely restricted in comparison to hearing children. Kirk et al. (2003:373) state that most of hearing impaired will have “delayed development of language (English) including vocabulary, grammar and language use, as a result comprehension of what is taught through this medium may be problematic.

For some hearing impaired children “strategies for processing information, for remembering and for learning may rely more on visual and spatial skills rather than auditory, sequential approaches” (Westwood, 2003: 49). For these children, therefore, their learning style may be different from the majority of children in their class and this will have implications for cognitive development and academic achievement, hence the need for programme modification. Furthermore, for hearing impaired

children “understanding speech, particularly in a group situation where it is difficult to lip read and where background noise interferes with speech signals, is extremely difficult and inevitably a great deal of information is lost”(Culatta, Tompkins & Werts, 2003: 256).

To sum up, linguistic delay will lead to problems of literacy, which is essential for academic success (Webster, 1986:126). This will have a very real effect on the child’s access to the educational environment. It then calls for effective teacher training in order to meet learner’s needs and provision of appropriate support services.

2.8.2 Literacy

Literacy is not merely the ability to read and write. MacArthur (1996:564) says literacy is best conceived as “a continuum (of skills) whose dissemination involves various kinds of behaviour at higher and lower levels, including reading, speaking, listening, thinking, counting, coping with the demands of the state, of employment, and of social life.” This consensus view of literacy is based on the realisation that all aspects of language contribute towards a person’s ever widening and heightening worldview. However, like most mainstream literature, this description of literacy ignores that part of any nation’s population for whom speaking and listening skills are difficult to acquire, due to sensory and other impairments (Strong et al., 1997:46). For example, for some hearing impaired persons the auditory-oral channel of communication is inefficient and often ineffective. Even with the use of amplification, use of residual hearing is distorted and produces greater dependence on visual strategies for communication. For them the most relevant skills are lip-reading, signing and watching for language (Culatta et al., 2003:166). These aspects of communication, therefore, deserve a place in the conceptualisation of literacy.

For the school child, educationists have come to realise that progress in almost all curriculum areas depends on the linguistic skills that he/she brings to school (Crystal, 1987:240). The foundation skills, which develop in the family at home, are mainly

oral, in the case of the normally hearing child, and signing, oral- cum-signing or oral, in the case of hearing impaired children. Teachers, therefore, use children's oral or signing skills as a foundation for such skills as reading and writing. Indeed, this practice supports the view that "every teacher was a teacher of language, that language was developed across the whole curriculum and that language was for life"(Tann, 1991:13). In addition, "teachers need to be aware that differences exist in the linguistic skills that children bring to school related to differences in the children's and parents' hearing status, quality of infancy and early childhood language input, and the socio-economic environment" (Steward & Kluwenn, 2002:220).

To suggest that oral and signing skills which children bring to school tasks should be regarded as the foundation of, and the fact that most of these tasks involve or are themselves, reading and writing amounts to suggestion that these forms of language are similar. They certainly have some features in common. They all enable the individual concerned to communicate and to express their opinions and ideas. Written language is also based on the structure of spoken language. However, spoken, sign and written language are different in several respects.

2.8.3 The Importance of Reading and Writing to Hearing Impaired Children

As alluded earlier, for children with hearing impairment, the process of learning spoken language is onerous. Hearing impairment distorts the auditory channel and reduces the amount and quality of spoken language input enormously. The distorted auditory channel creates fundamental difficulties producing varying effects on the perception of speech and the intelligibility of hearing impaired children's language (Kirk et al., 2003:373). It becomes difficult for most hearing impaired children, especially those with profound losses, to meaningfully engage in the process of spoken language acquisition. The child's ability to imitate the language of parents, teachers, siblings and other older children and to develop speech and other language skills is greatly reduced. Likewise, sign language has some limitations as a medium of communication. It relies primarily on the visual input channel for gaining

environmental as well as linguistic information. Unfortunately, unlike audition, the visual channel is directional rather than global (Swisher, 1991:546). As such it becomes difficult for a hearing impaired child to gain information, both environmental and linguistic.

Despite the difficulties the hearing impaired children experience in the comprehension and production of grammatically correct text, reading and writing seem to potentially offer the most powerful means of unambiguous communication. For both those who communicate orally and through sign, intact information can be received and delivered with minimal distortion. Supporting this view Moores (1996:260) writes, "limited in the amount of general information obtainable through word of mouth, a deaf person's access to the larger culture often depends on whether she or he has developed fluency in reading. Similarly, a deaf person's ability to communicate with hearing individuals may rely heavily on his or her fluency in writing."

The importance of writing, notwithstanding an examination of language samples in all studies from the 1990's indicates that, overall, there has been very little improvement, if any, in the written language skills of hearing impaired children (Paul & Quigley, 1994 & Schirmer, 1994). Teachers, therefore, need to foster the development of the skills required for the mastery of this important reading-writing medium. Unfortunately, schools have tended to give lopsided attention in favour of reading rather than equal weighting in their teaching (Moores, 1996:260). More effective strategies and techniques need to be developed for improving writing skills.

2.9 Curriculum implication

A sound curriculum must "have appropriate content, be relevant to the short and long term needs of learners and society, and in terms of content and process be flexible enough to accommodate diversity and individual needs of learners"(Zindi, 1997:15). The author further indicated that the components of a balanced curriculum include literacy, numeracy, social, physical, self-care and vocational skills. Therefore,

considering Zindi's opinion of sound and balanced curriculum as well as language problems experienced by the hearing impaired, access to the curriculum will be very challenging. It should be noted that in integrated setting, the child is likely to be exposed to "a richer and wider curriculum" than in a special school (Mittler, 2000:01).

The academic content presented to students who are hearing impaired parallels the content presented to students who hear normally. Luetke-Stahlman and Luckener (1991) cited by Culatta et al. (2003:271) contended that educators have the following five choices in the selection and implementation of a curriculum for students who are hearing impaired;

- Use a curriculum that has been specifically designed for students who are hearing impaired.
- Use the general education curriculum, attempting to meet the same standards as for other students by allowing for special services and special teaching methods.
- Use the general education curriculum, but reduce the level of complexity of the material presented.
- Use a curriculum from a lower grade.
- Use curricular that have been developed for other students with other exceptionalities.

This implies that change must take place in order to accommodate the needs of learners in an integrated setting. In fact, in integrated education approach, the curriculum accommodates the needs of all learners, including those with special educational needs. This can be achieved through the following;

- Adaptation, the process in which the program is slowed down, simplified or is stretched to the benefit of the learner.
- Differentiation, consideration of different ability levels in programme development.

- Universal design, design instructional material and activities that allow learners with wide differences to achieve set goals (Moahi, 2002:18).

It is said that some African countries have opted for a longer duration/stay in schools to assist the hearing impaired children access the curriculum (Kisanji, 2002:33).

Based on Moahi's (2002) and Culatta et al. (2003) perceptions of curriculum in integrated setting, hearing impaired children can only access the curriculum through curriculum adaptation and modification. The curriculum and its development should be the focus of reform and change and the means by which all children can have their needs met. Schools need to adapt to meet the wide diversity of individual needs and the curriculum as well should be adapted to children's needs, not vice versa. This requires "flexibility in terms of grouping, teaching approaches and support"(Wedell, 1995:104). For Wedell it is a question of meeting the needs of the learners, monitoring progress and ensuring individual needs are met. Due to problems associated with hearing impairment, teachers are compelled to modify their teaching methods and structure their work in such a way that they will meet their learner's needs (Culatta et al., 2003:273). Studies carried outside Africa have shown that it is possible for teachers to modify their teaching methods and structure their work in order to meet the needs of hearing impaired learners (Morgan, 1994:98, Gray, 1993:147, &1995:148). Though the emphasis is on curriculum adaptation and modification, some authors such as Zindi (1997:12) state that " if the hearing impaired are to be placed in special units then the academic curriculum should be as close to that of regular classroom as possible."

The literature also put emphasis on the need for "age appropriate" curriculum (Dart, 2002:64). Learners should participate on activities that are appropriate for their chronological age. Farrel cited in Gregory et al. (1998:139) broadly agrees but warns against being too dogmatic stating that, "sometimes students may choose to engage in activities that the teacher feels are not age appropriate, and some learning experiences for students with such developmental may of necessity not be chronological age

appropriate.” Nevertheless even if age appropriate is not a hard and fast rule it should certainly be an important guideline for teachers to bear in mind.

Pressure groups, such as The British Deaf Association, involved with hearing impaired children are as well voicing their concerns about the curriculum. They argue “not that hearing impaired children need the same as everyone else, but that they need something different in order to achieve equally”(British deaf association, 1996:18). If hearing impaired children are to be integrated, then we need to move away from a deficit model, where the same is offered to all children but some children have extra help in order to keep up, towards a difference model where approaches to learning and teaching are seen as a positive way of meeting the needs of all children”(British deaf association, 1996:18).

Major concern in the curriculum is the language curriculum. Even though learners who are hearing impaired learn language the same way other learners do, they may have special problems with spoken and written language as indicated earlier. They might need to learn about language through curricular activities that stress the structure and grammar of language, since they may not learn the complexities of grammar through hearing (Quigley & Paul, 1990 cited in Culatta et al., 2003:272). In addition, the language curriculum may need to be stressed to a greater extent than it would be with normal hearing students. Some teachers believe that some of the poor achievement results displayed by learners with hearing impairments in academics is due in part to the fact that so much instructional time is spent on communication and language skills (Gregory et al., 1998:140).

For hearing impaired children who use sign language, the provision of an interpreter may be seen as giving access and participation in relation to the curriculum. Musselman et al., (1996:63) argues that “this form of provision results in second-hand education via someone who is not a teacher and that without additional appropriate teaching methods full participation is not possible.” Jarvis (2000:72) in supporting stated that even students in higher education may be unable to access mainstream

courses fully through an interpreter and require adaptations to the learning and teaching context to ensure equal participation. This suggests that considerable knowledge and experience in terms of teaching strategies is required by mainstream teacher who will be expected to meet a wide range of needs.

It does not matter what options of integration the school adopts, in order to meet the needs of hearing impaired learners, curriculum adaptation and modification should be carried out.

2.10 Individual planning

It is impossible to read the literature without coming across Individual Educational Plan (IEP). All learners identified as hearing impaired must have an IEP that is designed to detail the services that they will need. Its presence can be used to determine the quality of a school's provision for special needs children (Culatta et al., 2003:283). The IEP may specify many things but should certainly detail the next steps to be taken in the education of the child, specify who is responsible for helping the child achieve that next goal and how achievement will be measured. Person (2000:236) states that an IEP should be SMART- specific, measurable, relevant and time-scaled but cautions against inflexibility. She also stresses that an IEP needs to be an integral part of school's overall arrangement for planning, assessment and record keeping.

The IEP may contain points for action that go beyond the school. With this group of children (hearing impaired) there may be a number of professionals/agencies involved. At a young age, perhaps medical personnel, assessment agencies and support therapist may be involved. The support may be needed through out schooling. Steel (1991:109) summed it "the key issues are effective communication and an understanding of the different roles and working practices of the members of a multi disciplinary team."

2.11 Teacher training

According to Culatta et al. (2003: 271) teachers of the hearing impaired are expected to adapt and modify the curriculum so as to meet their needs. Furthermore, various authors in this chapter have highlighted the need for teachers to foster for language acquisition, as well as development of both spoken and sign language and support for literacy. Teachers should also be aware of children's cognitive, emotional and social development (Gregory et al. 1998: 12). To achieve all these, effective and appropriate teacher training is required.

Most teachers in mainstream schools are not qualified teachers of the deaf/hearing impaired. Therefore assisting learners to access the curriculum is a challenging task to them. Andrews (1996:14) advises that those already holding qualified teacher status need to be considered for training, due to teaching experience they have. Kirk et al. (2003: 405) cautions about initial teacher training in teaching the hearing impaired and highlighted the need for change when saying, "most teacher training programs reflect traditional philosophies and methodologies, not the innovative educational approaches suggested by research findings. Until teacher training programs begin to integrate preparations and research through faculty appointments and university emphases, the students who graduate from traditional programs may continue to use methods that are not appropriate." This quotation calls for change in teacher training programs, so that teachers could be equipped with relevant skills/techniques rather than relying on traditional methods.

To effectively empower mainstream teachers, The Code of Practice (1994) as cited by Dean (1996: 148) advises that "the school's SEN policy should describe plans for in-service training and professional development of staff to help them work effectively with pupils with special educational needs, hearing impaired children in this case. The SEN in-service training policy should be part of the school's development plan and should, where appropriate, cover the needs of non-teaching assistants and other staff. Schools should consider the training needs of SEN Coordinator and how he or she can

be equipped to provide training to fellow teachers.” If the school is to maintain good provision for children with special needs every member of staff needs to acquire necessary skills and knowledge. Intensive in-service programmes should therefore be conducted to develop consistency among teachers in their methods and curricular offering (Zindi, 1997:12).

Professional development for teachers already holding the mandatory qualification as teachers of the deaf/hearing impaired needs to be considered as well (Andrews, 1996:14). The need for a clear programme to support further professional development is summed up by Powers, Gregory, Lynas, Mc Craken, Watson, Boulton & Harris, (1990: 95) when mentioning that “it is essential for all staff to have on going training to keep the professionals well honed and continually well honed. Without the development of staff skills you cannot provide quality service.”

2.12 Support services and making better use of available resources.

2.12.1 The teacher of the deaf/hearing impaired as a consultant and agent of change.

The teacher of the deaf/ hearing impaired working in a support capacity will be acting as consultant to other staff, giving advises and information (Gregory et al. 1998:55). They will therefore be expected to be knowledgeable about all aspects of education of the hearing impaired and be able to tailor their advises to fit the needs of individual learners (Gregory et al. 1998:55). The role of consultant can enable the teacher of the deaf/hearing impaired to act as an agent of change, challenging entrenched views about hearing impaired, in short being advocate for the needs of all hearing impaired learners (Wilson, 2003:210). The discussion in this paragraph as well highlights the need of effective appropriate training.

According to Alban-Metcalf (1996: 125-126) “mainstream teachers with a hearing impaired child in their class, are not necessarily required to have a specialist

qualification, but they are supported by a qualified teacher of the deaf/hearing impaired, who gives these pupils specialist tuition and who advises the class teacher. Teachers also have access to help, guidance and in-service training from the advisory staff.” This quotation implies that even if mainstream teachers do not have necessary skills and techniques needed to teach the hearing impaired children, they will be or are to be supported so as to cater for the needs of children.

2.12.2 Teachers to work cooperatively

Alban-Metcalf (1996:125-130) stresses the need for teachers to work cooperatively in order to come to terms with the requirements of the curriculum. “This cooperation has led to the formation (most commonly in ordinary schools) of ‘teacher support team’ either within a given school or, in a small number of cases, between two or more schools”(Alban-Metcalf, 1996:125-130). The focus of attention of teacher cooperation is often systematic planning, implementation and delivery of the curriculum, including different ways in which class teachers, SEN coordinators and learning support teachers with particular expertise can be effective in meeting individual learner’s needs. Therefore what teachers need is the advice and support from colleagues, complemented by the formulation and implementation of effective whole school policy.

The other form of cooperation includes that between special schools and ordinary schools, whereby the wealth of expertise that some special schools have developed is made available to their colleagues in ordinary schools (Culatta et al. 2003).

2.12.3 Employment of classroom assistants

There is need for classroom assistants to be employed as they are of value to both learners and mainstream teachers. These are staff employed, either to provide generalist help to the class teacher or support the class teacher in making provision for learner with SEN (Alban-Metcalf, 1996:128). Classroom assistants, who sometimes

have a professional qualification, such as nursery nurse, become involved along with the teachers in the planning as well as delivery of the curriculum. Some schools have sign language interpreters and have employed deaf persons as teachers (Zindi, 1997:17).

2.12.4 Special equipment

Dart et al. (2004:86) highlighted that “ in addition to regular supply of text books, pens and pencils there is need to equip the special units with special materials and equipment, for example therapy equipment, hearing aids, acoustically treated environment.” Acoustic treatment of rooms is very vital to hearing impaired learners, especially if they are to acquire language. A good acoustic environment may be defined as “...situation in which the noise that is irrelevant to us is suppressed as far as possible, while the useful sounds, those that interest us, stand out clearly and truly and easily distinguishable”(Kristensen, 2003:76). One of the main factors competing against reception of clear speech signals is unfavourable acoustic environment present in mainstream classrooms in the form of noise and reverberation.

Integration of the hearing impaired into mainstream school requires a consistent system of support. As alluded earlier, a teacher is also dependent upon support or advice from other professionals. Provision should be made to enable the learners to visit these specialists on a regular basis (Dart et al., 2004:26). Multi professional cooperation or Inter-Agency collaboration is also a further major way of using available resources appropriately.

2.13 Research carried out in Botswana concerning the integration of hearing impaired learners

In the background of the study, the researcher highlighted that integration of hearing impaired children in Botswana started in the 1970's and in CJSS's in 1999. But ever

since their integration, more research has been carried out to find out the progress so far.

In 2003 Kisanji found the following barriers to curriculum access for the hearing impaired learners in Botswana. Barriers were found to fall under nine areas. These were “delayed language development, quality of teachers, and through them the quality of teaching, the absences of a developed and legitimate sign language for Botswana and manual codes for Setswana to support deaf children learning it, congested curricular in terms of subjects and content, support materials that were unsuitable and unavailable, inappropriate assessment instruments and examination, shortage of qualified teachers, poor home school link and collaboration, and weak collaboration between and within Ministry of Education structures”(Kisanji, 2003:148).

Furthermore, in 2004 another consultant was engaged by the Division of Special Education to find out how integration has progressed. The consultant found a wide range of factors, which contributes to slow implementation. The barriers are;

- Aspects of identification: There is often lack of early identification of special needs/disability both at pre school stage and within school.
- Aspects of attitudes: There is sometimes a fear and reluctance in ordinary schools to take pupils with even the most basic physical, sensory and intellectual support needs.
- Aspects of teaching: There is lack of simple differentiated methods. Skills among specialists are not always developed enough to offer the best support to learners with special educational needs.
- Aspects of school management: There are few active support mechanism in place in schools to identify and support students with special educational needs. There is lack of inspection, formal or otherwise, of the provision.
- Aspects of funding and resources: There is often disagreement about who should provide what between ministries. The Division of Special Education and Central

Resources Centre are overstretched and cannot carry out its responsibility effectively (Dart, 2004:14).

The two recent reports show that teacher's attitudes are a cause for concern. It is due to teacher's attitude that at times students are wrongly placed. Furthermore, there is no curriculum designed to meet the varied needs of different learners, hence teachers modify the existing curriculum without guidelines. Teaching often lacks focus and planning as teachers need to consider the content, methodology and pace of teaching. This lack of focus and planning is often worsened by chronic shortage of resources. In fact, these findings are similar to the ones identified by teachers of Ramotswa CJSS who were involved in pilot project.

The factors identified by Kisanji (2003) and Dart (2004) are similar to the ones identified by the RNPE '94 and they need to be given serious attention they deserve. They are not only barriers to the education of hearing impaired children but to their integration as well. In these reports, problems/barriers outnumbered advantages of integration. The advantages of integration of hearing impaired children in Botswana has been covered under the heading Benefits of Integration (cf. par. 2.3).

2.14 Conclusion

Integration is unlikely to be successful unless there is recognition that as well as the child having rights in terms of placement he or she also has rights to;

- A relevant curriculum
- Specialist teaching
- A learning context which can respond to individual strengths and needs
- Appropriate support services

We need to look beyond placement alone to consider how the ideal of full participation by all can be achieved. This will involve focusing on how children learn

best and on the process of education. It involves looking in detail what is happening in classrooms.

There is a greater need for specialists in different aspects of special needs so that this expertise can be accessed and shared. This has implications for continuing professional development and for provision of resources. Individual schools cannot cater for a range of needs without adequate support. This implies adequate funding and cooperation among stakeholders.

The next chapter will deal with research methodology.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents a description of the research design that was used in the study. It also presents the aim of the study, targeted population and instruments used during data collection.

3.2 Aim of the study

The aim of this study is to investigate the integration of hearing impaired learners into Community Junior Secondary Schools with particular reference to curriculum adaptation, teacher training and support services available.

3.3 Research Design

The study was mainly a descriptive survey, in which qualitative data were collected. (cf. par. 1.8.2)

3.4 Instruments for data collection

Two instruments were used in this study, namely, questionnaire and interview. Data collection was cross- sectional, whereby the researcher collected data on a single occasion (Walsh, 2001:58).

3.4.1 Questionnaire

The main instrument used to gather data for this study was a questionnaire. It is one of the most widely used research techniques. "The idea of formulating precise written

questions for those whose opinions or experience you are interested in, seems such an obvious strategy for finding the answers to the questions that interest you” (Baxter et. al. 1996: 159). The questionnaire was for school heads and teachers.

It consisted of both closed and open-ended questions. The main approach was qualitative, that is the main reason why the questionnaire had a lot of open-ended questions. The researcher opted for more open-ended questions because they allow for a variety of individual responses and fit better with the aim of getting an “inside view” of the situation (Walsh, 2001:65). They also allow the respondents to make any response he or she wishes in his/ her own words and the respondent can include ideas the researcher has not predetermined (Bell, 1999:132). These open-ended questions can help the researcher to avoid introducing any of his or her own preconceptions, and protect the validity of the data as well (Walsh, 2001:65).

The researcher opted for questionnaires because, they are reliable, easy to analyse and enable the researcher to get factual information and opinion (Bell, 1999:119).

(a) Format of the questionnaire

The questionnaire consisted of Part one and two. Part one dealt with biographic information of the respondents, spelling out background information about respondent’s age, gender, qualification and experience in teaching. Such kind of information will help the reader to gain an insight into the profile of the respondents involved.

Part two consisted of section A, B, C, D, E, F and G (Appendix A). It contains open-ended items formulated on the basis of research questions. The purpose of each section will be discussed below;

- **Section A: Teacher training**

Its main purpose was to find out whether teachers have been fully trained for hearing impaired learners.

- **Section B: Curriculum**

Its main aim was to find out the type of curriculum hearing impaired children follow i.e. whether they have their own curriculum specially designed for them or they follow the normal curriculum. Furthermore, it was intended to find out how teachers adapt the curriculum to make it accessible to hearing impaired learners in an integrated setting.

- **Section C: Assessment**

The purpose was to find out if learners are assessed before being admitted into secondary schools so as to assist teachers and school administration in placement of children and in determining the communication method appropriate for the child as well as teaching strategies suitable for him/her.

- **Section D: Teaching**

The purpose was to find out if teachers really cater for individual needs during planning and teaching, thus do they prepare an IEP.

- **Section E: Staffing**

The purpose was to find out, apart from teachers, if other personnel like classroom assistance and sign language interpreters have been employed to assist teachers. Furthermore, it was aimed at finding out if teacher's workload is not too much.

- **Section F: Resources**

This was aimed at finding out if schools have got enough resources for the teaching and learning of hearing impaired learners.

- **Section G: Links with outside agencies**

This was aimed at finding out as to whether schools, apart from the government, have links with other agencies and professionals who are of benefit to hearing impaired learners.

(b) Administration

The administration and collection of the questionnaire was carried out by the researcher, so as to ensure that they reach the targeted people and all are returned. The researcher hand delivered the questionnaire to schools. It was during the distribution of the questionnaire that the researcher got an opportunity to explain certain issues emanating from the questionnaire or make some clarifications. This was possible because respondents were given time to browse through the questionnaire before the researcher's departure.

The questionnaires were collected after a week so as to give respondents ample time in order for them to provide relevant and honest information. One teacher, from each school, was chosen to collect questionnaires from others, hence the researcher collected them from those representatives. They were all returned because respondents were requested not to write their names on the questionnaire, since confidentiality encourages people to respond to the questionnaire without fear.

3.4.2 Interview

The interview is a research technique that can be used in investigating a wide variety of research problems as well as projects. The interview was for education officers (Hearing impairment) in the Division of Special Education. Moser and Kalton (1971) cited in Bell (1999:135) describe the survey interview as “conversation between interviewer and respondent with the purpose of eliciting certain information from the respondent.” Based on the quotation, interview is not just a conversation, but a conversation with a purpose and the success of it depends on its adaptability. The use of interview to generate data in qualitative research is widely recognised (Banes 1992, Powell 1992 cited in Bell, 1999:135). They further explain that it can yield rich data that can be used to supplement the responses from the questionnaire.

The fact that the researcher is physically present during data gathering is an advantage, as respondents are likely to answer questions fully and the interviewee can ask for further explanation. Furthermore this gives the researcher an instant record of key points of an interview (Blaxter et al., 1996:153). “The researcher can give help and guidance, explaining questions and giving additional information where it’s needed”(Walsh, 2001:66).

(a) Format of the interview

The interview was semi-structured. Its main advantage is it gives more latitude to respondents and interviewers, and allows them to explore issues emerging from the research (Blaxter et. al. 1996:152). Interviews can be built around the emerging responses of each interviewee rather than being bound by pre-decided issues. Semi-structured or unstructured interviews may produce a wealth of valuable data (Bell, 1999:137). In supporting Bell’s statement Walsh (2001:66) highlighted that “semi-structured interviews give the researcher an opportunity to probe what the respondent say. The researcher can also discover and make use of unexpected and unforeseen information as it is revealed.” The depth of the information is improved, because the

interviewer can explore what the respondents really mean or really believe, as they talk more freely. Below are items that were used to guide the researcher;

- What form of integration does the Division of Special Education advocate for? Give reason(s).

Purpose: To find out if the DSE is advocating for a particular form of integration e.g. physical, social or education as well as the reason for that.

- What form of support does the division offer to CJSS with regard to integration of hearing impaired learners?

Purpose: To find out the form of support the division offer to schools in terms of personnel, resources, teacher training and dealings with outside agencies/ professionals.

- Are schools satisfied with the support they get from the DSE? If Yes / No state the reason.

Purpose: To find out whether the support is enough or not.

- How does the division ensure that hearing impaired learners access the curriculum?

Purpose: To find out the provision made by the division to enable hearing impaired learners to access the curriculum.

(b) Administration

The researcher conducted the interview and the responses were recorded in point form and later transcribed into notes. The researcher opted for note taking because it gives the researcher an instant record of key points of an interview. After the interview, the

researcher went over the notes with the respondents in order to find out whether what was captured is exactly what was said.

3.4.3 Reliability and validity of instruments

In all research strategies and approaches, the researcher should aim to develop procedures that will produce results that are both reliable and valid. In checking content validity and reliability of data collected through the interview, the researcher had an opportunity of checking notes with the respondents so as to confirm if what was captured is really what they said. This was mainly to facilitate the detection of ambiguities (Walsh, 2001:14).

As for the questionnaires, they were pilot tested before they could be administered. The purpose of this was to detect and eliminate ambiguities as well as clarification of whether or not the instrument achieve its aim and determine consistency of the instrument (Walsh, 2001:14 & Wilkinson, 2000:42). The questionnaires were given to student teachers in Lobatse College of Education, specialising in special education. They were used because they are knowledgeable in special education and therefore can assist a lot in determining the reliability and validity of instrument. They actually completed the very questionnaire meant for teachers and school heads.

The results of the pilot study revealed no problems with the questionnaire. There was no ambiguity in questions asked. Hence the questionnaire was administered as it appear on Appendix A.

3.5 Population of the study

The population of the study consisted of teachers in two Community Junior Secondary Schools in Botswana offering education to the hearing impaired, school heads and education officers (Hearing impairment). In total the respondents were

twenty two in number, that is eighteen teachers, two school heads and two education officers.

Due to the small size of the targeted population, the researcher did not sample, but involved them all in the study (cf. par. 1.9).

3.6 Data collection

The researcher requested permission from the regional education officer and school heads of the two chosen schools to allow the researcher to carry out the study in their respective schools. The researcher started by first visiting regional education officer concerned and informed him of the research topic as well as the purpose of the study. Thereafter, the researcher then went to schools to request for permission. After permission was granted, the school heads introduced the researcher to the relevant teachers of the desired population. Permission was also requested from the head of the Division of Special Education to interview education officers responsible for hearing impaired learners.

Two instruments were used for data collection. These comprised of the questionnaire and an interview. The administration and collection of the questionnaire was done by the researcher (cf. par. 3.4.1). The researcher also interviewed education officers (cf. par. 3.4.2).

3.7 Data analysis

The analysis of qualitative data was presented in a written discussion form, whereby the researcher was describing and reporting on key themes that were found within the data (Walsh, 2001:90). Tables were used to present and illuminate findings.

3.8 Conclusion

The questionnaire and interview were the main instrument of this study and the researcher administered the instruments. The next chapter will deal with presentation and analysis of data collected.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

In this chapter, the researcher examines the findings of the research in relation to research questions and in terms of issues identified in the literature review. Evidence is cited from the original questionnaire sent out to teachers and school heads in two Community Junior Secondary Schools offering education to the hearing impaired and from the interview carried out at the division's main office in Gaborone.

The results of this study are organized and presented in four sets. The first set provides the biographic information of teachers and school heads. The second set deals with the responses from teachers and school heads to the questionnaire and the third set with responses from the interview. The last set discusses the results of the findings from both the questionnaire and interview. Tables are used to present and illuminate findings.

4.2 Biographic factors

It was necessary to investigate some biographical particulars of the respondents to obtain their background information.

4.2.1 Summary of biographic information of the questionnaire respondents in percentile frequencies.

Table 1 (n = 20)

Category	Variables	Frequency	Percentage
Gender	Male	9	45
	Female	11	55
Age group	21 - 25 years	0	0

	26 – 30 years	8	40
	31 – 35 years	5	25
	36 – 40 years	3	15
	41 and above	4	20
Academic qualification	P S L E	0	0
	J C	0	0
	C O S C	20	100
Professional qualification	Diploma (Sec Edu)	4	20
	Diploma (Spec Ed)	2	10
	BEd(Secondary)	3	15
	BEd (Spec Ed)	10	50
	Other	1	5
Rank	School head	2	10
	Deputy s/head	0	0
	Head of department	1	5
	Senior teacher	8	40
	Teacher	9	45
Experience in special education	Less than one year	0	0
	1 – 5 years	13	65
	6 – 10 years	3	15
	11 –15 years	1	5
	16 – 20 years	3	15
	21 and above	0	0

The summary of biographic information gives the reader a whole picture of gender, age group, professional qualification as well as respondents' teaching experience.

Summary of biographical information of the interview respondents.

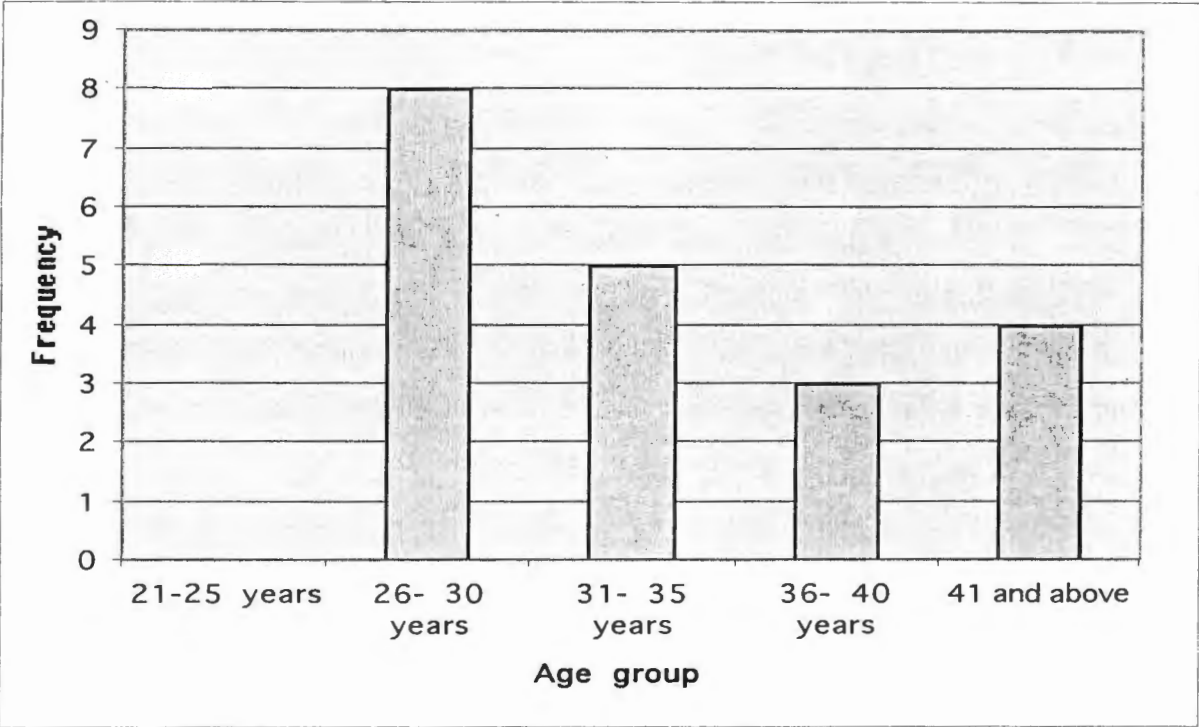
Table 2 (n = 2)

Category	Variables	Frequency	Percentage
Gender	Male	1	50

	Female	1	50
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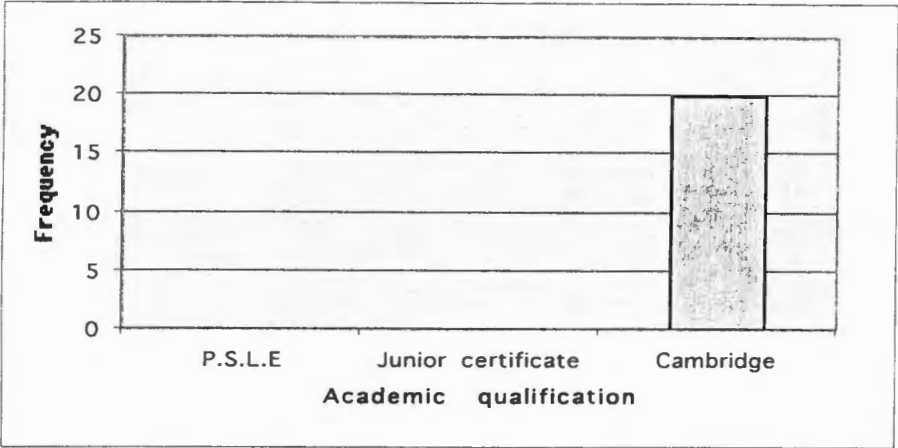
The officer interviewed were education officers from the Division of Special Education in Gaborone. These are officers responsible for the education of hearing impaired learners.

Chart 1: Age of respondents



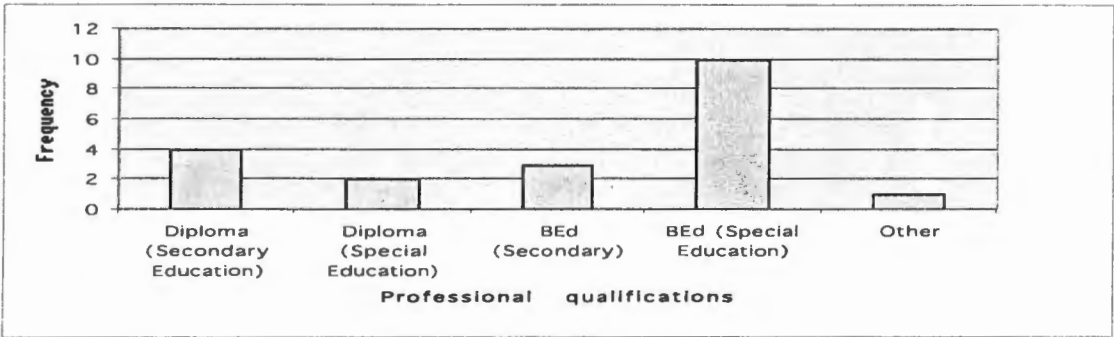
Of the total number of the respondents, 8 (40%) falls within 26-30 years, followed by 31-35 years which is 5 (25%) and 4 (15%) of 41 and above years. The least are those who fall within the age group of 36-40.

Chart 2: Academic qualification



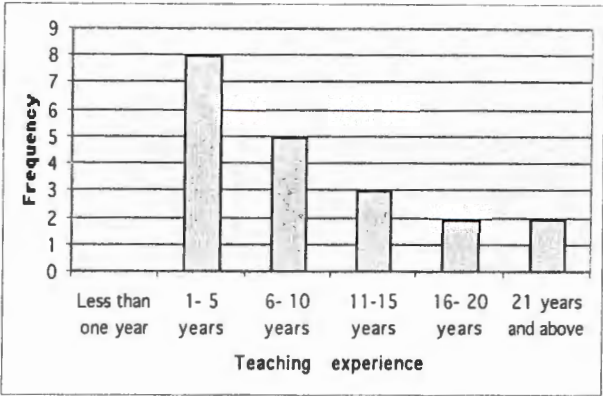
The chart above shows that all respondents, 20 (100 %) have done Cambridge (O’level).

Chart 3: Professional qualification of respondents



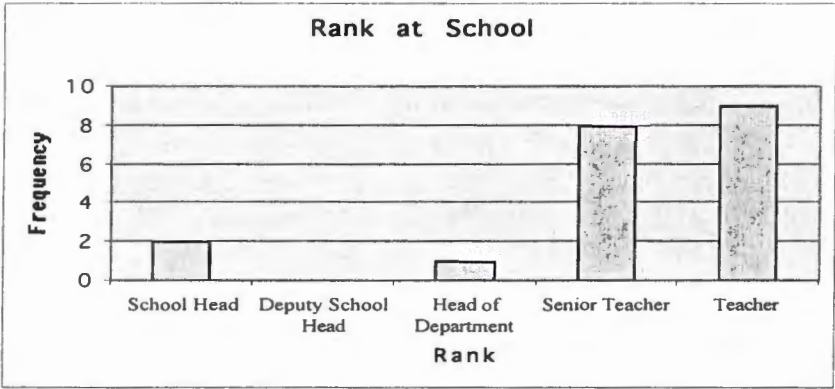
The results indicate that majority of the respondents 10 (50 %) have BEd (Special Education), followed by 4 (20 %) with a Diploma in Secondary Education, 3 (15 %) with a BEd (Secondary), 2 (10 %) with a Diploma (Special Education) and 1 (5%) with BA (Humanities).

Chart 4: Teaching experience



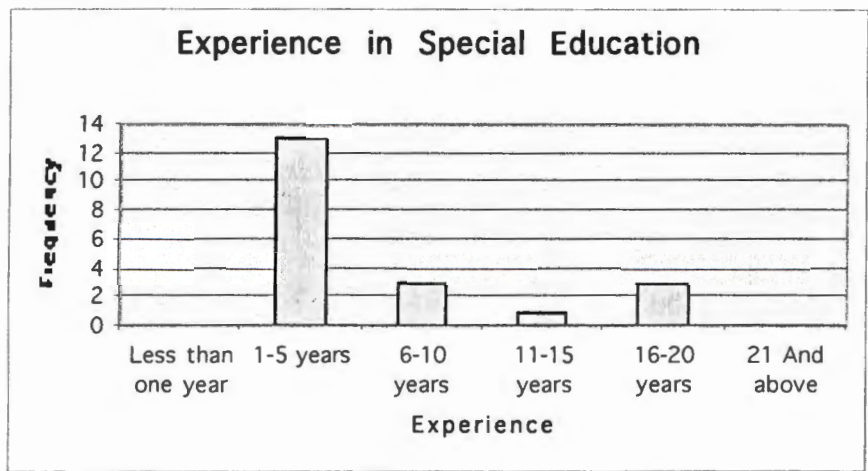
The chart above shows that majority of the respondents 8 (40 %) ranges between 1-5 years, followed by 5 (25%) who fall between 6-10 years. The third group are those who fall between 11-15 years who are 3(15 %) in number. The least are those who fall within 16-20 years as well as 21 years and above.

Chart 5: Rank at school



Nine (45%) respondents were teachers, 8 (40%) senior teachers, 1 (5%) head of department and 2 (10 %) are school heads. This shows that most of the respondents held teacher post as reflected in the chart above.

Chart 6: Experience in special education



The results from the chart shows that majority of the respondents 13 (65%) fall within 1-5 years, followed by 3 (15%) who falls within 6-10 and 16-20 years. The least being 1 (5%) who fall within 11-15 years.

Summary

The results indicates that there are more female teachers 11 (55%) than male teachers who are involved in teaching hearing impaired learners at Community Junior Secondary Schools. Perhaps this is influenced by the fact that culturally females are caregivers within the family. Furthermore, the results also revealed that more young teachers were involved in the study, as the majority 8 (40%) took part. The researcher is of the view that it might be due to renewed interest in the field of special education that more young teachers are involved. But it is good as more have been equipped with skills needed in special education as reflected by chart 3 where 10 (50%) have BEd (Special Education) and 2 (10%) have Diploma (Special Education). The young teachers are nowadays qualified in teaching children with special needs and will have motivation to equip themselves with better skills for future use. That is why it is encouraging that young teachers are involved.

Chart 4 indicates that 65 % of teachers have 1 – 10 years of teaching experience. There are fewer 35 % of teachers with a lot of experience. Furthermore, chart 6 shows that 80 % have 1 – 10 years of experience in special education while 20 % have an experience ranging from 11 – 20 years. This is a true reflection of the findings because, as stipulated earlier, more young teachers were involved in the study, hence fewer years of experience. But it is quite pleasing because the remaining experienced teachers are there to guide the less experienced ones.

4.3 Responses to part two of the questionnaire from both teachers and school heads, which deals with teacher training, curriculum adaptation, assessment, teaching, staffing, resources and links with outside agencies.

Table 3. Section A: Teacher training

Question	Variables	Frequency	Percentage
8. Where you trained to teach the deaf/hearing impaired?	• Yes • No	8 12	40 60
9. Do you have necessary skills and techniques needed to teach the hearing impaired?	• Yes • No	20 0	100 0
10. If not trained, how did you acquire those skills and techniques?	Through: • In-service training • Workshops • Other (formal training)	7 5 8	35 25 40
11. How are you kept abreast with latest trends in the teaching of the hearing impaired?	• Frequent in service training • No frequent in service training	3 17	15 85

Table 3 shows that a larger number of teachers 12 (60 %) are not qualified teachers of the deaf/hearing impaired. Only 8 (40 %) are qualified. This shows that hearing impaired learners are still taught by unqualified teachers of the deaf. Even though some teachers stated that they were not trained to teach the hearing impaired, they have the skills needed to teach hearing impaired learners. In fact 20 (100 %) stated that they have the skills and techniques needed to teach hearing impaired learners. Apart from 8 (40 %) who acquired the skills and techniques through formal training, the rest acquired them through workshops and in-service training. Seven (35 %) said it was through in-service training while 5 (25 %) said through workshops. The only concern was when the majority 17 (85 %) indicated that they are not frequently given in-service training to improve their skills.

Table 4. Section B: Curriculum

Questions	Options	Frequency	Percentage
12. What type of the curriculum does hearing impaired learners follow in general at your school?	They:		
	• Have their own special designed curriculum.	0	0
	• Follow normal curriculum.	20	100
	• Use a curriculum from a lower grade.	0	0

Questions	Options	Frequency	Percentage
13. State the reason(s) for the above.	Reasons • They sit for the same Junior Secondary School Examinations. • Word from the Ministry of Education is that they must follow the same curriculum as normal students (Directive from the Ministry) • There is no modified curriculum specifically designed for them. • Since the policy of Botswana is catering for all students, there is no exemption for them. • Consultation and research on curriculum for the hearing impaired learners was not solicited prior to placing them in secondary schools or schools in general. • Suggestions have been forwarded to the ministry but no effort has been made.		
14. How do you ensure that hearing impaired children access the curriculum?	Ways of ensuring access Through: • The use of visual aids • Remedial lessons • Simplifying the content • Modifying abstract words • Using sign language.	20	100

Questions	Options	Frequency	Percentage
	Modifying the curriculum		

Table 4 shows that 20 (100%) teachers indicated that hearing impaired learners do not have their own special curriculum instead they follow the normal curriculum. The reasons for following normal curriculum have been listed in the table above. Furthermore, 20 (100%) indicated that they ensure that hearing impaired learners access the curriculum through the following; the use of visual aids, remedial lessons, simplifying the content, modifying abstract words, using sign language and modifying the curriculum.

Data collected from the study, even though it was not in the questionnaire, revealed that students do not have problems in accessing curriculum for practical subjects namely Home Economics, Art and Design and Technology. 20 (100 %) teachers revealed this during the discussion with the researcher. The only problem according to them is time. They stated that it is very short, as the curriculum has to be completed within a stipulated time frame.

Table 5. Section C: Assessment

Questions	Variables	Frequency	Percentage
15. Are the children assessed before being admitted into Community Junior Secondary School?	• Yes	4	20
	• No	16	80

16. State reason(s) for the above	Those who said yes stated that they are assessed to determine: • their hearing loss • the category of the loss		
17. If so, by whom?	By: • Audiologist • Did not respond	4 16	20 80
18. How is the hearing impaired child's progress monitored? There was no response to this question.			

Table 5 indicates that 16 (80%) stated that children are not assessed before being admitted in Junior Secondary Schools. Of the remaining 20 %, 2 (10%) stated that assessment is done after they have settled in schools to determine their hearing loss while the other 2 (10%) said they are assessed before being admitted, mainly to determine the category of the loss. Those who said they are assessed mentioned that the audiologists do the assessment. The 16 (80%) who said no assessment was done, did not give any reason.

As for the monitoring of the progress, none of the respondents mentioned how it is carried out. This is probably because, as stated earlier, a lot of teachers teaching hearing impaired learners in Junior Secondary Schools are not qualified teachers of the deaf/hearing impaired, hence lack skills in some of the aspects in deaf education.

Table 6. Section D: Teaching

QUESTION	VARIABLES	FREQUENCY	PERCENTAGE
19. Do you use individualised educational plan for each child?	• Yes	4	20
	• No	16	80
20. State the reason(s) for the above	16 (80%) stated the following as reasons why they do not use IEP's: • Time factor, time is not enough for them to cover the curriculum. • Teacher- pupil ratio is too high. • It will take a long time to prepare, they are too many in class. • Workload is just too much. 4 (20%) stated that they use IEP because it allows them to cater for individual needs.		

The majority of the respondents 16 (80%) indicated that they do not use individual plans for each child. The reasons for not using them have been stated in table 6 above. Four (20%) respondents indicated that they use individual plans because it allows them to cater for individual needs.

Table 7. Section E: Staffing

Questions	Variables	Frequency	Percentage
21. How is the teacher-pupil ratio in your class?	All complained about the number of students per class, they stated that it is no easy to manage the class because they are a lot. The ratio is 1:16	20	100
22. Is there any other staff employed to assist in planning and delivery of instruction?	• Classroom assistants • Sign language interpreters • Other, specify	0 20 0	0 100 0

Table 7 shows that 20 (100%) teachers indicated that teacher-pupil ratio is very high, which is 1:16. That is why teachers earlier on stated that they cannot manage to cater for individual needs. Even 4 (20 %) teachers who use individual plans complained about teacher-pupil ratio as reflected in table 7 above.

Furthermore, the table revealed that 20 (100%) mentioned that sign language interpreters have been employed to assist mainstream teachers. During the discussion with the researcher, teachers revealed that these interpreters are qualified teachers of the deaf/hearing impaired.

Table 8. Section F: Resources

Questions	Variables	Frequency	Percentage
23. How would you describe acoustic conditions in your classroom?	• Very good • Fairly good • Bad	17 1 2	85 5 10
24. Do learners have access and the ability to use computers?	• Yes • No	20 0	100 0
25. What are your main needs in terms of teaching resources?	17 indicated their needs as: • Visual aids. • Games. • Speech trainers. • Teaching aids. • Modified curriculum. • Latest software for use on computers. 3 did not indicate their needs.		85 15
26. Where do you get most of your resources? (NB: teaching and learning resources)	Government NGOs	20 0	100 0

Table 8 shows that 17 (85%) respondents indicated that acoustic conditions are very good, 2 (10%) said that they are bad and 1 (5%) said they fairly good. The respondents were able to describe acoustic conditions in their classes because during

the delivery of the questionnaires, the researcher had an opportunity to explain some of the concepts such as “acoustic conditions” to them.

As for access and the ability to use computers, 20 (100%) said students have access to computers and are able to use them.

17 (85%) respondents indicated their main needs in terms of teaching resources as reflected in table 8 on the previous page. Only 3 (15%) did not indicate their main needs in terms of teaching resources.

All respondents 20 (100%) indicated that they get most of their teaching and learning resources from the government through Secondary Department. Though it was not asked anywhere in the questionnaire, the respondents stated that resources provided by the department are always not enough.

Table 9. Section G: Outside agencies

Questions	Variables	Frequency	Percentage
27. Do you have links with the Central Resource Centre in Tlokweg?	• Yes	19	95
	• No	1	5
28. How does these links work?	They are contacted for assessment and intervention programs.		

Questions	Variables	Frequency	Percentage
29. Describe the support you get from the Division of Special Education?	Description of the support by 18 who said its minimal: • Staff has no idea about secondary education curriculum. • The division seems inadequate and understaffed. • No frequent visits to offer assistance when seriously required especially during final examinations. • Visits are limited. They come only when asked or when they are after certain information. • We hardly get resources from this department. • There is very little advocacy for teacher training.	18	90
	Only 2 said they are happy with the support, but did not describe the support nor gave reasons why they are happy with it.	2	10
30. Name any other outside agencies that you have regular contact with?	Other agencies are the Division of Special Education and non governmental organisations such as Botswana Society for the Deaf, Churches and the Rotary Club.		

Questions	Variables	Frequency	Percentage
31. Do you have access to any of the following professionals; occupational therapist, physiotherapist, speech and language therapist, audiologist, social workers or any other?	• Yes • No 95 % stated that they are normally in contact with the following professionals; • Speech and language therapist • An audiologist • Psychologist • Social workers	19 1	95 5
32. How often is the contact?	• When there is need • Monthly • weekly	19 0 0	95 0 0

Table 9 shows that the two schools have contacts with outside agencies and other professionals. 19 (95 %) mentioned that they have links with the Central Resources Center for assessment and intervention programs. Other outside agencies involved has been listed in the table above. The respondents, during the discussion with the researcher, stated that these agencies (non-governmental organisations) normally donate hearing aids, blankets, clothes, food and educational facilities. Table 9 further shows professionals who are normally contacted by schools. This was revealed by 19 (95 %) respondents while only 1 (5 %) said they do not have access to them. These professionals are contacted whenever there is need.

Furthermore, 18 (90%) respondents indicated that they are not happy with what they termed “very minimal support” from the Division of Special Education. Only two (10%) said that they are happy with the support they get from the division.

4.4 Discussion and summary of the interview

The interview data enhanced the data collected through the questionnaire. These data also provide an insight into some of the issues raised in the literature review in relation to curriculum adaptation, support services and teacher training. The researcher took notes during the interview and the following statements are the views of the respondents to the interview conducted.

4.4.1 Form of integration

The Division of Special Education does not advocate for a particular form of integration. It is entirely upon the school to see how best to integrate the hearing impaired. The two officers interviewed revealed that the division support integration of children with special needs, especially those who can benefit from mainstream and the division always ensure that there is support for those integrated, especially academic supports.

4.4.2 The form of support the Division of Special Education offers to Community Junior Secondary Schools

- The division ensures that teachers are properly trained to teach hearing impaired children. It was revealed that currently some teachers have gone for further training, though the number was not specified.
- The division has employed sign language interpreters to assist mainstream teachers.
- The Central Resource Center, which is part of the division, has been given the responsibility of assessment and coming up with intervention programs.
- The division organizes seminars/workshops and in-service training for teachers covering issues such as methodologies, strategies, sign language as well as speech and auditory training.

4.4.3 Curriculum adaptation

The division normally conducts workshops on curriculum modification and adaptation. In most cases the Department of Curriculum, Development and Evaluation assist them. Thereafter they conduct pastoral visits to assess implementation of programs so as to ensure that quality education is offered to hearing impaired children. The education officers are in task forces for all subjects in all levels of education and are also involved in panel inspections. This is mainly to ensure quality. By being in this task forces they ensure that curriculum offered meets the needs of hearing impaired children.

As a way of ensuring access to the curriculum, the division normally modifies teaching materials. They also assist the Division of Examination, Research and Testing in modifying examinations. They have regular meetings with other departments within the Ministry of Education concerning curriculum issues.

4.4.4 Link with outside agencies and other professional

The division encourages schools to have links with outside agencies and other professionals especially those that could be of benefit to hearing impaired children. Agencies cited include among others Rehabilitation Services Division, Disability Support Services, Botswana Council of Disabled and Botswana Society of the Deaf.

4.4.5 Are schools satisfied with the support they get from the division?

The officers interviewed revealed that the division does not know if schools are satisfied or not with their support. As it is, the division has not got much feedback from schools due to lack of personnel. It is not easy for the division to make follow-ups. The officers stated they are really concerned about feedback from schools, this is what they said, "This is an area that needs to be revisited in the future whereby feedback from schools should be obtained."

4.4.6 What the division has noticed about the integration of hearing impaired learners in Community Junior Secondary Schools

- It has changed the attitude of other students. They now understand disability and accept hearing impaired learners.
- Hearing impaired learners have developed their self-esteem as nowadays they freely take part in sporting activities.
- The only problem the division has noticed is that of teacher's attitudes, especially administrators. They are resistant to change due to lack of knowledge.

Finally, the officers interviewed acknowledged that the division is not able to carry out its mandate due to lack of resources, transport and personnel. Some of the recommendations of the Revised National Policy on Education of 1994 have not yet been implemented due to lack of facilities and funds. Furthermore, it was revealed that they are not implemented due to lack of advocacy from the division.

4.5 Discussion of the findings from both the interview and questionnaire

Discussions of items are linked to the research questions.

4.5.1 Teacher

A larger number of teachers 12 (60%) are not qualified teachers of the deaf/hearing impaired, but they have skills and techniques needed to teach the hearing impaired i.e. methodologies/strategies as well as skills to adapt and modify the curriculum (cf. par. 4.3 Table 3 & 4). Apart from 8 (40 %) who acquired the skills and techniques through formal training, the rest acquired them through in service training and workshops.

Since a larger number of mainstream teachers are not qualified teachers of the deaf, they need to be given training in teaching hearing impaired learners, more so that they

already hold qualified teacher status (Andrew, 1996:14). In fact, even non-teaching staff should be considered for training. In acknowledgement, Dean (1996:148) alerted that “the schools special educational needs policy should describe plans for in service training and professional development of staff to help them work effectively with pupils with special educational needs.”

What causes concern was the fact teachers are not frequently given in service training to improve their skills, as stated by 17 (85 %) respondents. Yet according to Power et al. (1990:95) “it is essential for all staff to have an on going training to keep the professionals continuously well honed.”

To sum it up, without the development of staff skills you cannot provide quality services. Intensive in service programmes should therefore be conducted to develop consistency among teachers in their methods and curricular offering (Zindi, 1997:12).

4.5.2 Curriculum

20 (100%) respondents indicated that hearing impaired learners do not have their own special curriculum, instead they follow the normal curriculum. But problems associated with hearing impairment calls for a curriculum specifically made for the hearing impaired. It should be noted that with hearing impaired children “their special learning needs are due to the slow rate of developing oral language skills of reading, writing and speaking which lead to communication difficulties” (Gregory et al., 1998:70). Furthermore, mainstream teaching relies heavily on the learners understanding and using language, yet language and communication development are the main area which are affected by hearing impairment (Westwood, 2003:49). This calls for those in authority to actually design a special curriculum for the hearing impaired or else intensify training on areas of curriculum adaptation and modification.

As for how teachers ensure access to the curriculum, 20 (100%) of the respondents mentioned that they ensure it through curriculum adaptation and modification.

Furthermore, the Division of Special Education conducts workshops for teachers on curriculum adaptation and modification. What teachers and the division are doing is appropriate because in integrated approach, the curriculum accommodates the needs of all learners through adaptation, differentiation and universal design (Moahi, 2002:18). Problems associated with hearing impairment compel teachers to modify their teaching methods and structure their work in such a way that they will meet their learning needs (Culatta et al., 2003:272).

4.5.3 Assessment and Teaching

The majority of the respondents revealed that students are not assessed before being admitted into Community Junior Secondary Schools. This was said by 16 (80 %) respondents and only 4 (20%) said they are assessed to determine the level of hearing loss. The need for assessment is very vital. According to Culatta et al. (2003:75) assessment is “a process for determining a child’s strength and weakness.” Assessment in its nature involves screening, diagnosis, classification, placement and monitoring. So, it is very important for schools to consider assessment seriously.

The majority of teachers 16 (80 %) indicated that they do not use Individual Educational Plans for each child because of workload, time factors and teacher-pupil ratio. Only 4 (20 %) stated that they use individual plans for each child. According to these teachers, who use IEPs, they allow them to cater for individual needs. The need for Individual Educational Plans (IEP) cannot be over emphasized. The IEP may specify many things but should certainly detail the next steps to be taken, specify who is responsible for helping the child achieve the next goal and how achievements will be measured (Culatta et al., 2003: 283). Therefore IEPs needs to be an integral part of school’s overall arrangement for planning, assessment and record keeping.

4.5.4 Staffing

As mentioned earlier, teachers are complaining of teacher-pupil ratio, which they said it is too high. The teacher-pupil ratio is 1:16. 20 (100%) stated that due to this they cannot manage the class. This contributes a lot as to why teachers do not use individual educational plans.

What is most important is that sign language interpreters have been employed to assist mainstream teachers and those interpreters are qualified teachers of the deaf/hearing impaired.

4.5.5 Resources

17 (85%) respondents indicated that acoustic conditions of classrooms are good (cf. par 4.3 Table 8). If we are to take full advantage of limited hearing ability, then we must deliver the best possible acoustic signals to the child's cochlea (Boothroyd, 1985:94). Though acoustic conditions for learners with hearing impairment might differ from one school to the other, Watson (1996:189) highlighted good conditions as:

- Rooms with carpets, curtains and soft furnishing.
- Soft tops on tables and rubber feet on tables and chairs.
- Good lighting, which makes it easier to use all senses to aid understanding.
- Appropriate use of amplification equipment.

The environment discussed above aims at reducing background noise. Therefore the school need to ensure that the environment provides a maximum of meaningful sound with a minimum of interfering noise.

The results also revealed that students have access to use computers as indicated by 20 (100%) respondents. Furthermore, 20 (100%) respondents stated that they get most

of their resources (teaching and learning resources) from the government though they are not enough. That is why 17 (85%) of them managed to list their main needs in terms of teaching resources.

4.5.6 Support services and links with outside agencies/professionals

The education officers revealed that The Division of Special Education support schools in many ways, for example, they ensure that teachers are properly trained, provision of resources and in-service training. But the majority of teachers (90%) complained that they get “very minimal support” from the division. They even went to the extent of describing what they perceive about the division (cf. par. Table 9).

The two education officers interviewed further revealed that the division (DSE) encourages schools to have links with outside agencies and professionals. Even 19 (95 %) respondents indicated that they have links with outside agencies and professionals. They further gave examples of agencies and professionals they normally contact for help. In supporting this collaboration Dart et al. (2004:26) stated that “A teacher is also dependent upon support or advice from other professionals. Provision should be made to enable the students to visit these specialists on a regular basis.” They further mentioned that multi-professional cooperation or inter-agency collaboration is also a way of using available resources appropriately.

4.5.7 Integration

The Division of Special Education support integration of hearing impaired children, as stated by education officers interviewed. The researcher observed, during data collection, that the most dominating form of integration taking place in schools is joint sporting/social activities. Students are only integrated academically during practical lessons e.g. Art, Design and Technology and Home Economics. Teachers during the discussion with the researcher revealed this.

The Warnaco Report (1978) distinguished between different forms of integration as; locational, (children learning in the same school, even if not in the same classroom), social (allowing children the opportunity to mix on at least social level for example, during break) and curricular. The report further states that the first two are relatively easy to achieve but the third can prove more problematic and the search for appropriate curricular for children with special educational needs has dominated the thoughts of educators. Perhaps that is why the situation is as it is currently.

The report clearly shows that integration is not an easy process, especially when it comes to curriculum integration.

4.6 Conclusion

This chapter was concerned with the presentation and analysis of data collected. The next chapter will deal with summary, conclusion and recommendations from the study.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter summarises the findings of the study. Conclusions and recommendations are drawn based on the findings of the study.

5.2 Purpose of the study

(cf. par. 1.4)

The main purpose of the study was to investigate the integration of hearing impaired learners in Community Junior Secondary Schools in Botswana. The study seeks to investigate the integration with particular reference to the following;

- Curriculum adaptation
- Teacher training
- Support services available

5.3 Research design and procedures

A review of literature, which was relevant to the purpose of the study and research questions, was conducted. The questionnaire and the interview were the means of gathering data (cf. par.3.4).

The population of the study consisted of two school heads, eighteen teachers and two education officers responsible for the education of hearing impaired children . Teachers were from Ramotswa CJSS and Tashata CJSS, being the only two CJSSs in the country offering education to the hearing impaired. Teachers and school heads responded to the questionnaire while education officers were interviewed (cf. par. 1.9

& 3.5). All the 20 (100%) subjects who responded to the questionnaire managed to return them all completed.

5.4 Literature review

(cf. par.1.8.1 & chapter 2)

The review attempted to give the reader a holistic picture of the integration of exceptional children. Thereafter, the focus was on integration of hearing impaired children with particular references to curriculum adaptation, teacher training and support services.

Curriculum adaptation

(cf. par.2.9)

Literature clearly indicate that hearing impaired learners can only access the curriculum through adaptation and modification (Culatta et al, 2003 & Moahi, 2002:18). In an integrated approach “the curriculum accommodates the needs of all learners through adaptation, differentiation and universal design.” It should be noted that their special learning needs are due to the slow rate of developing oral language skills of reading, writing and speaking which lead to communication difficulty (Gregory et al, 1998:70). As a result, teachers are compelled to modify their teaching methods and structure their work in a way that they will meet their learning needs.

Teacher training

(cf. par. 2.11)

If the school is to maintain good provision for children with special needs every member of staff need to acquire necessary skills and knowledge needed to teach hearing impaired learners and it is essential for staff to have an on going training (Power, 1990:95). Intensive in-service programs should be conducted to develop consistency among teachers in their methods and curricular offering (Zindi, 1997:12).

Support service

(cf. par. 2.12)

Integration of hearing impaired learners in mainstream requires consistent system of support (Dart et al, 2004:26). Alban-Metcalf (1996:128) and Gregory et al (1998:55) stated that the support might be in the form of the following;

- Special materials and equipment
- Employment of classroom assistant and sign language interpreters
- Teachers working cooperatively
- Links with outside agencies (NGOs) and professionals.

5.5 Findings of the research

(cf. chapter 4)

5.5.1 Biographic factors

Biographic information revealed the following;

- More female teachers 11 (55%) were involved in the study compared to male teachers.
- The majority 8 (40%) of those who took part in the study mostly falls within 26-30 years.
- As per qualifications, all respondents 20 (100%) have done Cambridge and have all undergone teacher training with different professional qualifications, for

example, 10 (50%) have BEd (special education), 4 (20%) Diploma in Secondary Education, 2 (10%) Diploma (special education) and 3 (15%) BEd (secondary).

- A lot of those who took part in the study are not that experienced in teaching as 8 (40%) falls within 1-5 years. Furthermore, 13 (65%) of them fall within 1-5 years when it comes to experience in special education.

5.5.2 Data presented here emanates from the questionnaire and interview.

Teacher training

(cf. par. 4.3.1)

- 12 (60%) respondents revealed that they are not qualified teachers of the deaf/hearing impaired but do have skills and techniques needed to teach hearing impaired learners.
- The only concern was that they are not frequently given an in service training to improve their skills, 17 (85%) respondents indicated this.

In an integrated setting, the curriculum accommodates the needs of all learners (Moahi, 2002:18) and this call for teachers to be fully equipped with knowledge and skills needed to operate in such environment. The researcher, therefore, is of the view that it is very vital for teachers to have an on going training in order to provide quality service to learners, especially the hearing impaired, more so that most teachers in the mainstream are not qualified teachers of the deaf/hearing impaired. Furthermore, the results shows that, though they are not qualified teachers of the deaf / hearing impaired, they have acquired the skills/knowledge needed to teach the hearing impaired through other means. All they need is to have an intensive in service training programme for them so as to develop consistency among them in their methods and curricular offering. Training is also needed for the non-teaching staff as well.

Integration

(cf. par. 4.4.1 & 4.5.8)

- The Division of Special Education support integration of hearing impaired children.
- The predominant form of integration taking place in schools is joint sporting/social activities. Hearing impaired learners are only integrated academically in practical subjects.

Curriculum

(cf. par.4.3.2 & 4.4.3)

- Hearing impaired children do not have their own curriculum, instead they follow the normal curriculum. 20 (100%) respondents revealed this.
- 20 (100 %) teachers stated that they ensure that hearing impaired children access the curriculum through curriculum adaptation and modification. The Division of Special Education also train teachers on curriculum adaptation and modification.

The results clearly shows that the hearing impaired do not have the curriculum specifically designed for them, instead they follow the curriculum for the “normal” ones. That is the curriculum, according to the researcher’s view, designed not taking into consideration the needs of the hearing impaired learners. May be that is why the predominant form of integration taking place in schools is joint sporting/social activities and only integrate the hearing impaired learners academically in practical subjects. As stated earlier, in integrated approach the needs of all learners are accommodated and this can only be possible through curriculum adaptation and modification (cf. par. 2.9). Teachers deserve to be thanked and encouraged to continue doing so, because 20 (100%) stated that they ensure that the hearing impaired learners access the curriculum through curriculum adaptation and

modification. The 12 (60%) teachers who are not qualified teachers of the deaf/hearing impaired are among this 100%. The adaptation and modification of the curriculum is carried out when the hearing impaired are on their own in special education units as well as when they are integrated in practical subjects. This was revealed during the discussion with the researcher.

Assessment

(cf. par. 4.3.3)

- 16 (80%) said students are not assessed before being admitted in CJSS, while 4 (20%) said assessment is only for determining hearing loss.

The researcher is of the opinion that if assessment is taken seriously, it can assist schools a lot in determining the type of placement and communication method suitable for the child. For example, if the child is within the mild category, he or she can be integrated academically, since that particular child, with the help of amplifications, can communicate orally.

Teaching

(cf. par. 4.3.4)

- 16 (80%) respondents stated that they do not use individual plans for each child because of various reasons (which they have stated).
- 4 (20 %) those who use individual plans, did not mention how often they are reviewed and who is involved.

It is quite disappointing that Individualised Educational Plans (IEP) are not prepared / used by the majority of teachers. But IEPs are very important because it details the services for the education of the child (Culatta et al., 2003:283). This can, therefore, be very helpful to mainstream teachers and the school in general as the IEP contains

all the necessary information needed for the education of the child. Hence IEP can assist a lot in the integration of the hearing impaired.

Staffing

(cf. par. 4.3.5 & 4.4.2)

- 20 (100%) indicated that teacher-pupil ratio is very high.
- Sign language interpreters have been employed to assist mainstream teachers.
- 17 (85%) did indicate their main needs in terms of teaching resources.

The results indicate that teacher-pupil ratio is very high, as a results there is need to employ classroom assistants and sign language interpreters. They are of value to both learners and mainstream teachers as they can support the teacher in making provision for learners with special needs. Even when learners are not integrated there is need for support staff to be employed.

Resources

(cf.

- 17 (85%) indicated that acoustic conditions are good.
- 20 (100%) said that students have access to computers.
- Schools get most of the resources from the government though they are not enough. 20 (100%) respondents revealed this.

It is of paramount importance that adequate and appropriate resources are provided in the units so as to accelerate the integration of hearing impaired learners. It is a good

that the government has taken the responsibility of providing resources rather than relying on outside agencies only.

Support services and links with outside agencies/professionals

(cf. par. 4.3.7, 4.4.2, 4.4.4 & 4.4.5)

- The Division of Special Education support schools in terms of teacher training, provision of resources and in-service training. But the majority of teachers 18 (90%) complained of what they termed “very minimal support” from the division.
- The Division of special education encourages schools to have links with outside agencies and professionals especially those that could be of benefit to hearing impaired children, Furthermore, 19 (95%) respondents indicated that they have links with outside agencies and professionals.

As stated earlier, integration of the hearing impaired requires consistent support. The teacher is also dependent upon support and advice from other professionals. Hence the Division of Special Education should continue providing support to schools but need to put more on what they are doing currently. Furthermore, schools should continue having links with outside agencies and professionals for the benefit of the child. This form of support will make the hearing impaired child feel welcome in mainstream schools, thus promote integration.

5.6 Conclusions

The following conclusions can be drawn from the above findings:

- Most teachers involved in the study are not qualified teachers of the deaf/hearing impaired, but they have skills/techniques needed to teach hearing impaired learners.
- Hearing impaired learners do not have their own specially designed curriculum, instead they follow the normal curriculum. But teachers ensure that hearing impaired learners access this very curriculum through curriculum adaptation and modification.
- Teachers do not prepare and use IEP.
- Government provides resources but they are not enough/adequate.
- The Division of Special Education provides support to schools, but teachers complain that the support is not enough/adequate.
- Sign language interpreters have been employed to assist mainstream teachers.
- The predominant form of integration taking place in schools is joint sporting/social activities.

5.7 Recommendations

The following recommendations were made based on the findings of the study.

- The two schools offering education to hearing impaired learners should have a clear policy on integration of hearing impaired learners.
- A curriculum suitable for hearing impaired learners in secondary schools should be developed.
- Training should be regularly organised for teachers on curriculum adaptation and modification and such adaptation should be monitored regularly by the Division of Special Education to ensure that support materials and teaching methods meet the learning needs of hearing impaired learners as well as ensuring that the Individual Educational Plans are prepared.
- The adaptation of support materials for hearing impaired learners should be infused into subject's methods courses at University of Botswana and colleges of education.
- In order to improve access to the curriculum, the Ministry of Education should recruit more sign language interpreters and also employ classroom assistants. As it is currently each school has one or two sign language interpreters who have to work with all subject teachers who are not specialist teachers of the hearing impaired.
- Schools should continue to have links with outside agencies and other professionals for the benefit of hearing impaired learners.

- Teachers need to meet and discuss how best they can assist hearing impaired learners in integrated settings. Team teaching and clinical observation should be encouraged among teachers.
- Government should provide adequate resources for teaching and learning. It should be noted that Special Education in its nature is special, therefore it requires special resources, both human and non-human.
- Teacher-pupil ratio should be reduced to 1:6 so that teachers could have time for individual planning as well as attention.
- Hearing impaired learners should be assessed before being admitted in order to determine their placement and communication method suitable for them that will facilitate their integration.

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APPENDICES A

QUESTIONNAIRE FOR TEACHERS AND SCHOOL HEADS

The aim of this questionnaire is to get respondent's view on the integration of hearing impaired children in Community Junior Secondary Schools. Particular attention is given to curriculum adaptation, availability of resources and support services as well as training of teachers. Information will be treated confidentially.

Part One

Biographic information

Kindly provide information below by making a tick in the boxes provided next to the appropriate answer.

1. Gender; Male ☐ Female ☐

2. Age; 21- 25 ☐ 36- 40 ☐

26- 30 ☐ 40 + ☐

31- 35 ☐

3. Academic Qualification; Standard 7 ☐

Junior Certificate ☐

Cambridge ☐

4. Professional Qualification; Diploma (Secondary Education) ☐

Diploma (Special Education) ☐

B.Ed (Secondary) ☐

B.Ed (Special Education) ☐

Other (Specify) _____

5. Teaching Experience;	Less than 1 year	☐	11- 15 years	☐
	1- 5 years	☐	16- 20 years	☐
	6- 10 years	☐	21 +	☐

6. Rank at school;	School Head	☐
	Deputy School Head	☐
	Head of Department	☐
	Senior Teacher	☐
	Teacher	☐

7. Experience in Special Education;	Less than 1 year	☐	11- 15 years	☐
	1- 5 years	☐	16- 20 years	☐
	6- 10 years	☐	21 + years	☐

Part Two

This part is made up of several sections, which consists of both open and closed ended questions. In some questions, after placing a tick in an appropriate box you are required to kindly state your reason(s) for the selection.

Section A: Teacher training

8. Where you trained to teach the deaf/ hearing impaired? YES ☐ NO ☐

9. Do you have necessary skills and techniques needed to teach the hearing impaired?

YES ☐ NO ☐

10. If not trained how did you acquire those skills and techniques? Through the following;

In-service training ☐

Workshops ☐

Other (Specify) _____

11. How are you kept abreast with latest trends in the teaching of the hearing impaired?

Section B: Curriculum

12. What type of the curriculum does hearing impaired children follow in general at your school?

- They have their own specially designed curriculum ☐
- They follow the normal curriculum ☐
- Use curriculum from lower grade ☐

13.State the reason(s) for the above.

14. How do you ensure that hearing impaired children access the curriculum?

Section C: Assessment

15. Are the children assessed before being admitted into Community Junior Secondary Schools? YES ☐ NO ☐

16. State reason(s) for the above.

17. If so, by whom?

18. How is the hearing impaired child's progress monitored?

Section D: Teaching

19. Do you use individualised educational plan for each child? YES ☐ NO ☐

20. State the reason(s) for the above.

Section E: Staffing

21. How is the teacher-pupil ratio in your class?

22. Is there any other staff employed (e.g. classroom assistants, sign language interpreters etc) to assist you in planning and delivery of instructions?

Section F: Resources

23. How would you describe acoustic conditions in your classrooms?

Very Good ☐

Fairly Good ☐

Bad ☐

24. Do learners have access and the ability to use computers? YES ☐ NO ☐

25. What are your main needs in terms of teaching resources?

26. Where do you get most of your resources? (NB: teaching and learning resources)

Government ☐ NGOs ☐

Section G: Outside agencies

27. Do you have links with the Central Resource Centre in Tlokweng?

YES ☐ NO ☐

28. How does these links work?

29. Describe the support you get from the Division of Special Education?

30. Name any other outside agencies that you have regular contact with.

31. Do you have access to any of the following professionals; occupational therapist, physiotherapist, speech and language therapist, audiologist and social workers or any other? YES ☐ NO ☐

32. How often is the contact?

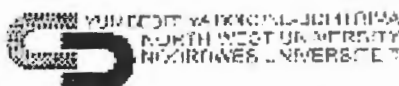
THANK YOU VERY MUCH FOR YOUR HELP. I AM VERY GREATFUL TO YOU FOR GIVING UP SO MUCH TIME TO ANSWER THIS QUESTIONNAIRE.

APPENDICES B

INTERVIEW GUIDE

- 1.What form of integration does the Division of Special Education advocate for? Give reason(s).
- 2.What form of support does the division offer to CJSS with regard to integration of hearing impaired learners?
- 3.Are schools satisfied with the support they get from the DSE? If Yes / No state the reason(s).
- 4.How does the division ensures that hearing impaired learners access the curriculum?

APPENDIX C



DEPARTMENT OF FOUNDATIONS OF EDUCATION

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Tel: +27 (0) 18 551 4560/5100/5111
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Email: admission@nwu.ac.za

Date: 26 November 2015

Your reference:

Our reference: 100000015

TO WHOM IT MAY CONCERN

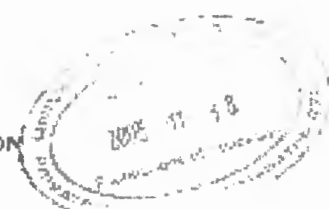
This is to certify that Mr. Phokwang Gilewa (ID No: 50011100) is registered with this university and pursuing a M.Ed. degree program in In-School Education. As a requirement for the fulfilment of his academic programme, this he is expected to conduct field-based research.

I would appreciate if you would extend the necessary assistance to enable him/her pursue the research project.

Yours Sincerely

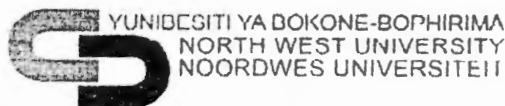
THOMAS ASSAN

HEAD, FOUNDATIONS OF EDUCATION



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YUNIBESITHI YA BOKONE-BOPHIRIMA
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Fax +27 18 389 2485/392 5775
Email: assant@uniwest.ac.za

Date : 28 NOVEMBER, 2005

Your reference :

Our reference FOD/MED/RES

TO WHOM IT MAY CONCERN

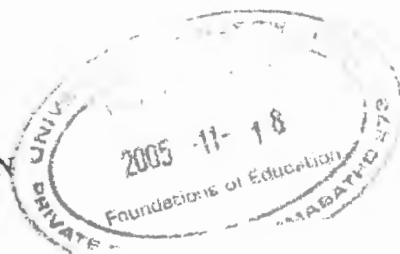
This is to certify that Mr Phelloeng Gabotshwane Student No 10755160 is registered with this university and pursuing a MEd degree programme in Special Education. As a requirement for the fulfilment of the academic programme, she/he is expected to conduct field-based research.

I would appreciate if you would accord the necessary assistance to enable her/him pursue the research project.

Yours Sincerely

THOMAS ASSAN

HOD, FOUNDATIONS OF EDUCATION



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