**SOLUSI UNIVERSITY**

**CHALLENGES IN TEACHING STUDENTS WITH HEARING IMPAIRMENT IN INCLUSIVE CLASSES: A CASE OF SECONDARY SCHOOLS IN KARIBA DISTRICT, MASHONALAND WEST, ZIMBABWE**

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**MASTER OF EDUCATION**

**(ENGLISH LANGUAGE AND LITERATURE)**

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**MAMUTSE YEUKAI**

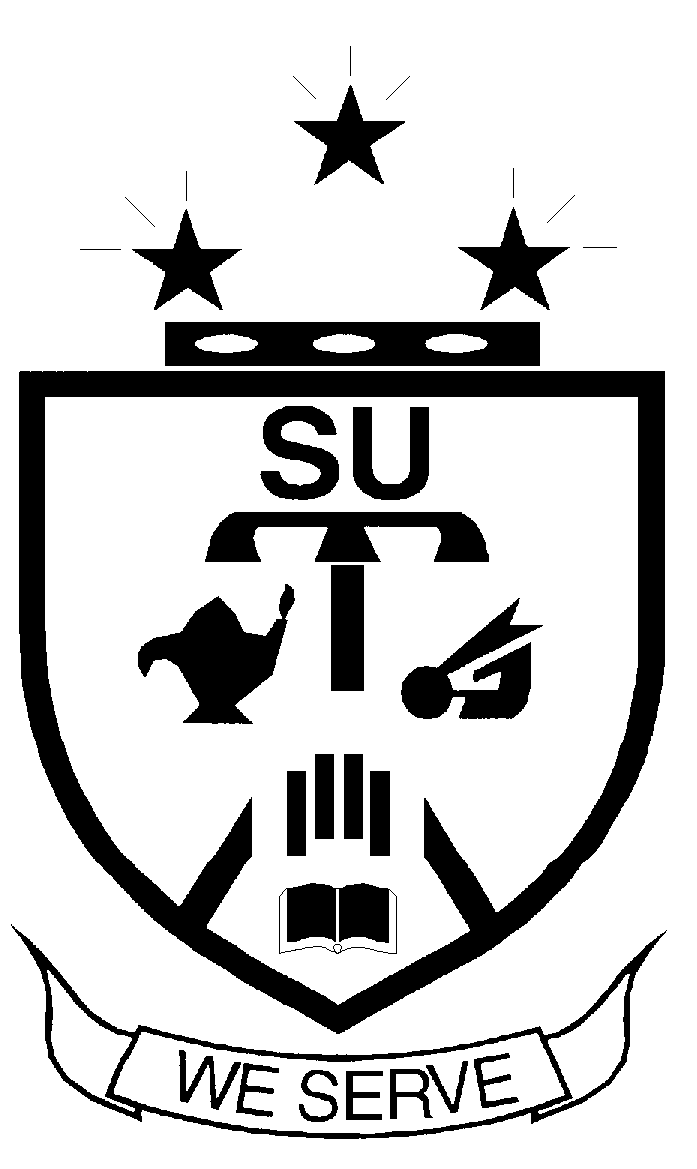
**A Thesis submitted to the Faculty of Education Graduate Studies, Solusi University, Bulawayo, Zimbabwe, in partial fulfillment of the**

**Requirements of the degree of**

**Master of Education**

**(English language and Literature)**

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**SOLUSI UNIVERSITY**

FACULTY OF EDUCATION

Graduate Studies

# APPROVAL SHEET

In partial fulfilment of the requirements for the Degree of Master of Education in English Language and Literature, this thesis titled **Challenges in Teaching Students with Hearing Impairment in Inclusive Classes: A case of Secondary Schools in Kariba District, Mashonaland West, Zimbabwe,** has been approved by Thesis Defense committee as satisfactory.

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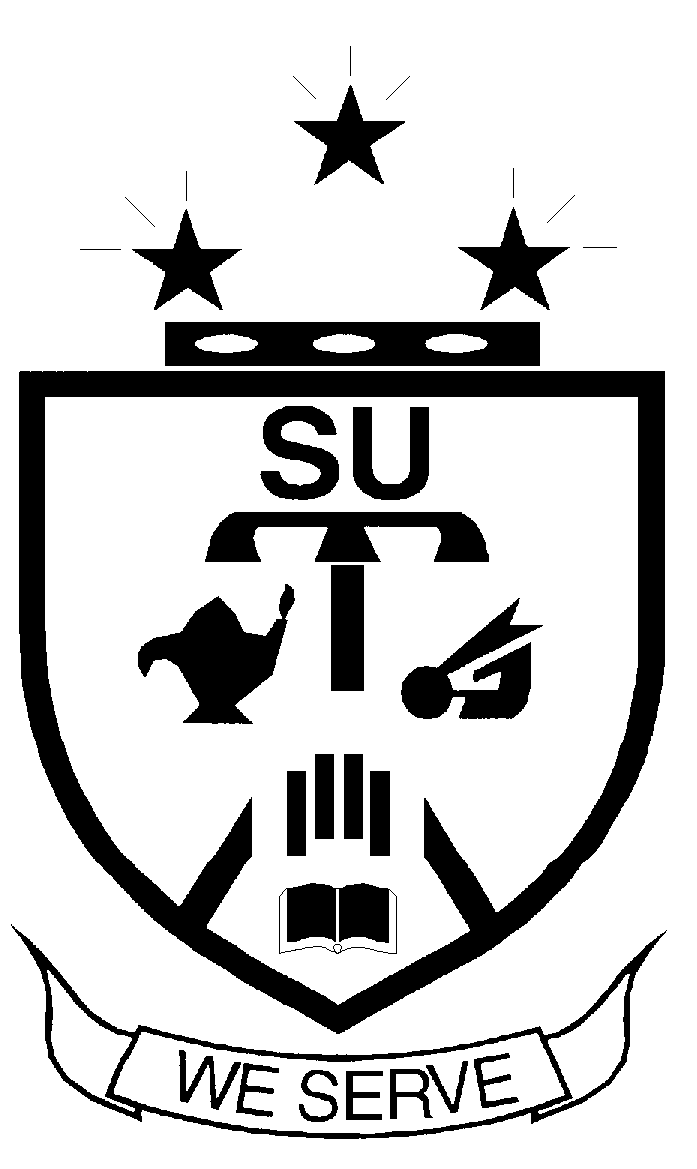
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# ACCEPTANCE SHEET

The thesis titled **Challenges in Teaching Students with Hearing Impairment in Inclusive classes: A case of Secondary Schools in Kariba District, Mashonaland West, Zimbabwe,** is hereby accepted in partial fulfilment of the requirements of the Degree of Master of Education in English language and Literature.

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# DEDICATION

This work is dedicated to God for being the source of my strength, and Trish Mamutse.

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# ABSTRACT

The purpose of this study was to establish the Challenges in Teaching Students with Hearing Impairment in Inclusive Classes in Secondary Schools in Kariba District: Zimbabwe. The descriptive research design was adopted for the study. The population consisted of five schools in the District. Purposive sampling was used to choose the teachers. Forty teachers who taught children with hearing impairment were chosen for the sample. The questionnaire was face and content validated. A pilot study was conducted in two schools outside the sampled population to ascertain reliability. The instrument was administered to ten respondents and the Alpha Cronbach’s reliability coefficient of 0.877 was obtained. Putting all ethical considerations into account, the researcher administered the questionnaire in person. Data was coded and analyzed using the Statistical Packages for Social Sciences (SPSS) software program, version 16.0. Descriptive statistics was used for question one. For question two factor analysis was used. The study revealed that six factors accounted for 75.131% variance in challenges in teaching students with hearing impairment in inclusive classes. From the study teacher competence and administrative support were highly a challenge.

# CHAPTER ONE

# INTRODUCTION

# Background to the study

In Zimbabwe prior to 1990, children with disabilities were educated in separate schools ,King Gorge VI in Bulawayo and Copota school of the blind in Masvingo just to name a few were established to separately cater for children with special needs education. However this came to an end with the advent of inclusive education. The focus of inclusive education was born out of the philosophical thinking that there was need for equality and the right to access to education regardless of disability. For children with hearing impairment this would mean that they be educated in the same environment with their hearing counterparts. According to the international journal of science and research (2014) the concept of inclusive education was premised on the fact that it was the school which needed to make adjustments to accommodate the children with hearing impairment, as such they were free to enroll at any school nearest their home other than being taken to special schools.

Education is a universal right that extends to all children including those with hearing impairment. This right is enshrined in the convention on the rights of the child (1989) and the rights of the persons with disabilities (2008), and it was also a subject of debate at international level forums such as the Jomtien Conference of (1990) as well as the Salamanca statement and framework of action. The constitution of Zimbabwe (2013) categorically stated this right, the country being a signatory to these international charters, Zimbabwe was mandated in the late 1990s to adopt the concept of inclusive education which placed emphasis on the rights for all, affirming the need to uphold the rights of children with hearing impairment. Hence the then Ministry of Education Sport Art and Culture through the division of Psychological Services and Special needs came up with a number of guidelines on the provision of equal access to education for all learners including those with disabilities. This saw the hearing impaired children being integrated in the regular class.

Inclusion was in contrast with the separate and special schools such as Emerald Hill of the deaf since according to Musengi, Mudyahoto and Chireshe (2010), Zimbabwe had been a signatory to the Salamanca statement and framework for action on special needs education and other inclusive educational related international charters which called for positive action towards overcoming barriers experienced by the physically disabled children.

The 1999 Presidential Commission of Inquiry into Education and training (CIET) popularly known as the Nziramasanga Commission upon realizing that the concept of inclusive education remained mainly theoretical, the commission recommended that inclusive education be adopted seriously on all levels of the Zimbabwean education system. According to the Ministry of Education document (2011) the overall goal of inclusive education in Zimbabwe is to achieve one society where students with disabilities attended the same school nearest their homes with other children without disabilities thus eradicating discrimination and prejudice. The Zimbabwe constitution in 2013 addressed the plight of people living with disabilities. The new constitution, in clause number 22, stipulated that all rights for people with disabilities, the hearing impaired included should be observed. However it did not commit itself to ensuring that there could be inclusive education.

The implication is that children with hearing impairment were brought together in the same class with their hearing counterparts. The same teacher who taught the hearing students was the same teacher for the hearing impaired. They received their instruction in the regular settings nearest their homes. According to Hardman, Drew and Egan (2015) the inclusion of children with hearing impairment in regular schools was pivotal to their educational success as they received their educational support in mainstream classes and were provided with the needed special education support services and the needed supplementary aids in age appropriate classes. Their inclusion in the main stream class fostered an attitude of unqualified acceptance and the need to support the growth of students with hearing impairment at all levels.

When children with hearing impairment and without impairment were educated together they learnt lifelong lessons and skills necessary for positive relationship from each other. However Kauffuman and Hallahan (2015) had a different opinion when they said although it sounded very intriguing and engaging they doubted that it would be possible to provide all the needed services in one place at the same time for all types of children one had. Adoyo (2008) cited in Gudyanga, Wadesango and Hove (2014) proposed another obstacle faced by the hearing impaired as failure by parents, professionals and the general public to understand and accept persons with hearing disability.

It was inevitable that access to education by children with hearing impairment was riddled with challenges and obstacles which militated against the success of their teaching. Among the challenges they faced according to Mafa (2012) communication barrier, negative attitude towards children with hearing impairment, lack of support, inadequately trained teaching personnel who lacked the experience and the expertise that may be required when teaching these children. As a result removing these obstacles became a major objective. Hence the study on challenges in teaching secondary students with hearing impairment in an inclusive class.

Due to the economic meltdown that the country underwent, the teaching and learning of students with hearing impairment was heavily hampered by lack of financial funding by the government. Jones (2013) posited that whilst mainstreaming implied that hearing impaired learners receive their education in regular schools it did not necessarily meant that it would happen satisfactorily within the regular class. Hearing impaired children were seldom effectively catered for in the regular class owing to the above mentioned obstacles. In most cases it was often the learner adapting to the system rather than the system providing for them which in turn defied the concept of total inclusion hence the need to make a survey of the challenges the hearing impaired children face in the regular class.

# Statement of the problem

Children with disabilities have been receiving education in special schools. Special education was developed to try and provide special attention and arrangements for the disabled learner’s needs. However, there has been a significant shift from this approach after realizing that it was not in the interest of the children with hearing impairment and society for the learners to be separated from the rest of the children. Hence inclusive education was introduced. Debates have been going on whether inclusive education was really beneficial to students with special needs, this study therefore, sought to establish the challenges in teaching students with hearing impairment in inclusive classes in secondary schools in Kariba District.

# Purpose of the study

The purpose of this study was to:

1. Find out the challenges in the teaching of English language to secondary school students with hearing impairment in an inclusive class in terms of :

* Teacher competence
* Teaching and learning resources
* Administrative support
* Teaching methodology
* Inclusive environment as responded to by the teachers.

1. Establish the dimensions of the challenges in the teaching of English to students with hearing impairment in an inclusive class as extracted by factor analysis.

# Research questions.

1. What were the challenges in the teaching students with hearing impairment in an inclusive class in terms of:

* Teacher competency
* Teaching and learning resources
* Administrative support
* Teaching methodology
* Inclusive environment as responded to by the teachers?

1. What were the dimensions of the challenges in the teaching of secondary school students with hearing impairment as extracted by factor analysis?

# Significance of the study

The study hopes to bring awareness to the stake holders in education on the challenges faced by secondary students with hearing impairment in an inclusive environment and recommend solutions to the challenges. The study might also be useful to the secondary teachers in regular classes who may be having limited knowledge in handling the hearing impaired children in these situations. Policy makers might also benefit from the study in their formulation and implementation of policies. Above all the research would contribute to the body of knowledge that would be made use of by other researchers who may want to research on similar or related topics.

# Basic assumption of the study

* The research was carried out on the assumptions that students with hearing impairment do exist in the mainstream classes and possibly facing challenges in their learning.
* The respondents would complete the questionnaire and return them on time.
* The research instrument provided would be sufficient to collect the information needed.

## **Scope and delimitation of the study**

The research was restricted to secondary schools in Kariba District practicing inclusive education and have enrolled students with hearing impairment. The study was also restricted to challenges faced by secondary students with hearing impairment, other forms of disabilities were not considered.

# Limitations of the study

Geographically Kariba district has schools that are sparsely placed and most of the roads are bad, as a result getting information could be a difficult and a strenuous task.

**CONCEPTUAL FRAMEWORK**

|  |
| --- |
| **Challenges**   * Teacher competency * Teaching methodology * Structural and Administration support * Teaching and learning resources * Inclusive environment |

# Figure 1: Variables associated with the study

## **Operational definition of terms**

**Hearing impairment**----- this is an inability to hear properly hence it prevents a person from total hearing

**Learners with hearing impairment**---- these are learners who do not necessarily benefit from their sense of hearing and use of ordinary speech but benefit from amplified speech and sign language. They include deaf learners and hard of hearing learners.

**Inclusive education**----- provision of education to children, both the abled and disabled in the same environment.

**Regular or mainstream class**---- this is an ordinary class which does not have specialized systems to cater for children’s individual specialized needs.

# CHAPTER TWO

# REVIEW OF RELATED LITERATURE

This chapter provided a review of the available literature that was considered to be of relevance to the topic Challenges in teaching secondary school students with hearing impairment in inclusive classes in Kariba. Mashonaland West Zimbabwe. This was done in order to place the investigation within the context of similar surveys thereby enriching it as well as proving justification for it. This Chapter was organized under the following subheadings.

* Related Studies
* Professional competence
* Organisational and administrative support
* Teaching methodologies
* The inclusive environment
* Teaching and learning resources

# Related Studies

A survey by the department of social development and department for women in South Africa (2012) indicated that most of the children staying in registered homes were reported to have some form of disability. As a result children, with certain disabilities were prone to some kind of abuse, that is mentally and physically. This means that disability awareness programs needed to be recognized as a critical component of social cohesion. Zeroing on the disability under study, researchers were carried out internationally and locally in a bid to try and counteract the predicaments in which these children face in their endeavor to obtain an education.

To substantiate the fact that children with hearing impairment did exist, a research carried out by Hassanzadeh ,Kamal, Parhoon and Movallali (2014) indicated that basing on statistical provisions by the Center for Disability in the United States of America, hearing impairment was the most prevalent impairment at birth. This kind of disability caused remarkable malfunctioning which in turn affected academic performance (Parhoon, 2013). In another research, a conclusion was reached by El-Zraigat (2013) that students with hearing impairment in Jordan exhibited needs on communication, audio logical rehabilitation and academic learning styles. The results of the same study revealed that need assessment of the student with hearing impairment facilitated the planning and evaluation of their academic training needs. As a result, a correct perception of their condition and efforts made to prepare for their acceptance was crucial

It was fundamental to design a curriculum for these children as one of the efforts to accept them in a regular classroom, however a research carried out by Mapholisa and Tshabalala (2010) observed that the curriculum in Zimbabwean schools was designed for students without disabilities. This observation pointed to the greatest hindrance of teaching students with hearing impairment in an inclusive environment. Looking at the characteristic of a curriculum, as pointed out by Beveridge (2015), the aims and objectives in the Zimbabwean curriculum did not accommodate students with hearing impairment. The methods to be employed by the teacher were designed for students without any hearing impairment.

This has been substantiated by a research carried out in Iran which concluded that hearing impaired children needed special services which should be offered to them by well-trained professionals and schools fitted with equipment to meet their unique characteristics (Hasanzadeh et al., 2014). For instance, a personalized curriculum that would be consistent with their special requirements Johnson and Seaton (2011). The same study established that the resources and opportunities did not cater for students with hearing impairment. Therefore the curriculum became the greatest impediment in the hearing of students with hearing impairment in an inclusive class.

Lack of individualized special needs resources in schools militated against their full inclusion. On a similar note Chimhenga and Mpofu (2013) carried out a research on the challenges faced by hearing impaired in their learning and their observation as put forward by Bagree and Myers (2011) that most schools that enrolled students with hearing impairment did not cater for their special needs. As a result they experienced problems in their learning resulting in low grades.

The study revealed that students with hearing impairment had severe challenges in the learning process. Doorn (2010) postulated that hearing loss created problems in how the individual expressed and received language in turn causing communicative and educational problems. Woltres, Knoors, Cillecen and Verhoeven (2011) propounded that students with hearing impairment had severe language deficits when compared with their hearing counterparts. In order to redress this situation Houston and Perigoe (2010) suggested that competent and skilled professionals needed to deal with them to improve their receptive language.

In order to make a headway start in inclusive education there was need for proper communication to be addressed by the curriculum designers such as sign language in all schools for inclusion to hold water if meaningful learning was to be achieved in the communication between the teacher and the learner. Oral communication forms the basis of communication in most regular schools. Depending on the degree of impairment, students with hearing impairment needed individual attention on that aspect of communication. Unfortunately the present curriculum does not give room for such individual differences making it very difficult if not impossible for students with hearing impairment to be accommodated in an inclusive learning situation.

In the light of the above, Riessser (2012) argued that teachers taught the same thing because there was no individual educational programme designed for children with hearing impairment. The need to revamp the curriculum was also echoed by UNESCO (1980) in its recommendations that the extent to which the curriculum should be modified was great if all the children with disabilities needs were to be catered for. The new curriculum to be designed needed to cater for all the aspects needed for meaningful learning to take place in an inclusive classroom where there are hearing impaired students. Hall, Oyer and Haas (2001) cited in Doorn (2010) proposed that educators, when designing their programmes, needed to consider the short and long term effects of how hearing loss impaired a person’s ability to understand spoken language .

Another obstacle that may be besetting the teaching and learning of children with hearing impairment was teacher competence. Onu, Eskay, Ugwuanyi, Igbo and Obio (2012) carried out a research in Nigeria intended to assess the attributes of teacher preparation for teaching student with hearing impairment. They concluded that for children with hearing impairment to benefit from the inclusive setting teachers needed to attend regular training workshops and conferences to be kept abreast with what was on the ground in terms of the state of art in pedagogical trends in special education. From the above observations it could be concluded that serious considerations should be made for students with hearing impairment in the inclusive classes if they are to be meaningfully mainstreamed.

# Professional Competence

Teachers are seen and regarded as the most vital resource in the education industry. They are equally considered as the pivot of the educational process and as such, teaching competence prove therefore to be of paramount importance in ensuring the smooth delivery of lessons to children with hearing impairment. The teacher is an indispensable factor in as far as the education of all nations, the quality of the education therefore hinges on the quality of teachers that are produced. As defined by professionals, teacher education or production includes all the arrangements and strategies which results in the provision of those person who will later function as teachers. Chakuchichi (2013), alluded that these ones, must as such have been academically and professionally prepared for the job of talking and chalking.

These should be concerned and determined to take up the challenges of providing, motivating and caring for the children with dedication, determination, discipline and zest. What it therefore entailed is the fact that without well trained and committed teachers it was impossible to effectively deliver meaningful teaching and learning of the pupils with hearing impairment. Smith (2010) went further when he asserted that production of these teachers was basically to meet national goals, however competences were even more urgent in the area of teacher production for teaching of special needs students.

This situation is typical of the Zimbabwean situation where the curriculum in teacher training institutions is designed to produce teachers who can only function in normal schools where there are no students with hearing impairments, or any other form of impairment. A study carried out in Nigeria (2012) concluded that, teaching special needs students, posed a challenge in the area of teacher preparation and called for urgent intervention. Judging by the pace at which inclusive education was gathering momentum in Zimbabwe, teacher education for special needs children was even more urgent. According to Onu, Eskay, Ugwuanyi and Obio (2012) the challenge was then to produce teachers who would take cognizance of all students’ aspirations and abilities while providing appropriate modified curricula to suit the needs of these special learners who in most cases may be having learning difficulties and other learning problems not visible.

The research earlier mentioned also revealed that basic requirements and competencies for teachers, whose students have special needs, have to be above the general training and skills required of the competences required of the teacher. In order for the students with hearing impairments or any form of impairment. This ranges from knowledge or specialization on hearing impairment to the ability to acquire goals and objectives of the individual educational programs desired. According to Martin (2010), the teacher also needed to demonstrate effective and positive interpersonal skills with students. Hearing impairments can be as a result of a number of factors thereby creating varying degrees of impairments that is from mild to severe. Some students are born without hearing and some others lose the ability during the course of their growth.

When teaching students with hearing impairment, reference were made to students who have lost their ability to hear or were born without hearing at all. Hearing loss is said to be devastating as purported by Marscharck and Knoors (2015) that since the individual is shut of communication with the world except when special interventions are employed to ensure that individuals learn sign or speech in order to be reckoned in the world. Furthermore, students need auditory training, lip reading and speech correction to enable them to be able to communicate their thoughts and feelings. The above observation therefore created the necessity for the teacher of hearing impaired students to acquire the basic skills to open up communication channels for the students. As earlier said, hearing impairments vary in degrees from mild to severe.

It now entailed the teacher to have the competence and professional training to assess the degree of impairment, design suitable programmes for various students and implement the programmes. The situation in developed countries is different as noted by Chireshe (2013). There were various programmed strategies employed in the developed world in working with the hearing impaired students which enable them to integrate into the regular classroom. However, the question was the extent to which regular teachers possessed the competence or professional training to implement the programmes designed to teach children with hearing impairment. Without the above prerequisites for integration of students with hearing impairments into the regular classroom, the inclusion could end up being only physical without much benefit to the student.

It was important to note that disability was reality that we have to come to terms with. WHO and World Bank (2011) postulated that globally an estimated 15% of the world’s population had moderate and severe disability. In this regard the lack of well-trained and supported teachers impacted on enrolment, participation and achievement of all children. Children with hearing impairment were not spared in this percentage as a result, teachers needed to be supported to take the responsibility to take up these children. However, the situation unfolding was that teachers were generally not well trained and supported to take this group of children. The Global Campaign for Education and Education International (2012) argued that high quality education required the recruitment of teachers who were well trained, supported and managed. It would be difficult to gainfully include students with hearing impairment in an inclusive class without a well prepared and supported professionals.

Children with disability remained one of the main groups being excluded from quality education, the hearing impaired was amongst this group. Hearing impairment is recognized as one of the least recognized yet the most potent, the document went further to explain that governments needed to develop national plans to extend inclusive education including detailed targets, strategies for improving access and learning achievement and comprehensive plans for providing financing and training teachers (EFA Global Monitoring Report, 2010). Teachers played an important role in the life of the hard of hearing and deaf children and had tremendous impact on their learning to such an extent that governments needed to budget specifically for the training and provision of quality teachers who would take charge of them. It was only a competent teacher of the hearing impaired who could understand the impact that the hearing disability impacted on the cognitive, physical, emotional social and communication development of an individual and created opportunities that promoted support for the developments of such students.

In a research study done by the University of Nigeria, the researcher came up with the following observations which have some similarities with the Zimbabwe situation.

* Teachers may not be aware that beyond that beyond classroom integration these students with special needs may require further relationships with teachers and peers that is all class activities, extra curricula activities, exposure to the role model for learning of social skills.
* Teacher needs to attend refresher courses, seminars and workshops so as to learn to identify assess and provide services for learning impaired students.
* There is need for provision of resource rooms and special teacher to assist regular class teachers.
* Current regular teacher training circular needs modification to professionals equipped to train and provide specialised services.

To emphasise the importance of teacher’s training for hearing impairment students, Mafa (2012) points out that if public school teacher of the twenty first century are to be prepared for the increasingly diverse needs of students, adequate preparations must be the highest priority that focuses teacher’s training institutions and what they do.

# Structural and Organisational Support

The success of inclusive education systems stems from the organization of the education system at the different levels that is national, provincial, district and school level. According to Hallahan, Kauffman and Pullen (2015) the philosophical rationale of inclusion came from the principles of Normalisation. Normalisation dictated that both the means and ends of education for people with hearing impairment should be as normal as possible. Some researches concurred when they asserted that the placement of a child in an ordinary classroom is synonymous with full inclusion. This meant that the child would be a bonafide member of the regular school system and had all his/ her education in an ordinary classroom. The government of Zimbabwe responded to this call for the need to integrate students with special needs in the regular school system by coming up with an Education Act (1996).

The act states that every child has the right to a school education. In section 4, subsection 2 it is stated that no child in Zimbabwe shall be refused admission to any school on the grounds of race, tribe, color, religion, creed, and place of origin, political opinion or the social status of his parents. This general act covered those children with disability within the ministry of education. A department which provided psychological services also catered for those children with special needs including the hearing impairments. Considering all that is required to facilitate effective learning by children with hearing impairments a department specifically for children with special needs like hearing impairments would be more effective. Although there are a number of policy guidelines on the range and form of special education provision on offer, very little was done to ensure that these are followed as observed by Chakuchichi (2013) in their assertion that one way for Zimbabwe was to go beyond mere policy statements and entrusted laws which related directly to special education. Lack of clear formulated and understood policies were evident as we went down the administrative structure of the education system.

Research studies have revealed that most schools in Zimbabwe did not have their own forms of policy interpretations that guided their services provision on special education. Mission statements in those schools did not reflect the institutions endeavors to accommodate students with disabilities and hearing impairments in particular. Chakuchichi (2013) observed that collaboration between parents and professional was equally important for facilitation of the learning of children with hearing problems. The Ministry of Education Development Analysis (1994) laid emphasis on strengthening the community’s capacity and role in planning and managing through School development committees.

The community’s collaborative partnership with those SDCs needed to be fully manipulated so as to address some of the issues on inclusion of students with hearing impairment in the regular school system. Beveridge (2015) advocated for a collaboration model he termed empowerment model. The parent in this model was regarded as a consumer and the professional recognizes the family as a system or asocial network. The parent was very important and had to have to be incorporated in a favorable way. Wolferndale (2012) cited two groups of cooperation depending on whether the direction of influence is from parents to school or from school to home. In this kind of cooperation interest, dedication and innovativeness of both the parent teacher was very important.

This collaboration between parents and professionals did not only benefit the learning processes through provision of material resources but also served to accomplish philosophical rationale of inclusive education. Northern and Downs (2015) alluded to this in their assertion that the deaf learn appropriate behaviors only when they were deliberately sequenced into the curriculum since most social skills, moral and behavior were transmitted through communication. Hardman et al (2015), concurred in their observation that Hearing impairment imposed limitations on the individual’s ability to acquire social skills, daily living skills, peer interaction, self-concept, grooming, toileting, dressing etc. The parent will get expert advice from the professional regarding the student’s life beyond the classroom

Hearing aids are a pre-requisite for those with hearing between 40-45 decibels, psychologist concurred by stating that hearing aids are used by the partially impaired. Children who cannot hear anything as loud as 90 decibels require special training and such as sign language (Beveridge, 2012). From the above observation, it became clear that assessment of impairment was required in any regular class so as to determine those children who needed assistance in the form of hearing aids and training in sign language. Given the prevailing economic environment, very few Zimbabweans especially in remote rural setups could afford to buy learning aids. Provision of teaching and learning materials in most regular schools in Zimbabwe is limited to text books and basic stationery. Infrastructural development of schools has been transferred to the School Development Committees (SDCs).

The organizational and structural setup of the education system does not give anyone the responsibility to make provisions of such items as hearing aids. Extreme cases of impairment compels the use of sign language. Both the teacher and the learner need to acquire this language before meaningful teaching and learning can take place. Just like in the provision of materials and resources, there are no structures in place to make both the teacher and learner to acquire the sign language.

The Zimbabwean colonial legacy of pre 1980 left behind a philosophy of oralism. This has been the mode of communication making inclusive education impossible to those students with hearing impairment. The state of the present day regular school teacher could be summed up by Hallalan and Kufman and Pullen (2015) in their assertion that, the current demands are overwhelming, not only are they being asked to do more than ever with regard to curriculum content, but they are faced with more and more students who need special education but who have a host of other problems.

To counteract this problem of special teacher for the hearing impairment, some schools have created special units where specialist teachers taught students with hearing impairment. These students are integrated into other students during break time, play time, lunches, sports and craft and other social activities. Chimedza (1998) cited in Mafa (2012) observed that in some regular schools, deaf students were taught in a self-contained classroom by a teacher of deaf students. They may be integrated in regular classes for some subjects like Mathematics, Art, Craft, Physical Education and Sports. Students learning under such environments may benefit academically, but due to the limitations of this type of integration they were disadvantaged greatly as noted by Hallahan and Kauffman (2012) in their assertion that in an inclusive classroom situation, the students felt less physically and socially isolated from other students and may have access to certain academic and vocational opportunities. Practices on inclusive education can differ depending on the needs of the school and students.

However, some practices offered a variety of variants which were more inclusive for example, a regular class with support. According to Adoyo (2013), some of the variants made it possible for the students to achieve, social, curricular or physiological integration which others only offer limited integration such as physical and administrative type.

In the concept of inclusive education the head teacher is seen as playing a crucial role as he or she is considered as the key factor in how effective a school runs. Cooperative head teachers helped in the establishment of an atmosphere of acceptance of students with special needs in the school. They supported the inclusion of children with hearing impairment by supporting the roles of support services professionals both administratively and in budgetary lines. In order for a student with hearing impairment to be fully included a lot of considerations must be made by administrators such as raising revenue to support the needs of these pupils and also considering the teacher pupil ratio in the classes where children with hearing impairment were placed (Chireshe, 2011).

Most instructional supervisors offered little or no help on the teaching of children with hearing impairment. Most of the heads would have graduated way before the concept of inclusion was put on the radar (Mafa, 2013). As have been said the concept of including pupils with hearing impairment depended largely on the school administrator’s role, the financial demands and technical expertise demanded the head teacher to be actively involved. Schools found it difficult to meet their expectations and many of these problems could be tracked back to poor administration.

# Teaching and Learning Resources

All hard of hearing and deaf children had the potential to attain and achieve as much as other children with the same cognitive development if the necessary resources are availed. Chireshe (2011) in his study revealed that lack of resources was a major setback to full inclusion of students with hearing impairment. Sepel (1999) quoted in Gudyanga et al. (2014) concurred to the above statement when he said that inclusive education of children with hearing impairment was hampered by lack of resources needed to meet the individualized needs of such children. It can be noted that the provision of teaching and learning resources are important if meaningful inclusion is to be attained in regular classroom

Instructional materials are the different teaching apparatus which a classroom teacher employed to facilitate the teaching and learning process for the achievements of stated objective. Provision of these materials is very much important (Mapholisa & Tshabalala, 2013). Research has indicated that the challenge of inclusion without support was that it could amount to children being dumped in mainstream classes. Some scholars like Chakuchichi (2013) have proposed that this type of inclusion where resources are not availed was tantamount to children with disabilities being physically present in classrooms but eventually gaining nothing in the teaching and learning process.

Research has indicated that in developed countries like the USA, the use of advanced materials such as the formulated module has produced impressing results to learners with hearing impairment. The educators wore a microphone that amplified the voice through speakers to enhance the learning ability of these children. The provision of these learning devices made it possible for a student with hearing impairment to be mainstreamed into the general education classroom. In support to the above Booth and Ainscow (2011), said the availability of instructional materials, audio visual aids with regards to classroom management and organization of charts and pictures enhanced faster conceptualization of what was taught.

There were gaps which needed to be filled in relation to resource availability in the mainstream school for meaningful inclusion of children with hearing impairment. The Global campaign for education and education international (2012) went further to elaborate that the gaps included assistive devices and learning equipment. Teaching resources both human and material formed a greater part of the gap which needed to be filled. The curriculum for regular classes did not demand so much in terms of resources both human and material. However, the situation became very much different in an inclusive class where adaptations or interventions were needed to mitigate the shortcomings of hearing impairment

Teachers had limited access to additional resources as these resources are scarce. One of the most basic requirements of teaching children is the classroom itself. Most regular schools provided classrooms which were not very suitable for the teaching and learning of children with hearing impairment. This observation was made way back at the Salamanca World Conference in 1994 when they proposed that infrastructure like classrooms with wide low windows and acoustically treated rooms to cater for students with profound hearing impairment to use in their learning was not enough. The importance of suitable classrooms were also echoed by Booth and Ainscow (2011) when he suggested that the need for modifications in resource rooms and ordinary classrooms should not be overemphasized.

The noisier the environment is, the more likely it is that undesired noises would be amplified to the detriment of more important noise such as the teacher’s voice. The rooms needed to be acoustically treated with carpets and double gazed windows and sound proof doors so as to minimize reverberations. The classrooms in most schools is far from getting anywhere near the above descriptions. The regular classrooms are not suitable for children with hearing impairment. It is almost impossible to talk about acoustic treatment in a classroom where the floor is heavily pot holed with no window panes and doors. The situation was summed up by Adoyo et al. (2012) in his assertion that inclusion would not work unless the regular classroom changed to accommodate all learners and in the process desirable services be were offered to all students with or without disabilities.

Some students with hearing impairment have some residual hearing which can be manipulated to facilitate oral communication. If the residual hearing is amplified through hearing aids students could exercise oral communication. Beveridge (2012) posited the fact that hearing aids were a pre requisite for students with 40-50 decibels. The above assertion made hearing aids a very important intervention tool in the learning of students with hearing impairment in an inclusive class. However the availability of these hearing aids in most schools was limited because of economic reasons. Considering the importance of these aids schools needed to create the capacity to provide these to those students who needed them just like other resources such as text books and stationery. In Nigeria a research published by the international journal of scientific and technology research (2013) revealed that the provision of hearing aids and earphones to hard of hearing students in regular classroom was one of the strategies of copying with hearing impairment.

A study carried out on factors influencing performance of deaf students in Mathematics in Kenya observed that children who were deaf required educational resources such as speech training, note takers for them to learn effectively. Those hard of hearing required hearing aids however as have been said earlier on. These hearing aids are effective in amplifying the residual hearing they had a problem of picking up environmental noises. The interference by these environmental noises made it difficult for the student to pick out the required noises such as the teacher’s voice Booth and Ainscow (2011). In an effort to counteract this problem the, the Ministry of Education in Singapore (2010) carried a pilot project to educate learners with hearing impairment in regular schools where teachers wore a small microphone linked to an FM transmitter device.

The device lowered the sign to noise ratio so that the students with hearing impairment could distinguish the teachers’ voice from environmental interference. Considering the level of resource provision in our schools, this kind of technological intervention would be too astronomical for most schools. The Itinerant Connection (2010) proposed the interpretation of sign language by sign language interpreters so as to bridge the communication gap between the hearing impaired and the teacher and other non-hearing impaired peers within the class. Visual and tactile aids could be possibly used in the classroom to reinforce understanding of concepts in an inclusive class. Myers and Bagree (2011) suggested that digital hearing aids, cochlear implants, newborn screening and well-functioning habilitative intervention made it possible for a person hard of hearing to be mainstreamed into the general education.

Availing technological devices such as an amplification system and caption services was important so as to boost the hearing levels of the learners with hearing impairment. Students with hearing impairment could boost their learning through the sense of vision, and as such, teachers needed to take advantage of this capability and provide such materials as charts and displays to enhance faster grasping of the concept taught. The use of technological advancement to assist students with hearing impairment was also advocated for by Sharilyn (2012). Some theorist suggested the use of the chalkboard, captioned films videos and discs in the classroom. The availability of instructional materials and utilization of audio visual aids with regard to classroom management and organization of charts and pictures enhanced faster conceptualization of concepts.

In a regular school system, at secondary level, concepts so abstract could be taught with minimal use of media since communication between the teacher and the student has no interface. The situation became different when there were children with hearing impairment. Illustrative pictures and charts were required to supplement the poor learning capacity. The introduction of computers in the regular school could be of great help in the inclusive class. All the above mentioned material could be of little assistance where human resources were not available. Although teachers in the regular schools were prepared to undergo in service training to enable them to work with the hearing impaired, specialist like audiologists and sign language interpreters needed to be provided.

Teachers needed resources to produce teaching aids and differentiate instruction as required by each student. School buildings in most Zimbabwean rural schools posed challenges to the teaching of hearing impaired children in inclusive settings. A research carried out by Mafa (2014) made mention of the absence of resources in mainstream schools. The same research underscored the fact that without suitable facilities and adequate resources it would be impossible to fully implement the concept of inclusion.

# Intervention Strategies

Since most schools in Zimbabwe were not fully fledged inclusive schools, the regular or mainstream class was confronted with the reality of having learners with hearing impairment, moderate or mild as a result the respective schools ought to adapt and modify their teaching and learning methodologies to ensure they met each individual learner’s educational need. According to Chakuchichi (2013), true inclusive education required collaborative teaching to plan for individual student’s daily schedules and collaborative instruction and to incorporate special education services and support into the classroom. It did not mean that when students with special needs were placed in regular classes they do not receive specialized instruction.

From the above assertion curriculum adaptation was one of the most important issues regarding successful inclusion of learners with various disabilities in the in inclusive settings. Curriculum adaptations were permissible changes in educational environments that allowed the learner equal opportunity to obtain access, results and benefits from the education system (Kaap, 2013). Curriculum adaptations do not change the content to be taught but structural that is the presentation, timing and environments. These adaptations would create the surface area for the formulation of suitable teaching methodologies to cater for different specific disabilities.

In the teaching of students with hearing impairment, methods to be used are determined by the level of impairment or hearing loss. The type of loss can also determine the method to be used in the teaching of such students, for example a student with pre- lingual hearing loss faced more challenges than a student with post – lingual loss (Mark, 2011). A student with bilateral hearing loss has more challenges than one with unilateral hearing loss. Information on types and levels of hearing can only be acquired after testing by speech language pathologists at hospitals and special schools (Ministry of Education, 2011). There are no definite teaching methods but the teacher has to use his or her own discretion in collaboration with the student and family for support on daily basis on the progress and problems faced by the student.

Whatever method used, students with hearing impairment need specific environments to facilitate effective learning. Martins (2010) suggested the following key considerations:

* Ensure the child has optimal hearing and listening in the classroom.
* There must be minimum distance between the teacher and the child to facilitate lip reading.
* Ensure there is good lighting to reinforce clear sight of visual aids
* Pronunciation should not be exaggerated
* Use as much visual information as possible to reinforce auditory information provided.
* Keep the environment free from noise to keep from interfering with the listening devices.

Since these hearing impaired children would be learning in an inclusive environment, adaptations made to accommodate them cannot be termed teaching methods rather intervention strategies (Ministry of Education, 2011). Some of these strategies can take advantage of the inclusive nature of the classroom where hearing students can be manipulated to facilitate the learning of the hearing impaired. Students with unilateral hearing loss can be made to sit next to hearing students. The sitting arrangement should be made in such a way that the hearing student is adjacent to the functional ear. The arrangement allows the hearing impaired student to participate in group activities like any other student. The same could be done even to students with bilateral hearing loss but have a high level of residual hearing.

If such students are strategically positioned in the classroom, it would take only a specialist to identify them since they would be assisted by hearing students in the event of a shortfall in their hearing ability. Chimedza and Petersen (2003) quoted in Mafa (2012) supported this assertion when they said some of these students would need preferential seating arrangements. Basic teaching methods in most schools were speech instruction therefore intervention strategies should have been designed in such a way that the students with hearing impairment benefited from this speech instruction.

Most students who have some residual hearing can benefit from well-planned interventions strategies. In the regular secondary schools, there could be two groups of hearing impaired children, those with moderate hearing loss, their residual hearing can be amplified through the use of hearing aids so that they benefit from speech instruction and those with severe impairment who did not wear assistive devices (Itinerant Connection, 2010). Those with hearing aids can participate in class activities such as debates and or group discussions since the amplification process brought their hearing almost to the normal level. The teacher’s may be limited to controlling environmental noise so that it did not interfere with the hearing devices (Berke, 2010). However, several researchers noted that schools have not extensively addressed environmental noise as such classroom acoustics remained a problem.

Having created a conducive classroom atmosphere for the hearing impaired children, another important aspect is social support and budding. Depending on the level of impairment, the student’s ability to socialize can be affected by their hearing impairment. Extreme cases of impairment where sign language has to be used can lead to self-isolation. Therefore the teacher needs to help the student to feel more a part of the inclusive classroom. The teacher can achieve this by identifying students with friends (budding). The importance of this process is substantiated by Booth and Anscow (2011) when they found that in the Netherlands that many students with hearing impairment who had been included in regular classes wanted to go back to their special schools after suffering stigmatization and isolation.

There were no specific teaching methods for an inclusive class with students with hearing impairment but only intervention strategies. According to Chireshe (2011) for most teachers inclusive classes may be synonymous to unchartered waters teachers may not be confident to experiment with new methods. Therefore it can be conclusively noted that teaching an inclusive class challenged the teacher to modify the existing methods so as to accommodate the students with hearing impairment. Modification of already existing teaching strategies can also benefit even the hearing students. A student who has a hearing impairment had vision as the only primary means of receiving information. Basic intervention strategies took advantage of this fact, hence most of these were founded on the student’s visionary capacity.

Teachers are encouraged to clearly structure the teaching learning session with key words written on the chalkboard. Where possible teachers needed to provide handouts linked to each activity to reinforce concepts. Visual representation of concepts could also be provided in the form of charts or displays to reinforce ideas. Wherever possible notices and announcements are to be given in written form. In a study carried out by Adoyo et al (2013) it was revealed that teachers should use latest techniques and materials for instruction when working with students with hearing impairment. More emphasis should be laid on showing the practical things to students so that they could easily understood the concepts. Teachers should make diagrams on the chalkboard when explain concepts.

To give advantage to the students to lip read the teacher should always face the students when speaking. Facial expressions gestures and other forms of body language could go a long way in assisting communication with the students. Stinson and Whitmire (2010) suggested that the arrangement of the classroom should be that students with hearing impairment can see facial expressions, read lips and assess body language of the teacher. Severe cases of impairment resulting in deafness would require that the teacher mastered the sign language together with the students.

At this stage of inclusive education in Zimbabwe very few teachers have mastered the sign language. Where the teacher had not mastered the sign language an interpreter in the classroom could help the deaf students communicate with the teacher. Although the later was another form of intervention strategy, it’s out of reach of many schools many schools which had a shortage of even the regular teachers.

# The Inclusive Environment

Inclusive education is a process of addressing and responding to the diversity of needs of all learners through increasing participation in learning. It can be noted that it is a dynamic and continuing process which facilitated the presence, participation and achievement of all students in the education system (Leonard Cheshire Disability & Inclusive Development Centre, 2014). It can be concluded that the goals of this concept are to change attitudes, overcome prejudice and increase frequency of contact and to prepare for life in the society. Mafa (2012) concurred when he said that the concept of inclusive education could be defined as the process of integrating students with special needs into less restrictive environment as required by the united nations declarations that gave all students the right to education.

It can be concluded that inclusive education was meant to remove barriers to education for children with disabilities. The ministry of education sport and culture document (2011) described inclusive education as an educational reform aimed at redesigning the general education structures to accommodate both able bodied and learners with disabilities. Hearing impairment was one of the most known disability but least understood. It should be known that the inclusion of learners with this kind of disability was one of the most debatable and complicated issue. As a result their inclusion in regular classes was also an important matter which needed critical considerations if these pupils were to enjoy their educational rights, as it fostered an attitude of unqualified acceptance for the student.

Informal observations, studies and debates have concluded that there needed to be a change in the manner in which special needs education was understood. Some scholars identified this shift and decided to explain it in paradigmatic shift. Clark, Dyson, Milward and Robson (2013) termed the shift as the psycho medical paradigm shift. In this shift the student’s needs were determined by what was on offer at the school. A number of characteristics were observed including the level of hearing loss and effects on the child’s functional capacity. The educators viewed these characteristics as the one responsible for the hearing impaired child’s inability to function properly in a mainstream class. Therefore some form of remedial interventions had to be provided depending on the level of hearing impairment.

In most cases, this would result in the watering down of the curriculum. In this shift the child had to alter to suit the organizational and structural set up of the regular class. Some scholars described this process as education being delivered in the context of special forms of support and taking place in special settings. In the second shift the disability of the child was acknowledged as being real and significant. The problems the child would face in functioning well in the inclusive environment were not limited to the child but were also looked at as the failure by the school to respond to the student needs. The paradigm is best described by Dyson and Millward (2013) observed that since it sets high store by the value of social integration, non-segregation and participation in a common curriculum as an entitlement for all children, it followed that the appropriate response to educational failure was to interrogate and reform the characteristics of schools rather than students.

In this paradigm shift, the student’s inability to function properly in a regular class was viewed as the school and all its components having failed to respond to with sufficient insight and flexibility. In the light of the above schools needed to adjust their environment to suit the needs of students with hearing impairment. Berke (2010) had the following suggestions on the best environment for a student with hearing impairment; the classrooms must not have background noise as this would confuse those who are hard of hearing. Booth & Ainscow (2012) concurred when they said in an environment which was unsympathetic in acoustic terms, the hearing aids would pick up and amplify every detail of sound, irrespective of its importance. This means that classrooms that are excessively noisy were not appropriate for learners with hearing impairment.

Unnecessary vibrations in the classroom environment disturbed students with hearing impairment. It has generally been observed that audio saturated worlds tended to frustrate students with hearing impairment. Research has also shown that classroom acoustics created problems for students with hearing impairment. The student may need attention to vocabulary and speech development as well as auditory training which may require the services of a specialist teacher or a language pathologist to assist the students or provide in service training to the regular teacher. Therefore one of the greatest needs to be provided by the classroom environment was support to sustain social, emotional and academic achievement.

One of the requirements of an inclusive environment was the minimal distance between the teacher and the student so as to facilitate lip reading (Chimoyo et al., 2014). The teacher has to face the student and should be close to the student to enable the students to benefit from the teachers’ voice and lip read if they are able. Martins (2010) argued that where there are low teacher pupil ratio there is need for the teacher to use the cow horn seating arrangements. This would greatly benefit learners with hearing impairment especially those who can lip read because they would be able to observe everything happening in the classroom. Students need to respect one another’s differences since learning followed orders of sensation and in cases of the hearing impaired the inability to hear altered all other levels of sensation hence may learn concepts at a fairly low or delayed pace. The academic performance of children with hearing impairment has to be understood in the context of their impairment.

Some factors related to the impairment to be considered were causes of hearing impairment, anatomical location of hearing impairment, the degree of hearing loss, personality and socio economic background of the student. After having analyzed such factors the teacher has to come up with an appropriate corrective program which formed the basis for the student’s greatest need. The most serious problem imposed by hearing impairment was not hearing parse but the fact that it impaired the acquisition of language via sound Meadow (1980) cited in the Mafa (2013). Lack of vocal auditory skills could lead to stunted growth in social skills, thereby limiting the student’s participation in non-academic activities like clubs and sports. This could be a barrier to deeper friendship with hearing peers.

The teacher therefore had to create an environment within the classroom which facilitates social interaction especially with hearing peers. This could be achieved by cooperative learning where students would be put in small groups to promote interaction when making group discussions, assigning roles to every member of the group so that each member has a chance to participate.

# Summary of Literature Review

From the evidence gathered in literature review it was clear that the variables considered in this study which included the teaching methodology, teacher competency, teaching and learning resources, structural and organizational support and the inclusive environment could have an impact on the teaching and learning of secondary students with hearing impairment in an inclusive environment. The inclusive environment should be conducive if meaningful inclusion was to be attained. The teaching of these students demanded more than placing them in the regular classes. Teachers needed to be trained in how they handle such students since most of them were ill equipped when it came to issues pertaining to the hearing impaired children. Resource mobilization was also critical since most of the required assistive devices were very expensive and beyond the reach of many parents yet important for the children.

# CHAPTER THREE

# RESEARCH METHODOLOGY

This chapter outlines the research methodology used in this study. These includes the research design, population of the study, sample and sampling techniques, data collection instruments, reliability of instruments, data collection procedure and data analysis procedure.

# Research Design

The study utilized the descriptive design to study the challenges in teaching secondary school students with hearing impairment in an inclusive class. According to Borg and Gall (2010) descriptive research involved gathering data that described events from large groups of people hence allowing the researcher to access a wider variety of behaviors that could be studied naturally. According to Leedy and Armrod (2010) a descriptive survey do not only have the advantage of being used on relatively large samples but also allowed collection of detailed description of existing phenomenon with the intention to justify current conditions and to make more intelligent means of improving them.

# Population of the study

The population of the study referred to the entire group of individuals or objects of research (Babie, 2010). It is an aggregate of all that conforms to a given specification. The population of the study comprised 87 teachers from 5 secondary schools with children who had hearing impairment in Kariba District.

# Sample and Sampling Technique

Forty teachers were purposively chosen from all 5 secondary schools, seventeen females and twenty – three males. Although the method is considered judgmental its major strength lied on the fact that it gave great possibility for those considered crucial to the study to participate. The teachers were purposively chosen because the study needed to deal with teachers specifically handling children with hearing impairment in an in inclusive class.

# Research instruments

In this research data was collected using a questionnaire. Awoniyi, Aderati, Tayo (2011), described a questionnaire as a self-reporting system of evaluation. A self-structured three part close ended questionnaire was used. Section A contained questions soliciting information on demographic data. Section B had a five point scale of strongly agree contained questions which would state the extent to which the given information would be challenges to the teaching of children with hearing impairment. The last part of the questionnaire sought information on the adequacy of teaching materials.

# Validity of the Instruments

The instrument for data collection was validated using face and content validity. For face validity, the questionnaire was taken to the supervisor and experts in the Faculty of Education at Solusi University. They then checked to see if the questionnaire had been expertly constructed, necessary corrections and modifications were made.

# Reliability of Instruments

The reliability of the instrument was determined through the use of a pilot study conducted in two schools using ten teachers. The data collected was coded and reliability of the instrument determined using the Corbach’s Alpha reliability method. A reliability coefficient of 0. 877 was obtained.

# Procedure for Data Collection

The researcher obtained an introductory letter from Solusi University, Department of Graduate Studies in order to get permission to carry out her research from the responsible Ministry. Permission was also sought from the Provincial Education office to conduct the exercise in schools. The researcher then personally visited all the five schools which had children with hearing impairment and administered questionnaires.

# Data Analysis Procedure

Data analysis was made using descriptive statistics and factor analysis. A Statistical Package for Social Science (SPSS) was used. For question 1descriptive statistics was used and factor analysis was used for question 2.

Table 3.1 and Table 3.2 show the interpretation of scores for research questions 1 and 2

**Table 3.1: Interpretation of scores:** Teacher competence; Teaching methodology; Structural and Administrative Support; The inclusive environment.

|  |  |  |  |
| --- | --- | --- | --- |
| Scale | Response | Mean interval | Verbal interpretation |
| 5 | Strongly agree | 4.50-5 | Never a challenge |
| 4 | Agree | 3.50-4.49 | Rarely a challenge |
| 3 | Undecided | 2.50-3.49 | Sometimes a challenge |
| 2 | Disagree | 1.50-2.49 | Most of the time a challenge |
| 1 | Strongly Disagree | 1-1.49 | Highly a challenge |

**Table 3.2:** **Interpretation of Scores:** Teaching and learning resources

|  |  |  |  |
| --- | --- | --- | --- |
| Scale | Response | Mean interval | Verbal interpretation |
| 5 | Extremely adequate | 4.50-5 | Never a challenge |
| 4 | Very adequate | 3.50-4.49 | Rarely a challenge |
| 3 | Adequate | 2.50-3.49 | Sometimes a challenge |
| 2 | Not adequate | 1.50-2.49 | Most of the time a challenge |
| 1 | Extremely inadequate | 1-1.49 | Always a challenge |

# CHAPTER FOUR

# DATA PRESENTATION, ANALYSIS AND INTERPRETATION

This chapter presents the results obtained from the analysis of data on challenges in teaching students with hearing impairment in secondary schools in Kariba: Mashonaland West Zimbabwe. Data was analysed using the descriptive statistics and factor analysis. The results of the analysis were presented in line with the research questions

# Research Question One

**What were the challenges in the teaching of secondary school students with hearing impairment in an inclusive class in terms of:**

1. professional competence
2. organisational and administrative support
3. teaching methodologies
4. the inclusive environment
5. teaching and learning resources

For an item to be a challenge a threshold of 2.49 was used. This means that any mean 2.49 and less indicates that the factor is a challenge. Table 4.1 displayed results on professional competence. The findings indicated that the respondents agreed that they understood the impact of hearing loss with a mean of 4.025. The mean indicated that understanding the impact of hearing loss by teachers was never a challenge. The respondents were heterogeneous in their responses with standard deviation of 1.12061.The respondents indicated that using a variety of teaching skills was sometimes a challenge with a mean of 2.9500 and heterogeneous on the fact that they used a variety of teaching skills to accommodate children with hearing impairment.

**Table 4. 1: Professional Competence**

| **Item** | **Mean** | **Std. Deviation** |
| --- | --- | --- |
| 1. I understand the impact of hearing impairment in teaching and learning in an inclusive class | 4.0250 | 1.12061 |
| 2. I am experienced in the management of children with hearing impairment | 1.8750 | .96576 |
| 3. I am trained to teach hearing impaired children | 1.6000 | .92819 |
| 4. I delight in teaching children with hearing impairment | 1.8000 | .93918 |
| 6. I use a variety of teaching skills to accommodate pupils with hearing impairment | 2.9500 | 1.37654 |
| **Average** | **2.3375** | **.70860** |

In general the respondents indicated that professional competence was most of the time a challenge since they did not have any competence in handling children with hearing impairment with a mean of 2.3375. The respondents were homogeneous in their responses with a standard deviation of 0.7086.

From the above findings it can be noted as was purported by Mafa (2012) that teacher training was a pre requisite for a conducive learning environment of pupils with hearing impairment. Competent teachers helped to ensure that every child learns to his or her full potential hence entered the adult life well equipped. Teachers were therefore seen and regarded as integral in the implementation of inclusive education and were viewed as linchpins in the process hence needed the correct technical knowhow on how best to deal with these pupils. However the lack of well-prepared teachers impacted negatively on the learning of pupils with hearing impairment.

A research carried out by Chireshe (2013) affirmed that teacher training for mainstream teachers rarely prepared them for working in diverse classrooms and in particular did not equip them with the necessary arsenal needed to deal effectively with children with hearing impairment as a result dealing with special children was most of the time a challenge. In a research carried out in Uganda teachers expressed more uncertainty about their abilities than the abilities of the hearing impaired children. This is more or less the same with the findings of my research that a mean of 2, 95 indicated that methodology in dealing with hearing impairment was sometimes a challenge. As a result preparing and training of teachers was the first step in ensuring that inclusive education has become more effective and improving the effectiveness of the teacher in a regular class. It is therefore of paramount importance that the teachers given systematic and intensive training and access to ongoing training so that children with hearing impairment benefit.

On Table 4.2 the respondents disagreed to the fact that administrations provided human resources, financial resources, collaborated with the teachers, collaborated with the community in decision making, that there was a coordinated learning and support for students with hearing impairment, that the administration provided adequate resources for the teaching and learning of children with hearing impairment with a mean of 1. 7000; 1. 5000; 1.8000; 2.1500 and 1.6750 respectively. All the standard deviations are below one indicating that the responses were clustered around the means. This means that the respondents were in agreement about these items.

**Table 4. 2: Organisational and Structural Support**

| **Item** | **Mean** | **Std**. **Deviation** |
| --- | --- | --- |
| The administration at my school provides human resources to support the teaching and learning of children with hearing impairment | 1.7000 | .64847 |
| The administration at my school provides financial resources to support the teaching and learning of children with hearing impairment | 1.5000 | .64051 |
| The administration collaborates with the teachers for the success of the teaching of children with hearing impairment | 1.8500 | .76962 |
| The administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment | 2.1500 | .89299 |
| There is coordinated learning and support for students with hearing in my school | 1.6750 | .65584 |
| The administration provides ad equate teaching resources for the teaching of students with hearing impairment | 1.3750 | .49029 |
| **Average** | **1.7083** | .**43322** |

Since the objective of full inclusion was according to Hallahan and Kauffman (2012), to bring about change in the education system by identifying and bringing mitigations to barriers to the presence, participation and achievement of every learner Headmasters must be seen on the forefront of making necessary adjustments in school. However from this study an overall mean of 1.7083 indicated that organisational and structural support was most of the time a challenge and the standard deviation of 0.43322 indicated that the respondents were in agreement.

In order for a student with hearing impairment to be fully included a lot of considerations must be made by the administrators such as raising revenue to support the needs of these pupils. However most heads according to a research carried out by Mafa (2012) offered little or no help in as far the teaching and learning of these pupils were concerned. Jones (2013) advocated for cooperation, collaboration and information sharing between the administration, the teachers and the community for the success of the inclusion of children with hearing impairment in mainstream classes.

From Table 4.3 an average mean of 2.8393 indicated that teaching methodologies was sometime a challenge and a standard deviation of 0.53373 indicated that the respondents were in agreement on the item. Jones (2013), emphasised interaction in the classroom to allow pupils with hearing impairment to develop social skills. A mean of 2.300 shows that proper interaction between the hearing impaired and hearing pears was most of the time a challenge and heterogeneous in their responses with a standard deviation of 1.22370. A mean of 1.2750 shows that communicating in sign language was most of the time a challenge. A standard deviation of 0,45220 indicates homogeneity of responses.

**Table 4. 3: Teaching Methodologies**

|  |  |  |
| --- | --- | --- |
| **Item** | **Mean** | **Std. Deviation** |
| The seating arrangement of the pupils in my class enables easy learning for pupils with hearing impairment | 3.4250 | 1.19588 |
| I ensure proper interaction between myself and the hearing impaired students | 2.7000 | 1.26491 |
| I ensure proper interaction between the hearing impaired pupils and their hearing peers | 2.3000 | 1.22370 |
| I positioned myself properly while teaching in order to impact positively on the learning of the hearing impaired | 3.5500 | .95943 |
| I can communicate using sign language | 1.2750 | .45220 |
| I use a variety of teaching methods | 3.3750 | 1.14774 |
| I can extend my voice projection to accommodate pupils with hearing impairment | 3.2500 | 1.31559 |
| **Average** | **2.8393** | **.53373** |

From the Table 4.4 the respondents strongly disagreed that they were delighted in having the hearing impaired children in their classes with a mean of 1.4500 and their responses were homogeneous with a standard deviation of 0.84580. They also strongly disagreed that their classrooms were acoustically conditioned to control, absorb or carry sound with a mean of 1.2250 and homogeneous in their responses with a standard deviation of 0.57679. Generally a mean of 1.6500 indicated that the inclusive environment was most of the time a challenge and the respondents were homogeneous in their responses with a standard deviation of 0.62680. This affirmed the sentiments echoed by Mapholisa (2013) who attributed the environmental factor as an impediment to successful inclusion. Classrooms should be able to accommodate a student’s assistive technology, eventually the absence of acoustically conditioned classroom made it possible for the environment to become noisier and ended up forcing the assistive devices to amplify even the unnecessary noise

**Table 4.4: The Inclusive Environment**

| item | Mean | Std. Deviation |
| --- | --- | --- |
| My classrooms are acoustically conditioned/designed to control, absorb or carry sound | 1.2250 | .57679 |
| Varied media displays are available in my class | 2.2750 | 1.39574 |
| I am delighted in having the hearing impaired children in my class | 1.4500 | .84580 |
| **Average** | **1.6500** | **.62680** |

From Table 4.5 the respondents indicated that models were not adequate, reading materials were not adequate with a mean of 2.05 and 1.8750 respectively and homogeneous in their responses with a standard deviation of 0.93233 and 0.75744 respectively. They also indicated that sign language charts were not adequate with a mean of 1.8250 and homogeneous in their responses with a standard deviation of 0.44393. This means that these were most of the times a challenge. An average mean of 1.7562 indicated that the inadequacy of resources was most of the time a challenge. These findings were in line with what Chireshe (2012) observed when he said in his study that learning materials were the major setback and highly a challenge in the inclusion of children with hearing impairment. Coltart (2011) lamented that the absence of resources thwarted the positive move of inclusion.

**Table 4. 5: Teaching and Learning Resources**

|  |  |  |
| --- | --- | --- |
| **Item** | **Mean** | **Std. Deviation** |
| Reading materials | 1.8750 | .75744 |
| Hearing aids | 1.2750 | .45220 |
| Models | 2.0500 | .93233 |
| Sign language charts | 1.8250 | .87376 |
| **Average** | **1.7562** | **.44393** |

# Research Question Two

**What were the dimension of the challenges in the teaching of secondary school students with hearing impairment as extracted by factor analysis?**

The 26 items on the questionnaire were subjected to factor analysis in order to determine the underlying dimensions on the challenges of teaching secondary students with hearing impairment in an inclusive class. The results of the factor analysis were presented on tables 4.6 to 4.13. The tables shows six underlying factors responsible for the challenges in hearing impairment. The results of factor analysis indicated that six factors accounted for 75.131% of variance on the challenges in the teaching of students with hearing impairment in an inclusive class. This indicated that the researcher managed to capture 75.131% of what constituted the challenges. The factors were: 1. Professional Competence; 2. Administration; 3. Intervention Strategies; 4. Teaching Methods; 5. Collaboration; 6. Communication.

The KMO value of 0.537 indicated that the sample used for the study was adequate while the Bartlett’s Test of Sphericity was found to be significant to 0.000 an indication that there was inter correlation between the variables and that the various items on the questionnaire were capable to be grouped into dimensions hence the need to proceed to factor analysis.

**Table 4.6: KMO and Bartlett’s Test**

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .537 |
| --- | --- | --- |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 387.398 |
| Df | 171 |
| Sig. | .000 |

Table 4. 7 shows the communalities of the various items on the questionnaire. Communality is the proportion of common variance within a variable. The principal analysis worked on an initial assumption that all variance was common at 1.000. The range was from 0.739 to 0.780 an indicator that all items shown were reliable and valid. This indicated that the researcher managed to capture 75.131% of what constituted the challenges.

| **Table 4. 7: Communalities** | | |
| --- | --- | --- |
| **Items** | **Initial** | **Extraction** |
| I understand the impact of hearing impairment in teaching and learning in an inclusive class | 1.000 | .739 |
| I am experienced in the management of children with hearing impairment | 1.000 | .748 |
| I am trained to teach hearing impaired children | 1.000 | .769 |
| I delight in teaching children with hearing impairment | 1.000 | .784 |
| I have in service training in the teaching of children with hearing impairment | 1.000 | .776 |
| I the administration at my school provides human resources to support the teaching and learning of children with hearing impairment | 1.000 | .811 |
| The administration collaborates with the teachers for the success of the teaching of children with hearing impairment | 1.000 | .691 |
| The administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment | 1.000 | .487 |
| The administration provides adequate teaching resources for the teaching of students with hearing impairment | 1.000 | .673 |
| I ensure proper interaction between myself and the hearing impaired students | 1.000 | .742 |
| I ensure proper interaction between the hearing impaired pupils and their hearing peers | 1.000 | .677 |
| I positioned myself properly while teaching in order to impact positively on the learning of the hearing impaired | 1.000 | .822 |
| I can communicate using sign language | 1.000 | .871 |
| I use a variety of teaching methods | 1.000 | .828 |
| I can extend my voice projection to accommodate pupils with hearing impairment | 1.000 | .761 |
| Varied media displays are available in my class | 1.000 | .710 |
| I am delighted in having the hearing impaired children in my class | 1.000 | .768 |
| Models | 1.000 | .838 |
| Sign language charts | 1.000 | .780 |

From table 4.8, professional competence accounted for 23.280% variance in the .challenges in teaching secondary school students with hearing impairment in inclusive classes. The factor loading of the five items indicated that all the items belonged to the factor professional competence. The overall mean of 1.7000 indicated that lack of professional competence among the respondents was most of the time a challenge in dealing with students with hearing impairment in an inclusive class. A standard deviation 0.78185 affirmed that they were homogeneous.

The Global Campaign for Education International (2012) argued that in order to have high quality education teachers needed to be well trained and equipped to meet the diverse situations in their classrooms expertly. Teachers with low or no competence found it difficult to teach children with hearing impairment since they could hardly address critical issues in relation to this group of students. Kabugi (2013) asserted the importance of competent teachers in education delivery.

**Table 4. 8: Professional competence**

| **Items** | **Factor loading** | **Mean** | **Std. Deviation** |
| --- | --- | --- | --- |
| I am experienced in the management of children with hearing impairment | 0.846 | 1.8750 | .96576 |
| I am trained to teach hearing impaired children | 0.834 | 1.6000 | .92819 |
| I delight in teaching children with hearing impairment | 0.811 | 1.8000 | .93918 |
| I have in service training in the teaching of children with hearing impairment | 0.795 | 1.7750 | 1.04973 |
| I am delighted in having the hearing impaired children in my class | 0.738 | 1.4500 | .84580 |
| **Average** |  | **1.7000** | **.78185** |

**Variance accounted for = 23.280%**

Table 4.9 shows that Administration accounted for 16.801%1 variance. The factor loading of the five items indicated that all the items belonged to the factor Administration. An average mean of 1.8950 meant that the respondents indicated that the necessary assistance from the head teachers was most of the time a challenge. The respondents had a standard deviation of 0.62591 meaning they were homogeneous in their response

**Table 4. 9: Administrative support**

| **Items** | **Factor loading** | **Mean** | **Std. Deviation** |
| --- | --- | --- | --- |
| The administration collaborates with the teachers for the success of the teaching of children with hearing impairment | .791 | 1.8500 | .76962 |
| The administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment | .714 | 2.1500 | .89299 |
| The administration provides adequate teaching resources for the teaching of students with hearing impairment | .685 | 1.3750 | .49029 |
| Varied media displays are available in my class | .597 | 2.2750 | 1.39574 |
| Sign language charts | .574 | 1.8250 | .87376 |
| **Average** |  | **1.8950** | **.62591** |

**Variance accounted for 16.801**

The intervention strategies accounted for 13.210% of the varience in the teaching of hearing impaired according to table 4.10. An average mean of 2.9500 indicated that intervention strategies were sometimes a challenge. They were homogeneous in response with a standard deviation of 0.63851.

**Table 4.10: Intervention Strategies**

| **Items** |  | **Mean** | **Std. Deviation** |
| --- | --- | --- | --- |
| I ensure proper interaction between myself and the hearing impaired students | .792 | 2.7000 | 1.26491 |
| I ensure proper interaction between the hearing impaired pupils and their hearing peers | -714 | 2.3000 | 1.22370 |
| I positioned myself properly while teaching in order to impact positively on the learning of the hearing impaired | .697 | 3.5500 | .95943 |
| I can extend my voice projection to accommodate pupils with hearing impairment | .674 | 3.2500 | 1.31559 |
| **Average** |  | **2.9500** | **.63851** |

**Variance accounted for = 13.210%**

From the table 4.11 teaching methods accounted for 8.924% variance in the challenges of teaching children with hearing impairment. The factor loading indicated that the items belonged to the factor teaching methods. An average mean of 2.7125 indicated that teaching methods were sometimes a challenge. A standard deviation of 0.91208 showed that they were homogeneous in their responses.

**Table 4.11: Teaching Methods**

| **Item** | **Factor loading** | **Mean** | **Std. Deviation** |
| --- | --- | --- | --- |
| I use a variety of teaching methods | .825 | 3.3750 | 1.14774 |
| Models | .823 | 2.0500 | .93233 |
| **Average** |  | **2.7125** | **.91208** |

**Variance accounted for = 8.924%**

From table 4.12 collaboration accounted for 7.339% variance in the teaching of children with hearing impairment. The factor loading indicated that the two factors belonged to the factor resources. An average mean of 2.8625 was accounted for implying that collaboration was sometimes a challenge. The respondents were homogeneous in their response with a standard deviation of 0.76784.

**Table 4. 12: Collaboration**

| **Item** | **Factor loading** | **Mean** | **Std. Deviation** |
| --- | --- | --- | --- |
| I understand the impact of hearing impairment in teaching and learning in an inclusive class | .819 | 4.0250 | 1.12061 |
| The administration at my school provides human resources to support the teaching and learning of children with hearing impairment | .784 | 1.7000 | .64847 |
| **Average** |  | **2.8625** | **.76784** |

**Variance Accounted for = 7.339%**

The table 4.13 indicated a variance of 5.577% in the teaching of children with hearing impairment. The factor loading indicated that there was only one item in the factor communication. An average mean of 1.2750 showed that the respondents were unable to communicate in sign language as a result communication was most of the time a challenge. They were heterogeneous with a standard deviation of 0.45220.

**Table 4. 13: Communication**

| **Item** | **Factor loading** | **Mean** | **Std. Deviation** |
| --- | --- | --- | --- |
| I can communicate using sign language | .898 | 1.2750 | .45220 |
| **factor6** |  | **1.2750** | **.45220** |

**Variance Accounted for =5.577%**

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMMENDATION

This chapter gives the summary, conclusion and recommendations of the study as well as recommendations for further studies.

# Summary

The purpose of the study was to find out the challenges in teaching secondary school students with hearing impairment in inclusive classes in Kariba, Mashonaland West, Zimbabwe. The population of the study consisted of 8 secondary schools that had children with hearing impairment. Forty teachers who directly taught these children were purposively chosen. A self-constructed questionnaire of 26 items on a five point Likert scale was used to collect data.

The instrument was face and content validated by experts at Solusi University. The reliability of the questionnaire was determined through a pilot study that was conducted in 2 schools with a total of 10 respondents. The Cronbach Alpha reliability coefficient of 0.877 was obtained and as a result the items were reliable. The researcher personally administered the questionnaire to the respondents. The data collected were coded and analysed using the Statistical Packages for Social Sciences (SPSS) Version 16. Descriptive statistics was used for question 1 and for question two factor analysis was used.

The following were the findings

1. Professional competence, Organizational and structural support, the inclusive environment and teaching resources were most of the times challenges.
2. Factor analysis revealed that professional competence, administrative support, intervention strategies, teaching methods, collaboration and communication were the six factors extracted by factor loading.

# Conclusion

It is evident from the above that professional competence, structural and administrative support and teaching resources are the major challenges in the teaching of children with hearing impairment in inclusive classes in Kariba: Mashonaland West- Zimbabwe.

# Recommendations

Based on the findings from this study the researcher recommends that

1. In service training that addresses skill development to handle children with learning disabilities.
2. Policy makers must make a follow up of their policies to see if they are being implemented. Teachers should be trained in the use of sign language
3. Teaching and learning resources such as hearing aids should be made available to children who may need them

# 

# Recommendations for further studies

1. A different methodology such as qualitative or mixed methodology is also recommended for further studies.
2. Other disabilities can also be looked at.

# REFERENCE

Awoniyi, S. A., Aderati, R. A. & Tayo, A. S. (2011). *Introduction to Research Methods*. Nigeria, Ibadan: Ababa Press Ltd.

Babie, E. (2010). *The Practice of Social Research* (12th ed.). United States of America, Wardworth: Cengage Learning.

Beveridge, S. (2015). *Special needs in schools*. United Kingdom, London: Routledge Falmer.

Booth, T., & Ainscow, M. (2011) 3rd (ed.). *The index of inclusion*: New York, NY: Macmillan.

Borg, W., R & Gall, M.D. (2014). *Applying Educational Research how to read, do and use Research to solve practical problems* (7th ed.), England, Harlow: Longman.

Chakuchichi, D. (2013). *Inclusive education in Zimbabwe: Mashonaland West Province.* Zimbabwe, Harare: Leonard Cheshire Disability Zimbabwe trust.

Chimonyo, I., Mavura, E., Kaputa, T.M., Hlatywayo, L., Nyatsanza, T.D., & Mutandwa E. (2014). *Breaking barriers to inclusive education: A handbook for teachers*- Zimbabwe, Harare: Zimbabwe Open University.

Chireshe, R. (2013). The state of inclusive education in Zimbabwe. BA (special needs education) student’s perception. *Journal of Social Science* Issues 34(3), 223- 228

Clark, C., Dyson, A., Milward, A & Robnson, S. (2013). Towards inclusive schooling. Doi:1080/0141192990250203.

Coltart, D. (2011). *School for all 30th Anniversary of Leonard Cheshire Zimbabwe Trust launch of an inclusive manual entitled: “Breaking barriers to inclusive education in Zimbabwe*: Originally published comments September 15 2011

Doorn, R. (2010). Teaching hearing impaired children. *TEACH magazine*. Retrieved from http://www.teach mag.com/archives/tag/ron-doorn

El-Zraigat, A. (2013). Assessing special needs of students with hearing impairment in Jordarn and its relation to some variables. *Journal of International studies*, *Issue* 6 (2) 23-31

Global Campaign for education and International (2012) closing the gap for trained teachers. Retrieved from www.campaign- foreducation.org./docs/reportsECNT%20Report PGB pdf p3 accessed on 12-08-15

Hallahan, D.P., Kauffman,J.M. & Pullen,P.C. (2012). Exceptional learners: introduction to special education (13th ed.). Upper Saddle River, NJ, Pearson.

Hardmen, M. L., Drew, C. Egan W.M. (2015).*Human exceptionality society. Society and family*. (11th ed.). Belmont, C A: Wadsworth Publishing

Hasanzadeh, S., Parhoon, K., Parhoon, H., and Movallali, G. (2014).Educational needs assessment of students with hearing impairment in inclusive schools. *International Journal of Academic research in progressive education*. *Issue,* 3 (2) 2226-6348.

Houston, K., and Perigoe Ch.B. (2010). Speech language pathologist: vital listening and spoken language professionals, *International Journal of Academic research in progressive education*. *Issue,* 110 (2) 219-230

Johnson, B., & Seaton, J. (2012). *Educational audiology handbook*. Australia, Delmar: engage learning.

Jones, F. (2013). *Does inclusion Help or Hurt Students*? Weekly Newsletter http/www.education.world. Accessed on 20-10-15

Kabugi, S. W. (2013). *Challenges to teaching of agriculture in secondary schools in Kakuyani District in Division, Kangundo District, Machakosi Count, Kenya*. (Unpublished Master’s thesis). University of Kenyatta, Kenya

Knoors, K., & Marscharck, M. (2015). *Educating learners creating a Global Base- Perspective on Deafness*: New York, NY: Continuum.

Leonard, C. D. (2014).*Including children with disabilities in Primary school: The case of Mashonaland West. Retrieved from* <http://www.ucl.ac> uk-cr| centrepublications| working papers on 25-08-15

Martin, D.S (2010) *Exceptional children.* New York. NY: Continum

Mafa, O. (2012) Challenges of implementing inclusive education in Zimbabwe education system. *Journal of education research*. Retrieved from http:www.onlineresearchjournals.org/IJER. Accessed on 12-06-15.

Mapholisa, T, and Tembinkosi, T (2013) The impact of inclusion of children with hearing impairment, *International Journal of Asian social science Issue* 2013 3 (7). 1500-1510.

MacConkey, R (2014) *Inclusive education in low income countries: A resource book for educators*. South Africa, Cape Town: Mega digital.

Ministry of Education, MOE (2010). Education of learners with hearing impairment in Singapore, *International Journal of Special Education*, *Issue* 25 (2)112-118

Ministry of Education, MOE (2011). *Breaking barriers to inclusive education*. Zimbabwe Harare: ZOU.

Musengi, M., Mudyahoto, T., and Chireshe, R. (2010). Sport participation by pupils with hearing impairment in Masvingo Urban, Zimbabwe. *Educational Journal of behavioural science*, *Issue* 1 (1) 4- 5

Myers, J., and Bagree, S. (2011). *Making inclusive Education a reality*. Sighsavers policy paper. Retrieved from http://[www.sight-savers](http://www.sight-savers)org/indepthand research/education16079sightsavers%20/E20policy%202011%20%20finalpdf retrieved on 9-07-15

Okutoyi, J., Kochung, E., Kabuka, E.K., and Adoyo,P.O. (2013). Support services and resources in regular primary schools with hearing impairment: A case study of Kakamega. *International Journal of Scientific Technological Research*, *Issue* 2 (4) 2277-8616

Onu, V. C., Esky, M. K., Ugwuanyi, L., Igbo, J. N & Obio, N. O. *Nigeria Journals US- China Education review* ISSN 1548-6613

Punch, K. (2014). *Introduction to social research*.United Kingdom, London: Sage Publications.

Reisser, R. (2012).*Implementing inclusive education.* United Kingdom, London: Charlesworth Press.

Sharilyn, V. (2010). Inclusion strategies for teaching learners with hearing impairment retrieved on http:// www inclusion strategies on 01-06-15

Smith, R. (2010). *Observing inclusive education in Italy*. Retrieved from <http://wwwmiusa,org> n c d e/ stories/ smith/?searcher m=none retrieved on 01- 06-15

Toreno, S. (2011) *Five Barriers in education*. Retrieved from http://www.isorjounals.org

WHO. (2011). *World report on Disability*. Geneva WHO/ World Bank available at http:www.who.int/disabilities/ world report/2011/en/index.html. Retrieved from 20 -08-15

**QUESTIONNARE**

# Appendix A

Dear respondents

My name is Mamutse Yeukai. I am a Solusi University, Master of Education student. I am researching on the topic **Challenges in Teaching Students with Hearing Impairment in Inclusive Classes: A case of Secondary Schools in Kariba District: Zimbabwe**.

Kindly complete the questionnaire below to the best of your knowledge. The information gathered shall be used for academic purposes and shall be treated with confidentiality. Please do not write your name.

**SECTION A**

Instructions

Indicate by putting a tick in the appropriate space applicable to you

1. Gender Female  Male 
2. Qualification Certificate Diploma  Degree 
3. Teaching experience 1-5 yrs. 6-10yrs.  above 10 yrs. 

**SECTION B.**

Instructions

State the extent to which the following are challenges to the teaching of children with hearing impairment on a five point scale of strongly agree.

Scale Description

5 Strongly Agree

4 Agree

3 Undecided

2 Disagree

1 Strongly disagree

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SN** | **Professional competence** | 5 | 4 | 3 | 2 | 1 |
| 1 | I understand the impact of hearing impairment in teaching and learning in an inclusive class. |  |  |  |  |  |
| 2 | I am experienced in the management of children with hearing impairment |  |  |  |  |  |
| 3 | I am trained to teach the hearing impaired children |  |  |  |  |  |
| 4 | I delight in teaching children with hearing impairment |  |  |  |  |  |
| 5 | I have in- service training to teach children with hearing impairment |  |  |  |  |  |
| 6 | I use variety teaching skills to accommodate those with hearing impairment |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | **Organisational and administrative support** |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 7 | The administration at my school provides human and financial resources to support the teaching and learning of children with hearing impairment |  |  |  |  |  |
| 8 | The administration collaborates with the teachers for the success of the teaching of children with hearing impairment |  |  |  |  |  |
| 9 | The administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment |  |  |  |  |  |
| 10 | The administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment |  |  |  |  |  |
| 11 | There is coordinated learning and support for students with hearing impairment in my school |  |  |  |  |  |
| 12 | The administration provides adequate resources for students with hearing impairment |  |  |  |  |  |
|  | **Teaching methodologies** |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 13 | The seating arrangement of the pupils in my class enables learning of pupils with hearing impairment |  |  |  |  |  |
| 14 | I ensure interaction between myself and the hearing impaired pupils |  |  |  |  |  |
| 15 | I ensure proper interaction between the hearing impaired pupils and their hearing peers |  |  |  |  |  |
| 16 | I position myself properly while teaching in order to impact positively on the learning of the hearing impairment |  |  |  |  |  |
| 17 | I can communicate using sign language |  |  |  |  |  |
| 18 | I use a variety of teaching methods |  |  |  |  |  |
| 19 | I can extend my voice projection to accommodate pupils with hearing impairment |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | **The inclusive environment** |  |  |  |  |  |
|  |  |  |  |  |  |  |
| 20 | My Classrooms are acoustically conditioned/ designed to control, or carry sound |  |  |  |  |  |
| 21 | Varied media displays are available in my class |  |  |  |  |  |
| 22 | I am delighted in having the hearing impaired children in my classes |  |  |  |  |  |

**Section C**

Respond to the following using the five point scale of adequate to extremely not adequate given below.

Scale Description

5 Extremely adequate

4 Very adequate

3 Adequate

2 Not adequate

1 Extremely inadequate

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **SN** | **Teaching and learning resources** | **5** | **4** | **3** | **2** | **1** |
| 23 | Reading materials |  |  |  |  |  |
| 24 | Hearing aids |  |  |  |  |  |
| 25 | Charts |  |  |  |  |  |
| 26 | Models |  |  |  |  |  |

# C:\Users\M DUBE-Laptop\Pictures\2015-12-06\002.jpgAppendix B

**Appendix C**



# APPENDIX D

**Raw Data**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **Mean** | **Std. Deviation** |
| 1. I understand the impact of hearing impairment in teaching and learning in an inclusive class | 40 | 4.0250 | 1.12061 |
| 2. I am experienced in the management of children with hearing impairment | 40 | 1.8750 | .96576 |
| 3. I am trained to teach hearing impaired children | 40 | 1.6000 | .92819 |
| 4. I delight in teaching children with hearing impairment | 40 | 1.8000 | .93918 |
| 5. I have in service training in the teaching of children with hearing impairment | 40 | 1.7750 | 1.04973 |
| 6. I use a variety of teaching skills to accommodate pupils with hearing impairment | 40 | 2.9500 | 1.37654 |
| Profane | 40 | 2.3375 | .70860 |
| Valid N (list wise) | 40 |  |  |

|  |
| --- |

|  |  |  |  |
| --- | --- | --- | --- |
|  | **N** | **Mean** | **Std. Deviation** |
| 7. The administration at my school provides human resources to support the teaching and learning of children with hearing impairment | 40 | 1.7000 | .64847 |
| 8.The administration at my school provides financial resources to support the teaching and learning of children with hearing impairment | 40 | 1.5000 | .64051 |
| 9. The administration collaborates with the teachers for the success of the teaching of children with hearing impairment | 40 | 1.8500 | .76962 |
| 10.The administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment | 40 | 2.1500 | .89299 |
| 11.There is coordinated learning and support for students with hearing in my school | 40 | 1.6750 | .65584 |
| 12.The administration provides adequate teaching resources for the teaching of students with hearing impairment | 40 | 1.3750 | .49029 |
| organave | 40 | 1.7083 | .43322 |

| **Descriptive Statistics** | | | |
| --- | --- | --- | --- |
|  | N | Mean | Std. Deviation |
| 13.The seating arrangement of the pupils in my class enables easy learning for pupils with hearing impairment | 40 | 3.4250 | 1.19588 |
| 14. I ensure proper interaction between myself and the hearing impaired students | 40 | 2.7000 | 1.26491 |
| 15. I ensure proper interaction between the hearing impaired pupils and their hearing peers | 40 | 2.3000 | 1.22370 |
| 16.I positioned myself properly while teaching in order to impact positively on the learning of the hearing impaired | 40 | 3.5500 | .95943 |
| 17. I can communicate using sign language | 40 | 1.2750 | .45220 |
| 18. I use a variety of teaching methods | 40 | 3.3750 | 1.14774 |
| 19.I can extend my voice projection to accommodate pupils with hearing impairment | 40 | 3.2500 | 1.31559 |
| Teacher | 40 | 2.8393 | .53373 |
| Valid N (listwise) | 40 |  |  |

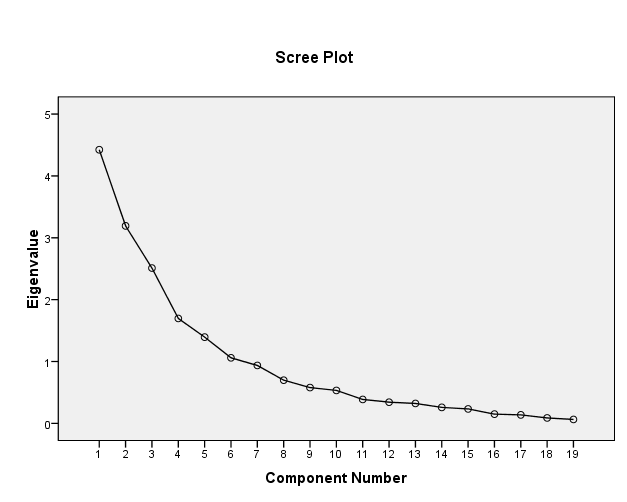
| **Descriptive Statistics** | | | |
| --- | --- | --- | --- |
|  | N | Mean | Std. Deviation |
| 20.my classrooms are acoustically conditioned/designed to control, absorb or carry sound | 40 | 1.2250 | .57679 |
| 21. varied media displays are available in my class | 40 | 2.2750 | 1.39574 |
| 22.I am delighted in having the hearing impaired children in my class | 40 | 1.4500 | .84580 |
| Inclusive | 40 | 1.6500 | .62680 |
| Valid N (listwise) | 40 |  |  |

| **Descriptive Statistics** | | | |
| --- | --- | --- | --- |
|  | N | Mean | Std. Deviation |
| 23.reading materials | 40 | 1.8750 | .75744 |
| 24.hearing aids | 40 | 1.2750 | .45220 |
| 25. models | 40 | 2.0500 | .93233 |
| 26.sign language charts | 40 | 1.8250 | .87376 |
| Learning | 40 | 1.7562 | .44393 |
| Valid N (listwise) | 40 |  |  |

| **Factor Analysis KMO and Bartlett's Test** | | | | |
| --- | --- | --- | --- | --- |
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | | .537 | |
| Bartlett's Test of Sphericity | Approx. Chi-Square | | 387.398 | |
| Df | | 171 | |
| Sig. | | .000 | |
| **Communalities** | | | | | | |
|  | | | Initial | | Extraction | |
| 1. I understand the impact of hearing impairment in teaching and learning in an inclusive class | | | 1.000 | | .739 | |
| 2. I am experienced in the management of children with hearing impairment | | | 1.000 | | .748 | |
| 3. I am trained to teach hearing impaired children | | | 1.000 | | .769 | |
| 4. I delight in teaching children with hearing impairment | | | 1.000 | | .784 | |
| 5. I have in service training in the teaching of children with hearing impairment | | | 1.000 | | .776 | |
| 7. The administration at my school provides human resources to support the teaching and learning of children with hearing impairment | | | 1.000 | | .811 | |
| 9. The administration collaborates with the teachers for the success of the teaching of children with hearing impairment | | | 1.000 | | .691 | |
| 10.the administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment | | | 1.000 | | .487 | |
| 12.the administration provides adequate teaching resources for the teaching of students with hearing impairment | | | 1.000 | | .673 | |
| 14. I ensure proper interaction between myself and the hearing impaired students | | | 1.000 | | .742 | |
| 15. I ensure proper interaction between the hearing impaired pupils and their hearing peers | | | 1.000 | | .677 | |
| 16.i positioned myself properly while teaching in order to impact positively on the learning of the hearing impaired | | | 1.000 | | .822 | |
| 17. I can communicate using sign language | | | 1.000 | | .871 | |
| 18. I use a variety of teaching methods | | | 1.000 | | .828 | |
| 19.i can extend my voice projection to accommodate pupils with hearing impairment | | | 1.000 | | .761 | |
| 21. varied media displays are available in my class | | | 1.000 | | .710 | |
| 22.i am delighted in having the hearing impaired children in my class | | | 1.000 | | .768 | |
| 25. models | | | 1.000 | | .838 | |
| 26.sign language charts | | | 1.000 | | .780 | |
| Extraction Method: Principal Component Analysis. | | | | | | |

**Total variance explained**

| Component | Initial Eigen values | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 4.423 | 23.280 | 23.280 | 4.423 | 23.280 | 23.280 | 3.875 | 20.396 | 20.396 |
| 2 | 3.192 | 16.801 | 40.081 | 3.192 | 16.801 | 40.081 | 2.908 | 15.306 | 35.703 |
| 3 | 2.510 | 13.210 | 53.291 | 2.510 | 13.210 | 53.291 | 2.705 | 14.234 | 49.937 |
| 4 | 1.696 | 8.924 | 62.215 | 1.696 | 8.924 | 62.215 | 1.824 | 9.600 | 59.537 |
| 5 | 1.394 | 7.339 | 69.554 | 1.394 | 7.339 | 69.554 | 1.680 | 8.840 | 68.378 |
| 6 | 1.060 | 5.577 | 75.131 | 1.060 | 5.577 | 75.131 | 1.283 | 6.753 | 75.131 |
| 7 | .936 | 4.929 | 80.060 |  |  |  |  |  |  |
| 8 | .698 | 3.675 | 83.735 |  |  |  |  |  |  |
| 9 | .578 | 3.043 | 86.778 |  |  |  |  |  |  |
| 10 | .533 | 2.804 | 89.582 |  |  |  |  |  |  |
| 11 | .386 | 2.033 | 91.615 |  |  |  |  |  |  |
| 12 | .343 | 1.803 | 93.419 |  |  |  |  |  |  |
| 13 | .322 | 1.694 | 95.113 |  |  |  |  |  |  |
| 14 | .258 | 1.358 | 96.471 |  |  |  |  |  |  |
| 15 | .234 | 1.229 | 97.700 |  |  |  |  |  |  |
| 16 | .149 | .784 | 98.484 |  |  |  |  |  |  |
| 17 | .137 | .723 | 99.207 |  |  |  |  |  |  |
| 18 | .088 | .463 | 99.670 |  |  |  |  |  |  |
| 19 | .063 | .330 | 100.000 |  |  |  |  |  |  |
| Extraction Method: Principal Component Analysis. | | | |  |  |  |  |  |  |



|  | | | Component | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | 1 | | 2 | | 3 | | 4 | | 5 | | | 6 |
| 2. I am experienced in the management of children with hearing impairment | | | .818 | | -.209 | | .025 | | .113 | | -.147 | | | .005 |
| 4. I delight in teaching children with hearing impairment | | | .776 | | -.226 | | -.281 | | -.226 | | .008 | | | .009 |
| 5. I have in service training in the teaching of children with hearing impairment | | | .738 | | -.047 | | -.263 | | -.252 | | .229 | | | -.209 |
| 22.I am delighted in having the hearing impaired children in my class | | | .729 | | -.059 | | -.377 | | .023 | | -.205 | | | -.220 |
| 3. I am trained to teach hearing impaired children | | | .719 | | -.363 | | -.265 | | .215 | | -.015 | | | -.057 |
| 10.the administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment | | | .468 | | .305 | | .314 | | -.156 | | .222 | | | -.057 |
| 12.The administration provides adequate teaching resources for the teaching of students with hearing impairment | | | -.048 | | .756 | | .305 | | -.046 | | .043 | | | .038 |
| 26.Sign language charts | | | .181 | | .751 | | .240 | | -.096 | | -.273 | | | -.204 |
| 21. varied media displays are available in my class | | | .147 | | .723 | | .016 | | -.201 | | .265 | | | .234 |
| 14. I ensure proper interaction between myself and the hearing impaired students | | | .403 | | -.533 | | .453 | | .214 | | .168 | | | .123 |
| 16.I positioned myself properly while teaching in order to impact positively on the learning of the hearing impaired | | | .463 | | .027 | | .693 | | .243 | | .044 | | | -.257 |
| 15. I ensure proper interaction between the hearing impaired pupils and their hearing peers | | | .237 | | -.301 | | .671 | | -.245 | | -.027 | | | .138 |
| 19.I can extend my voice projection to accommodate pupils with hearing impairment | | | .230 | | .510 | | -.512 | | -.394 | | -.009 | | | -.175 |
| 9. The administration collaborates with the teachers for the success of the teaching of children with hearing impairment | | | .469 | | .260 | | .500 | | -.344 | | -.163 | | | -.093 |
| 25. models | | | .195 | | .384 | | .162 | | .696 | | .376 | | | -.030 |
| 1. I understand the impact of hearing impairment in teaching and learning in an inclusive class | | | .134 | | .392 | | -.332 | | .463 | | -.426 | | | .248 |
| 7. The administration at my school provides human resources to support the teaching and learning of children with hearing impairment | | | .454 | | .283 | | .101 | | .307 | | -.596 | | | .255 |
| 18. I use a variety of teaching methods | | | .386 | | .348 | | -.325 | | .323 | | .579 | | | .112 |
| 17. I can communicate using sign language | | | .406 | | -.049 | | -.019 | | -.331 | | .101 | | | .764 |
| **Rotated Component Matrixa** | | | | | | | | |  | |  | | |  |
|  | | | Component | | | | | | | | | | | |
|  | | | 1 | | 2 | | 3 | | 4 | | 5 | | | 6 |
| 4. I delight in teaching children with hearing impairment | | | .846 | | .022 | | .021 | | -.045 | | -.022 | | | .255 |
| 22 I am delighted in having the hearing impaired children in my class | | | .834 | | .041 | | -.107 | | .005 | | .228 | | | -.087 |
| 5. I have in service training in the teaching of children with hearing impairment | | | .811 | | .188 | | -.077 | | .124 | | -.223 | | | .104 |
| 3. I am trained to teach hearing impaired children | | | .795 | | -.228 | | .201 | | .145 | | .152 | | | .015 |
| 2. I am experienced in the management of children with hearing impairment | | | .738 | | .081 | | .354 | | .034 | | .251 | | | .086 |
| 26.sign language charts | | | -.047 | | .791 | | -.178 | | .003 | | .298 | | | -.178 |
| 9. the administration collaborates with the teachers for the success of the teaching of children with hearing impairment | | | .225 | | .714 | | .277 | | -.217 | | .022 | | | .078 |
| 12.the administration provides adequate teaching resources for the teaching of students with hearing impairment | | | -.342 | | .685 | | -.135 | | .222 | | .134 | | | .030 |
| 21. varied media displays are available in my class | | | -.100 | | .597 | | -.312 | | .348 | | .010 | | | .355 |
| 10.the administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment | | | .240 | | .574 | | .184 | | .198 | | -.115 | | | .119 |
| 14. I ensure proper interaction between myself and the hearing impaired students | | | .260 | | -.143 | | .792 | | .084 | | -.080 | | | .115 |
| 19.I can extend my voice projection to accommodate pupils with hearing impairment | | | .340 | | .363 | | -.714 | | .015 | | -.034 | | | .057 |
| 16.i positioned myself properly while teaching in order to impact positively on the learning of the hearing impaired | | | .180 | | .455 | | .697 | | .164 | | .044 | | | -.260 |
| 15. I ensure proper interaction between the hearing impaired pupils and their hearing peers | | | .032 | | .239 | | .674 | | -.300 | | -.157 | | | .224 |
| 25. models | | | -.061 | | .168 | | .208 | | .825 | | .212 | | | -.195 |
| 18. I use a variety of teaching methods | | | .284 | | .068 | | -.191 | | .823 | | -.016 | | | .170 |
| 7. the administration at my school provides human resources to support the teaching and learning of children with hearing impairment | | | .208 | | .261 | | .148 | | -.031 | | .819 | | | .077 |
| 1. I understand the impact of hearing impairment in teaching and learning in an inclusive class | | | .041 | | -.025 | | -.275 | | .214 | | .784 | | | .003 |
| 17. I can communicate using sign language | | | .215 | | .060 | | .098 | | -.018 | | .070 | | | .898 |
| Extraction Method: Principal Component Analysis.  Rotation Method: Varimax with Kaiser Normalization.   | Component | 1 | 2 | 3 | 4 | 5 | 6 | | --- | --- | --- | --- | --- | --- | --- | | 1 | .861 | .312 | .256 | .170 | .178 | .186 | | 2 | -.246 | .722 | -.471 | .347 | .277 | -.007 | | 3 | -.357 | .478 | .788 | -.118 | -.080 | -.050 | | 4 | -.105 | -.347 | .284 | .612 | .519 | -.379 | | 5 | -.029 | -.029 | .046 | .675 | -.711 | .186 | | 6 | -.242 | -.176 | .099 | .081 | .332 | .886 | | Extraction Method: Principal Component Analysis.  Rotation Method: Varimax with Kaiser Normalization. | | | | | |  | | | | | | | | | |  | |  | | |  |
| **Descriptive Statistics** | | | | | | | | | | | | | | |
|  | | | | | N | | | | Mean | | Std. Deviation | | | |
| 9. The administration collaborates with the teachers for the success of the teaching of children with hearing impairment | | | | | 40 | | | | 1.8500 | | .76962 | | | |
| 10.The administration collaborates with the community in decision making that is focused on intervention strategies for students with hearing impairment | | | | | 40 | | | | 2.1500 | | .89299 | | | |
| 12.The administration provides adequate teaching resources for the teaching of students with hearing impairment | | | | | 40 | | | | 1.3750 | | .49029 | | | |
| 21. Varied media displays are available in my class | | | | | 40 | | | | 2.2750 | | 1.39574 | | | |
| 26.Sign language charts | | | | | 40 | | | | 1.8250 | | .87376 | | | |
| factor2 | | | | | 40 | | | | 1.8950 | | .62591 | | | |
| Valid N (listwise) | | | | | 40 | | | |  | |  | | | |
| | **Descriptive Statistics** | | | | | --- | --- | --- | --- | |  | N | Mean | Std. Deviation | | 14. i ensure proper interaction between myself and the hearing impaired students | 40 | 2.7000 | 1.26491 | | 15. i ensure proper interaction between the hearing impaired pupils and their hearing peers | 40 | 2.3000 | 1.22370 | | 16.i positioned myself properly while teaching in order to impact positively on the learning of the hearing impaired | 40 | 3.5500 | .95943 | | 19.i can extend my voice projection to accommodate pupils with hearing impairement | 40 | 3.2500 | 1.31559 | | factor3 | 40 | 2.9500 | .63851 | | Valid N (listwise) | 40 |  |  |  | **Descriptive Statistics** | | | | | --- | --- | --- | --- | |  | N | Mean | Std. Deviation | | 18. i use a variety of teaching methods | 40 | 3.3750 | 1.14774 | | 25. models | 40 | 2.0500 | .93233 | | factor4 | 40 | 2.7125 | .91208 | | Valid N (listwise) | 40 |  |  |   **Descriptive Statistics** | | | | | | | | | | | |
|  | N | | Mean | | | | Std. Deviation | | | | |
| 17. I can communicate using sign language | 40 | | 1.2750 | | | | .45220 | | | | |
| factor6 | 40 | | 1.2750 | | | | .45220 | | | | |
| Valid N (listwise) | 40 | |  | | | |  | | | | |