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# “School for all”: Teachers’ perspective of inclusive education for hearing-impaired learners in Dubai, UAE

By

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**Abstract**

The "School for All" policy implemented by the Ministry of Education (MOE) in Dubai states that all learners, regardless of their developmental delays or disabilities, have the same right to equal education as children with no difficulties. The MOE and the Knowledge and Human Development Authority (KHDA) have therefore implemented the inclusive education policy within all private schools in Dubai. The private schools in Dubai are thus referred to as 'inclusive schools' as per the definition of the policy implemented. Teachers are mandated to teach all children within the Dubai inclusive school setting regardless of any additional required support and special needs. As the majority of teacher training in private Dubai inclusive schools has focussed on autism, there is a dearth of information surrounding teacher training for auditory impairments. The possible lack of training in assisting children with hearing impairments in private Dubai inclusive schools, may often leave the teachers feeling inexperienced when supporting the hearing-impaired learners within the inclusive setting which has been implemented under the "School for All" policy. Hearing-impaired learners are often moved to another classroom in order to have one-on-one support, and learners may begin to feel frustrated and inadequate as they are taken away from their peers, which contradict the definition and framework of inclusive education. The current research investigated the teachers' perspectives of teaching the hearing-impaired learner within the private English-speaking regular schools in Dubai, that are governed by KHDA and implementing the "School for All" policy. A qualitative approach was used in this study. The participant schools were conveniently sampled and selected due accessibility for the researcher. The participants were required to read, write and speak English fluently as this was the primary language medium of the participant schools. The perspective of the participants regarding inclusion of hearing-impaired learners was explored through observations within the classrooms and school, teacher questionnaires and a focus group

discussion. The combination of the results added to the richness of the data and through triangulation enhanced the reliability and validity of the study, and then analysed through a thematic content, providing the researcher with constructive information regarding the perspectives of teachers within private regular Dubai schools regarding inclusion of hearing-impaired learners.

The results of this research indicate that although the teachers in the three schools agree with inclusion of hearing-impaired learners through the implementation of the "School for All" policy, further training and knowledge acquisition in effectively assisting hearing-impaired learners, would benefit in their academic and social development. The participants believed that the curriculum of the school could be adapted to accommodate hearing-impaired learners needs, enhancing their ability to learn within inclusive classrooms. Further domains included financial burdens on parents and schools, the teachers' role with limited resources and the school management role. External therapists, including speech-language therapist, occupational therapist, psychologists, behavioural therapists and physiotherapists, assist the hearing-impaired learners within the classroom setting; however, at an additional cost to hearing-impaired learners' parents. School and classroom infrastructure would require adaptations to assist the hearing-impaired learners effectively in their academic and social development, thus requiring increased financial costs to the school. Further research on the perspective of teachers within government schools, and a larger number of private regular Dubai schools, and the comparison between female and male teacher perspectives is required. This further research would assist in gaining a broader number of teacher perspectives of inclusive education of the hearing-impaired learner. The perspective of hearing-impaired learners' in higher grade levels where academic demands are greater would be necessary to fully understand the implications and effects of inclusion of the hearing-impaired learners. By combining research under different perspectives, the effectiveness and implications of the



*Abstract*

"School for All" policy for the hearing-impaired learners would be established. The findings of this study could serve as a baseline research into the perspective of teachers within regular Dubai schools, regarding the implications for the implementation of the "School for All" policy for the hearing-impaired learner.

***Key words**: School for All, inclusion, private regular Dubai schools, hearing-impaired learners*



*Abstract*

DEDICATED TO

*GIA ANNE VAN NIEKERK*

13/03/2017 – 25/09/2017

*You taught me to be brave and to fight for life. I love you my baby girl. Mamma will always keep you in my heart.*

*Now may you rest in peace my beautiful little fighter.*

## Declaration

I, Andria Calicchio, hereby declare that this submission is my own original work and that the assistance I have received is detailed in the acknowledgments of this dissertation. To the best of my knowledge and belief, it contains no material which has been accepted for the award of any other degree or diploma at any other university or other institute of higher learning. I am responsible for the study and conclusions reached.



25/09/2019

Andria Calicchio Date

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## List of Abbreviations

CHL – Conductive hearing loss

CMV - Cytomegalovirus

dB – Decibel

DP – Diploma programme

FM – Frequency modulation

Hz – Hertz

IGCSE – International General Certificate of Secondary Education

IB – International Baccalaureate

KHDA – Knowledge and Human Development Authority

MOE – Ministry of Education

MYP – Middle years programme

PYP – Primary years programme

SEN – Special Education Needs

SNHL – Sensorineural hearing loss

UAE – United Arab Emirates

WHO – World Health Organisation

# Chapter One: Outline of Chapters and Theoretical Framework

## 1.1. The researcher's perspectives

The United Arab Emirates (UAE) Government launched the "School for All" policy in 2010, which was based on the Federal Law 29/2006 (Alborno, 2017). The School for All policy was intended as the first practical steps towards inclusive education for children with disabilities (Alborna, 2017). With the implementation of this policy, the right to an education for all children saw the progression from segregation of special needs learners in special schools to the practice of integrated schooling or mainstreaming (Alborno, 2017). The school system has progressed further to a more recent inclusive education (Frederickson & Cline, 2002) which states that all learners are to be in a regular classroom setting. However, according to Alborno (2017), inclusion remains controversial, as in order for inclusive education to be effective; practical, cultural and structural changes are required (Booth & Ainscow, 2011). One of the key aspects in the success of inclusive education is the positive attitude and beliefs of the teachers within the schools (Winter & O'Raw, 2010). Similarly, in South Africa, where change is on-going and operational guidelines are a step forward (Pottas, 2005), research into the implementation of these policies by the teachers is needed.

When this research began, as a practicing Speech-Language Pathologist and Audiologist in Dubai, UAE, for approximately three years, and mainly based within private inclusive schools, the desire to assist both teachers and learners became an area of interest, which developed into a passion. Although mainly conducting speech and language therapy, the background and qualifications as an Audiologist became an evident need within the schools. What became evident and where additional time was spent in the schools, was that the teachers had many questions and required advice regarding the children in their class. This ranged from second language English learners, to autism, to classroom modifications and how to assist hearing-impaired learners. Although there has, in recent years, been

research regarding overall outlines and specifications of the "School for All" policy within the UAE, there was no specific research regarding inclusion of hearing impaired learners. Hearing impairment can be defined as the loss of hearing acuity, either permanent or fluctuating, which is negatively impacting on the learner's educational performance (Pottas, 2005). According to Alahbabi (2009), the attempts that the UAE have made towards inclusion have not been based on research but rather the implementation of international processes, like in the US.

It became apparent that the focus of the policies put in place by the governing bodies (i.e. MOE and KHDA) was on the learners and that the teachers within the schools required assistance based on the specific requirements which they themselves may not have agreed with or understood. Many teachers therefore, requested clarification on what the policies and/or requirements were, as they had no, or very little, background or fundamental understanding of these (Alahbabi, 2009). For inclusion to be successful, those who are responsible for the implementation of such policies should be receptive to the principles and demands of inclusion (Alahbabi, 2009). According to Rose (2001), the way in which teachers react and behave has a direct impact on the success or failure of inclusion. Thus, if a teacher feels they are not fully prepared to assist the hearing impaired learner within the classroom, the potential negative impact of this attitude would greatly affect the learners' success within the inclusive education system. According to Alahbabi (2009), professional attitudes may either assist with or hinder the implementation of polices, which result in the policy outcomes being radical or controversial.

As part of the "School for All" policy, all schools within the UAE are inclusive as the government aims to establish a nationwide inclusion program (Alahbabi, 2009). Based on Alahbabi, and other researchers cited, the researcher attempted to gain further insight and

knowledge of potential needs, through interaction with a larger number of schools and teachers, within Dubai private schools.

Within research and in practice, allied professionals often focus on the client and their family. In the case of school-based therapy, the focus would be on the learner. As therapists, strategies and recommendations are set in place to solely assist the learner (i.e. "our patient"), as we set goals in order for the learner to reach their optimum potential developmentally, socially and academically. In doing so, there may be a greater expectation on teachers and the assumption that the teachers understand the reasoning behind the recommendations and how to implement, monitor and adjust these recommendations within their daily routine. In the UAE, there is a tremendous diversity of cultures and religions, as well as native languages, despite the common language of English being used (Hadidi & Khateeb, 2015). Similar to the South African context, teachers are from a large diversity of ethnic, linguistic, cultural, familial and national identities within one school. Although this may also be true for other countries like America, United Kingdom and Australia, to name a few, the research focused on schools located in Dubai, and as the researcher hails from South Africa, the comparison is focused on Dubai and South Africa. This diversity may often lead to miscommunications and frustration for the teachers, which may hinder the learners' progress. These difficulties were mainly seen with hearing-impaired learners.

Research within the UAE which has been conducted thus far, is based on the teachers' perspectives of the "School for All" policy and inclusive education in general. There is no focus on hearing-impaired learners. As noted from research conducted in South Africa, it would appear that research in the inclusive education of the hearing-impaired learner is lacking (Pottas, 2005). It was stated by Pottas (2005), that teachers receive little or no training in the needs of hearing-impaired learners, and as a result, the learners' needs are not met. As an Audiologist with a passion for the study of hearing impairment in children and as

a Speech-Language Pathologist with a passion for inclusive education, a combination of these passions and the desire to assist hearing-impaired learners within the inclusive education system in Dubai private schools, lead to this research project with a specific interest and focus, to hopefully form a baseline for further research within the area of effective inclusion of hearing-impaired learners.

According to Pottas (2005), hearing-impaired learners are particularly interesting as they require a multidisciplinary team approach which includes not only professionals from the field of health (audiologists, speech-language pathologists), but also professionals from education (teachers).

**1.2. Qualitative Research**

When research is conducted which focuses on individuals and their perspectives, a shift would be required from the use of a medical approach to a social ecological model (SEM). In this way, a more meaningful view of the teachers' perspectives can be focused on. This would allow for a fuller view of the data and how these relate back to the principals of the "School for All" policy. The SEM is a theory-based framework to assist researchers in understanding the multifaceted effects of personal and environmental factors which determine the individuals' view and behaviours towards others and their own perspectives (Preacher & Zyphur, 2010). SEM consists of five hierarchical levels as seen in Figure 1 (Preacher & Zyphur, 2010). This model was chosen as the model represents all aspects of an individuals' life starting from their own personal perspective and follows through to a government policy, which has been set for the individual to follow (Figure 1). In the case of this research, the SEM shows the hierarchy from the teachers' perspective on inclusive education for hearing-impaired learners, to the top of the hierarchy which is the "School for All" policy. The perspectives of teachers are given from different individuals who have their

own opinions in relation to the way in which they view aspects within their environment. This provides a complicated overall view-point.

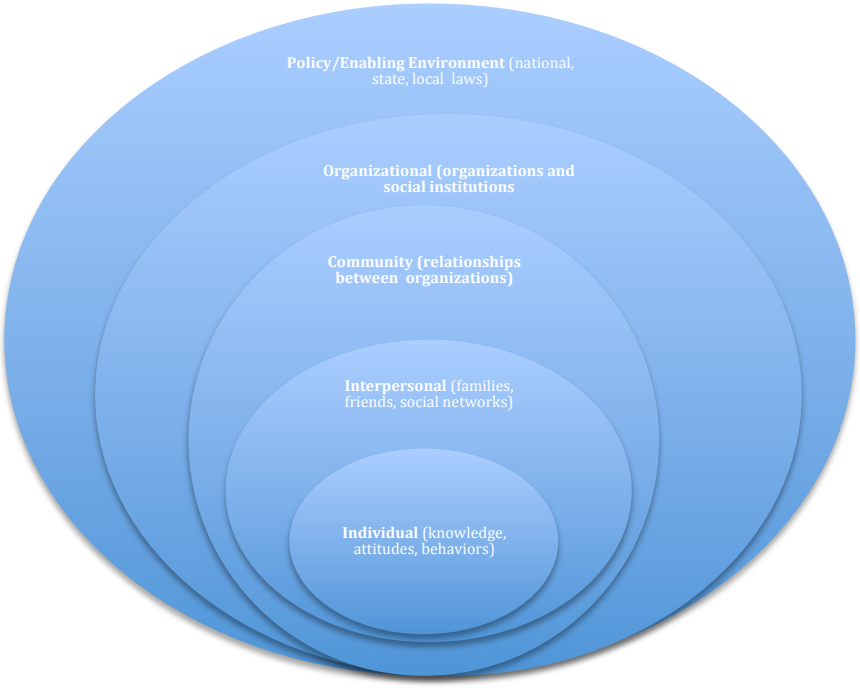



*Figure 1: The social ecological model cited from https://d2l.sdbor.edu/d2l/eP/presentations/presentation_preview*

### 1.3. Chapter outline of this research study

This research has been set out in various chapters in order to present the background and foundations the researcher had in conducting this research, the manner in which the data was collected and analysed, drawing of conclusions based on research questions, and finally to show how possible limitations could elicit further research where and if needed.

The initial chapter shows the reader the reasons behind conducting this research, helps build the foundation for the research topic chosen and the concepts which contributed to forming the foundation of the research, and the research orientation. The second chapter explores the complexity which surrounds hearing impairment and the developing learner, both academically and socially. Chapter two also focuses on the background of the policies which have been set in place within Dubai schools. For the sake of this research,

understanding the definition of inclusive education and inclusive schools follows the "School for All" policy definition, although this definition does not consistently abide to the globally used "inclusive education" definition.

Chapter 3, the methodology chapter, describes an overview of all factors which were considered when conducting this study. The logistical and practical aspects have been described in the methodology chapter, as well as all ethical considerations which were applied. Data analysis approaches and frameworks are discussed with a motivation for why a qualitative research design was chosen for this study.

The results chapter, chapter 4, has both graphic and tabulated means of showcasing the participant view points and perspectives. Chapter 5 offers an expansion of the results obtained with the use of comparisons to literature through the framework of the "School for All" policy.

Chapter 6, the conclusion, and chapter 7, conclude the research with a discussion of the limitations and recommendations for further research in this area, as well as a discussion of the study implications.

# Chapter Two: Introduction and Literature Review

## 2.1 Introduction

International trends have shown that teaching learners with disabilities within private regular schools has become an important goal for the schools, teachers and parents of special needs learners (de Boer, Pijl & Minnaert, 2011). The term "inclusion" was described as "keeping children with disabilities in a regular education setting as opposed to special needs schools" (Anati, 2012). Inclusion refers to the process involved in teaching learners with additional needs in regular education classrooms and providing these learners (e.g. hearing-impaired learners) with the same necessary services and support as learners without disabilities or any additional needs (Rafferty, Boettcher & Griffin, 2001). Thus, many countries, including the United States of America, South Africa, the United Kingdom and Dubai, have chosen to largely abandon special school systems, and rather follow the "inclusion" policy (Meijer et al, 2006), where learners with special needs are accepted into inclusive schools. When comparing the inclusive education policy of South Africa to the "School for All" policy in Dubai, the main discrepancy noted was the 'pull-out' system which is implemented in Dubai schools, whereas the Universal Design for Learning states that all learning is required to be within the classroom and not incorporate specific learning programmes (Dalton, McKenzie & Kahonde, 2012). Although the implementation and definition of inclusive education has differences, for this current research study, the "School for All" policy inclusive definition will be adhered to and thus, the schools of this current research will be referred to as 'private inclusive Dubai schools'.

## 2.2. Inclusive education versus mainstream schools

Globally, the terms "inclusion" and "mainstream" are at times used interchangeably, and often this causes confusion between the two schooling systems (Farell, 2001). Farell (2001) states that the main difference between mainstreaming and inclusion is that

mainstreaming requires a learner to gain academic knowledge from being in the classes with the learners' peers at intervals throughout the school day, while inclusion only requires a student to show that he or she is not at a disadvantage by being in class with his or her peers. In a regular learning classroom environment, the hearing-impaired learner would thus be required to cope with what is being taught within the regular education classroom and be subjected to the same academic demands as children who are hearing (i.e. inclusion). With mainstreaming, the learners attend regular education classes in intervals and are required to learn specific programmes within the class, and then continue their learning in the special needs classroom setting (Knight & Swanwick, 1999). Another reported difference between mainstreaming and inclusion is that a hearing-impaired learner in a mainstream class usually has little support from the school apart from the regular teacher, while in an inclusion class, the learner should be assisted by special professionals trained to help the student adjust to the regular classroom and give individual support to the student with special needs. This would include learning support staff, teaching assistants, shadow teachers and therapists (i.e. speech and language therapists, occupational therapists, psychologists) who work within the school setting. Thus, it can be said that inclusion is the full acceptance of all students and leads to a sense of belonging within the classroom community.

The term inclusion has been defined in a variety of ways across the literature and research. One way that is was defined, was that it is the process of including all learners within regular schools with the support of the Special Education Needs (SEN) department (DfEE, 1997). Another definition included the system in which learners are taught together in the same classroom, using materials appropriate to their various needs, and participating in the same lessons and recreational activities (Booth, et al, 2002). Inclusion as defined by Mittler (2000), is the education within an ordinary class of neighbourhood schools, which a learner would normally attend, with extra support as needed. According to McManis (2017),

all students regardless of the challenges they may face, are placed in age-appropriate general education classes and receive high quality instruction, intervention and support enabling the hearing-impaired learner to meet success in the core curriculum. This would therefore mean that the hearing-impaired learner is with his/her peers without hearing impairment to the maximum degree possible. The hearing-impaired learner would thus only leave the class for a particular purpose (i.e. speech therapy). However, this should be rare and the exception (McManis, 2017).

For a school to be considered as implementing inclusion, learners with special needs must not be taught in separate classes (Farell, 2001). When students are taken out of the class in order to receive extra assistance in their learning and then brought back to the class when they are able to cope with the class with their peers, this is known as mainstreaming (Farell, 2001). Teaching methods, textbooks, materials and the school environment should be designed so that all learners, regardless of their range of abilities and special needs, including physical, sensory, intellectual and motor impairments, are included in the same class at the same time (Knight & Swanwick, 1999). Thus, by definition, inclusion would imply that all learners are included in the same learning environment as those learners who do not require additional support.

Integration, however, is often associated with the concept of mainstreaming (Bergsma, 2000). Both inclusion and mainstreaming reflect the attempts of placing learners with special needs in the mainstream of education. Integration is often considered as re-integration after a period of segregation and thus attempts to avoid separating special needs learner from separation from their peers (Bergsma 200). In contrast, mainstreaming is considered as the practice of placing students with special needs in classes and schools with their peers who do not have special needs, for short periods of times throughout the school day (Bergsma, 2000). However, it is assumed that special education remains the main and primary mode for

students with special needs, and they return to the special needs classroom for the majority of their school day (Bergsma, 2000).

*Table 1: Comparison between definitions of inclusive education and mainstreaming*

| Terminology | United States | Dubai | South Africa |
|---|---|---|---|
| Inclusive Education | Learners are placed in the classroom with the 'Least Restrictive Environment' (LRE) without the teacher significantly altering the curriculum (Dudley-Marling & Burns, 2014). | Learners with special needs are in the classroom, and the 'pull out' system is implemented to assist with additional learning (KHDA, 2017 (a)). | Learners with special needs remain in the classroom for all learning (Dalton, et al., 2012). |
| Mainstreaming | When a learner is unable to learn with the support provided and their | There is no distinction between inclusive education and mainstreaming | Learners are placed in the classroom for specific time periods in order to encourage |

| | | | |
|---|---|---|---|
| | performance is evidence for this, then the learner is placed in a special needs classroom and attends classes on an interval basis for specific programmes (Dudley-Marling & Burns, 2014). | research for Dubai schools (Karaman, 2011). | 'streaming' to the classroom; however, the majority of their learning is conducted in a special needs class (Engelbrecht & Green, 2003). |
| Policies implemented | Individuals with Disabilities Education Act (IDEA); 1975 | School for All; 2006 | Education White Paper 6: Special needs education; 2001 (Department of Education, 2001) |

Table 1 shows a comparison between the definitions of inclusive education and mainstreaming between three prevalent countries found in research, namely the United States, Dubai and South Africa.

Both South Africa and Dubai are relatively new in implementing inclusive education policies, both of which are due to rapid changes in the country. In South Africa, changes began in 1994 when democracy was established (Dalton, et al., 2012). In 1996 the Constitution of the Republic of South Africa, Act No. 108, Section 29, states that "everyone has the right to basic education" (Dalton, et al., 2012). Similarly, Federal Law 29/2006 in Dubai, concerning the rights of people with disabilities, and the right for learners with disabilities to no longer be segregated from their peers who do not have extra learning needs (Alborno, 2017). When comparing both South Africa and Dubai to the US, it is evident that these two countries are still in the developing stages of inclusive education, since the US began on the road to inclusion over 37 years ago (Dalton, et al., 2012).

According to the study completed by Dalton, et al. (2012), there is, similar to Dubai according to Kumar (2015), a need for teachers to be fully trained in the understanding of the diverse learning needs of the children, and how to address these needs in promoting successful learning. It is also stated that teachers and therapists would need to find a way to work collaboratively in both planning and implementation to obtain successful inclusion.

### 2.2.1. Mainstream Education

When focusing on mainstream education, as opposed to inclusive education as defined above, Bergsma (2000), for the most part, has shown that mainstreaming has been ineffective due to the following:

- In order to be mainstreamed, learners mostly have to "earn their way" into the regular classroom. Thus, these learners are required to show that they would be able to cope in the classroom without additional support and at the same pace as their peers.
- Many students are required to meet the same standards as their non-disabled peers;
- Most students are expected to learn in the mainstream environment without additional support services, such as shadow teachers, therapists and curriculum adaptation.

- The general teachers, although receptive, are not prepared enough to deal with the more complex learning problems. For many educators and parents, mainstreaming provides too little assistance for the learners with additional needs. Often the correct assistance required by the learners is provided too late in the learner's development.

### 2.2.2. Inclusive Education

Therefore, inclusive education can be defined as an education system which includes a large diversity of students, and diversifies education to such an extent that it can meet the individual learning needs of all learners within the regular classroom regardless of their special needs (Bergsma, 2000). All learners, including the ones with a hearing impairment or any other additional need, receive all their educational instruction in a regular education setting and, when necessary, support services assist the learner within the regular classroom setting, and thus the learner does not attend the support service outside of the regular classroom setting (Bergsma, 2000). As it is stated that inclusion requires the learning support team to "come to them" the learner is thus not leaving the classroom for this support. It can therefore be said, that the current "pull-out" system that is used in the private inclusive Dubai schools, does not support the full inclusion system stated by the "School for All" policy (KHDA, 2017 (a)). For a school to reach "full inclusion", the complete elimination of special education, from the Special Educational Needs (SEN) departments and extra outside therapeutic support within the schools, would need to be totally eliminated, or be at a minimum where only on rare occasions would the hearing-impaired learner receive this additional support (Bergsma, 2000).

Partial inclusion, however, means that students receive most of their instruction in the classroom with their peers, but may be "pulled-out" to another classroom setting when appropriate to their individual needs (Bergsma, 2000). Thus, in accordance with the literature provided by Bergsma (2000), at this current stage, regular private schools in Dubai are thus

following a "partial inclusion" system and not a fully inclusive system as stipulated by the "School for All" policy. Implementing inclusion of hearing-impaired learners within private regular schools involves important aspects including teacher training, resources, legislation and teachers (de Boer et al., 2011; Baker, Wang & Walberg, 1995). Teachers are regarded as the role players in the development and implementation of effective inclusive education systems (Ainscow, 2007). In the case of the current research, the inclusion of hearing-impaired learners in the private regular Dubai school system in order to promote inclusion will be the focus.

There are discrepancies amongst studies regarding teachers' attitudes towards inclusion, where some studies have shown a positive attitude towards the general philosophy on inclusion, and others stating that teachers hold serious reservations about the practice of inclusion (Friend & Bursuck, 2002). Research has also shown that teachers' attitudes differ according to the type of special needs that the learner may have and the experience the teacher has with such special needs (de Boer et al., 2011). Contrary to the before statement made by de Boer et al. (2011), teachers endorse the inclusion policy in general, however, teachers are not consistently directly involved in implementing the inclusion policy when it may affect their own teaching practice (de Boer et al., 2011). Teachers' opinions regarding inclusion may also vary according to the learners' special needs (de Boer et al., 2011).

In May 2010, the Ministry of Education (MOE) in Dubai implemented the "School for All" policy under Federal Law 29/2006 (Ministry of Affairs, 2010). It is important to note that the "School for All" policy has granted equal access in schools to all students, including those with physical, sensory and intellectual special needs, into the private and government regular schools (Gaad, 2011). Under the "School for All" policy, all children, regardless of their areas of strength and weaknesses, are part of the school community (Hassan, 2008); including children with diagnosed hearing impairment. Although the policy

is directed towards both government and private schools, the current research focused on only private regular schools in Dubai.

The 'pull-out system' was thus implemented within Dubai schools, where the hearing-impaired learners are taken to a special classroom for further teaching and academic assistance (Bradshaw, Tennant & Lydiatt, 2004). The learners are thus taken out of the classroom for a period of time, usually 30-60 minutes, and receive separate one-on-one tutoring, focussing on the areas of difficulties that the learners encounter within the regular classroom setting (i.e. extra reading lessons, homework, recap of classroom lessons) (Moore, 2008). Depending on the learners' needs, which would be stipulated by the classroom teacher, and the learning support department within the school, additional support for the hearing-impaired learner outside of the classroom may be on a daily or weekly basis (Stanovich, 1999). The 'pull-out' system however, may lead to stigmatization, discrimination and fragmented learning (Saland & Duhaney, 1999), which in turn would essentially go against the aim of inclusion within the private regular Dubai school system.

As the number of hearing-impaired learners increases in private regular schools across Dubai, the challenges faced by teachers within the regular school system would thus essentially increase (Lewis & Shaheen, 2010). It is therefore imperative that information regarding the classroom teachers' perspective of inclusion for hearing-impaired learners within private regular schools in Dubai be documented. Teachers working with hearing-impaired learners or offering in-class support to learners with special needs (e.g. hearing impairment), should be encouraged to share their knowledge and gained experience with their colleagues who could potentially have a hearing-impaired learner in their classroom. The information regarding how to assist hearing-impaired learners within the classroom should be shared amongst the teachers, the school management and outside support systems, and

concerns or perceived barriers discussed, thus ensuring the hearing-impaired learners' optimum academic learning and overall development.

The current study was thus conducted within Dubai private regular English-speaking schools who integrate hearing-impaired learners in their school in order to strive for inclusive education, and where the "School for All" Policy was stated as being implemented within the school.

**2.3. Hearing-impaired and deaf learners**

Hearing-impaired learners are those learners who have mild (31-50dB) to moderate (51-70dB) hearing loss (Marschark, et al., 2002). Learning and acquisition of speech, and at times language acquisition, is gained through the use of residual hearing (Marschark, et al., 2002). Although hearing aids are useful, sounds are often distorted and visual cues or communications skills are often required to assist with this. A severe to profound hearing loss (+70dB) is classified as deaf. According to Bell (2016), hearing can be defined as the ability to perceive auditory sounds, thus, a child who has a hearing impairment has difficulties perceiving or identifying sounds. These sounds occur over a wide spectrum of frequencies expressed in decibels (dB). The frequency range for the human ear is generally between 150 Hz to 8000 Hz. Hearing impairment can be unilateral (i.e. in one ear) or bilateral (i.e. in both ears). Sound occurs over a wide spectrum of frequencies. The inability to hear sounds within the frequency range is known as hearing impairment. For children under 15 years of age, disabling hearing impairment is defined as permanent unaided hearing threshold level (average for frequencies 0.5, 1, 2, 4 kHz) for the better ear of 31 dB or greater (Bell, 2016). Categories of hearing impairment range from "no impairment" to "profound impairment" according to the threshold. Therefore, for children "disabling hearing impairment", means the same as moderate or worse hearing impairment.

These learners rely primarily on their sense of vision to acquire language and for academic learning within any setting. Most deaf children have great difficulties learning from their everyday surroundings due to the sound distortion created by neural damage, even when hearing aids are fitted (Marschark, et al., 2002). The main difference between hearing-impaired and deaf learners is in the capacity that a hearing-impaired learners' ability to acquire spoken language (Marschark, et al., 2002). At the time of the current research, there was no evidence and study with which the research could obtain information regarding Deaf communities and culture within Dubai. Thus, for the current research, learners who have a profound hearing loss will be referred to as 'deaf' learners. As the hearing-impaired learner may naturally acquire spoken language throughout their lives, they have a greater ability to cope within the classroom environment, with or without hearing aids. However, the deaf learner has not acquired the correct grammar and use of spoken language due to their diminished ability to hear. A hearing impaired learner will start school needing to first acquire their first language, in addition to being far behind their peers in language skills and social skills.

**2.4. Hearing and the auditory system**

As the current research dissertation is aimed at inclusive education of hearing-impaired learners, professionals who are not trained audiologists but rather educators and other staff in school systems are a focus reader. The hearing system would need to be understood in order to increase understanding of the importance of accommodations for hearing-impaired learners in the classroom. The 'normal hearing ear' needs to be understood and explained prior to establishing an understanding of deficits, which may be associated with hearing impairment. This explanation would thus include the language and comprehension of learners with mild hearing impairment to profound hearing impairment, either unilateral or bilateral hearing loss. The concept of "hearing" can be simply explained

as the gathering of sounds and then the interpretation of the sound heard.

Each part of the ear is involved in the sequence of events which, transports the sound heard or "gathered" from the outside world to the brain to be interpreted. The outer ear, or the part that is visible, is called the pinna. The pinna gathers the sound and sends it through the ear canal towards the eardrum, which is known as the tympanic membrane. The tympanic membrane then begins to vibrate causing the ossicular chain to also move turning the sound waves into mechanical energy. Each bone of the ossicular chain is individually named: the malleus, incus and finally the stapes. The movement of the ossicular chain carries the sound from the eardrum to the inner ear through the oval window (Duthey, 2013).

The inner ear, which is embedded in bone, contains the cochlea and the semicircular canals (which control the sense of balance). The cochlea is considered the main sensory organ of the ear and is therefore essential for hearing. The fluid in the cochlea moves in response to the mechanical energy released by the ossicular chain. The stereocilia within the cochlea convert the mechanical energy into electrical impulses that are transmitted by neurons along the auditory nerve carrying the sound message to the brain (Duthey,2013).

Finally, the Eustachian Tube, which runs between the middle ear and the back of the throat, controls the air pressure within the middle ear (Duthey, 2013). The figure 1, taken from The Nassau Guardian (https://thenassauguardian.com/2016/09/27/types-and-causes-of-hearing-loss-in-children/ on the 8th July 2019), is a graphic representation of the ear structure in order to visually illustrate what was described above regarding the ear system.




*Figure 2. Ear Structure cited from https://thenassauguardian.com/2016/09/27/types-and-causes-of-hearing-loss-in-children/*

With the understanding of how the ear system works, different types of hearing loss can now be described to further increase comprehension of hearing impairment.

**2.5. Types of hearing loss**

According to Pottas (2005) teachers' perspectives of the hearing-impaired learner and their knowledge about hearing-impairment are related. It would thus be important for teachers to have a background knowledge of the types of hearing loss and the effect that they may have on the learners development in the hope of gaining a positive attitude towards the hearing-impaired learner.

Hearing loss can be classified into three different types, namely: conductive hearing loss, sensorineural hearing loss and mixed hearing loss, with varying degrees of hearing loss as seen in table 1 and figure 2. These classifications are based according to which part of the

ear has experienced some kind of damage. According to Duthey (2013), each classification can be defined as follows:

- A *conductive hearing loss* (CHL) is when sound is not conducted efficiently through the external ear canal to the eardrum and the ossicles (i.e. bone chain) within the middle ear. This type of hearing loss usually involves a reduction in the ability to hear soft sounds and can be corrected medically or surgically. Thus, as this type of hearing loss can be corrected (Duthey, 2013), the inclusion of children with a conductive hearing loss once corrected, would not have a great difficulty for the teachers to assist these learners. Transient hearing difficulties, as with middle ear infection, are corrected with medications. Once the infection has been cleared through medical treatment (Duthey, 2013), the hearing impairment would no longer affect the child's ability to hear within the classroom. If the learner has been fitted with hearing aids, the teacher would require training in how hearing aids work and possibly the use of an FM system, which is explained in section 2.8 below.
- A *sensorineural hearing loss* (SNHL) generally occurs when there is damage to the inner part of the ear (i.e. the cochlea). Or, it occurs when the nerve pathways from the inner ear to the brain have been damaged. SNHL is classified as the most common type of hearing loss and cannot be medically treated, unless the learner is a candidate for a cochlear implant fitting. For the learners who have permanent hearing impairments, effective inclusion within the classroom would be highly dependant on the quality of the teacher and their impact on the learner's achievement (Marschark, et al., 2002)
- A *mixed hearing loss* is a combination of both the outer pathway to the middle ear and the inner ear being affected or damaged. With a mixed hearing loss, both the conductive and sensorineural components of hearing are reduced. However, the

sensorineural pathway of hearing is better by ten or more decibels (Roeser, Buckley & Stickney, 2000). This is known as the "air-bone gap".

*Table 2. The degree and type of hearing loss in children (Roeser, et al., 2000).*

| DESCRIPTION | RANGE |
|---|---|
| Slight hearing loss | 16-25 dB |
| Mild hearing loss | 26-40 dB |
| Moderate hearing loss | 41-55 dB |
| Moderate to severe hearing loss | 56-70 dB |
| Severe hearing loss | 71-90 dB |
| Profound hearing loss | >90 dB |

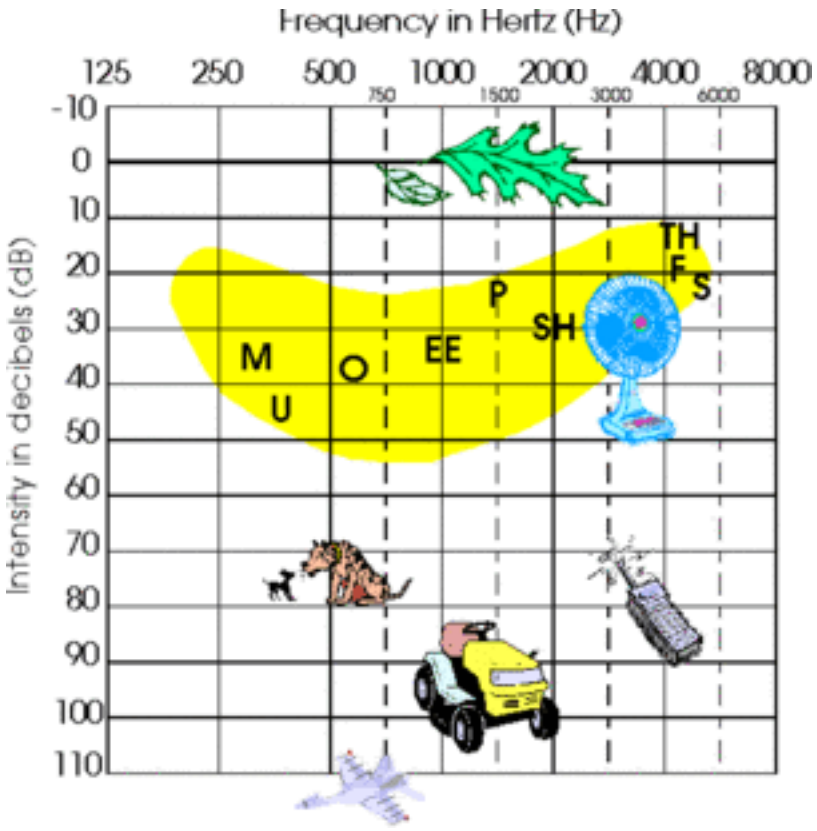



*Figure 3. A representation of how degrees of hearing loss can affect the ability to hear speech sounds. (Cited from https://www.agbell.org/SpeechBanana/ on the 8th February 2017).*

Having the types of hearing loss in mind, and the effects and degree each type would have on the development of language and learning skills, the age of onset would thus play a significant role in language and academic development.

**2.6. Age of onset of hearing impairment and the development of verbal spoken language skills.**

There is a link between the onset of hearing impairment and the development of verbal spoken language skills. It is of the utmost importance to detect any hearing impairment as early as possible (Hallahan & Kauffman, 2006). It would be more difficult for a child to develop verbal spoken language and be able to develop both socially and academically, the earlier the hearing impairment develops and where no intervention is implemented (Hallahan

& Kauffman, 2006). When a child's hearing impairment is identified prior to starting school, intervention strategies and treatment begin (Marschark, et al., 2002) in order to assist the child in developing the required skills for school learning. Learning strategies and techniques would thus be set in place prior to the child starting school and provisions would be made for them which are directly related to their individual needs (Gaad, 1998). As these strategies are set prior to the commencement of school, the teacher can be prepared for what the learner may require within the class, and assist in effective inclusion.

Hearing impairment can be classified as pre-lingual (i.e. for those children who are born with hearing impairments prior to language development) and post-lingual (i.e. children who develop a hearing impairment after birth and language development) (Hallahan & Kauffman, 2006).

According to Frederickson and Cline (2002), pre-lingual deafness may be caused by the following:

- Maternal illness (e.g. German measles/rubella contracted by the mother, especially during the first trimester of her pregnancy where the virus attacks the unborn baby).
- Cytomegalovirus (CMV), which is another maternal viral infection that attacks the unborn baby.
- Genetic deafness, which means that the deafness is hereditary in nature.
- Birth complications and/or premature birth (i.e. before 37 weeks gestation).

Following on from pre-linguistic deafness, Frederickson and Cline (2002) also stated possible causes of post-lingual deafness, which would also impact the learners' language and academic development. These factors include:

- Middle ear infections (i.e. otitis media). This is known as the most common form of hearing loss in children if it fluctuates over time.

- Meningitis: an infection of the central nervous system covering of the brain, which, could extend into the brain and ears, causing deafness. Learners who become deaf as a result of meningitis are usually profoundly deaf and the majority of these learners do not benefit from hearing aids.
- Accidents and blows to the head.
- High fevers, mumps and measles.
- The side effects caused by certain types of medication (i.e. ototoxic medications).

There may be other causes of hearing impairment, and the above stated outlines some possible causes. As the research is aimed for educational sector and not medical, causes of hearing loss, which would impact on successful inclusion of the hearing-impaired learners, have been the focus of the research literature.

**2.7. Identification of hearing impairment**

Early identification, and/or early detection by teachers, of hearing impairment is imperative as verbal spoken language development is reliant on a child's hearing abilities (Downs & Yoshinaga-Itano,1999). Therefore, having a child's hearing acuity tested early and detecting a hearing impairment at an early stage of the child's development, is a vital component in supporting hearing-impaired learners within their environment and in their academic performance, as intervention strategies can be put into place from an early age. According to Anderson (1999), it is never 'too' early for children to have their hearing acuity tested. Magnuson (2000) adds that young children with profound hearing loss who receive early intervention services have much better outcomes than those who do not.

It has been reported that in order for teachers to play an active role in identifying a possible hearing impairment and thus early identification of this, they need to be educated about the following signs (Frederickson & Cline, 2002):

- Are the children's reactions often slow in reaction to instructions, or do the children constantly ask for repetition of instructions, immediately after instruction is given?
- Do the children watch their peers to see what they are doing and then copy them?
- The children's hearing is inconsistent. For example, when they stand on one side of the classroom, they are able to hear but not when standing on the opposite side?
- The children often misinterpret information and questions, or responds to only part of what was said?
- The children are not able to locate a speaker or the source of a sound, especially in noisy conditions?
- The children present with poor concentration or daydreaming during group discussions or carpet time?
- The children present with delayed language development (e.g. immature use of syntax, limited vocabulary)?
- The children have difficulties in repeating words or sounds during phonics?
- The children present with poor articulation skills (i.e. they make speech errors) or they confuse similar sounding words (e.g. mat-cat)?
- The children may be disruptive during lessons that require learners to listen?

**2.8. How hearing-impaired learners access information through the auditory system**

Hearing-impaired learners may benefit from the use of some type of technology in order to provide the children with better access to auditory information. According to Duthey (2013), learners with a mild hearing impairment may benefit from some assistance in noisy environments (e.g. classrooms, malls). The most common forms of assistive devices for school-aged children are hearing aids, cochlear implants and frequency modulation (FM) systems.

### 2.8.1. Hearing aids.

Hearing aids are the most common form of hearing assistive devices. The hearing aid is used to amplify the sounds heard in the child's immediate environment, thus making them audible for the learner (Duthey, 2013). Each hearing aid chosen, generally recommended by a trained audiologist, is individualized for the child being fitted and according to the child's presenting hearing impairment (Duthey, 2013). The main type of hearing aids for children are behind the ear (i.e. the most powerful hearing aids) (Marschark et al., 2002).

Hearing aids are generally fitted after the hearing impairment has been diagnosed in order to assist the child in being exposed to auditory information, thus assisting in acquiring spoken language development (Marschark et al., 2002).

When a school-going child is fitted with a hearing aid, or when a child enters a school wearing hearings aids, it is essential that the teacher be efficiently trained in how the hearing aids works (i.e. that she is familiar with the correct operation and maintenance of the aid) and that the teacher works closely with the parents, medical professionals and therapists in all areas required (Hallahan & Kauffman, 2006), in an attempt to ensure maximum benefit for the child and their social and academic development. It is often beneficial for the audiologist or speech-language therapist to train both the parent and teachers together in the operation of the hearing aids, or any other device recommended for the child.

### 2.8.2. Cochlear implants

Cochlear implants are fitted for those children that have a profound sensorineural hearing loss and are generally only fitted after the use of hearing aids has not sufficiently benefitted the child (Porter, 2002). The sound that is provided by the cochlear implant differs from hearing aids, as it bypasses most of the child's hearing system providing an electrical stimulation to their auditory nerve (Porter, 2002).

A cochlear implant consists of a thin electrode implanted inside the child's cochlear

of the inner ear and a speech processor worn externally by the child (Porter, 2002). The cochlear implant should be used simultaneously with an ongoing intervention program in order to assist the child in using a combination of auditory and visual means to learn and communicate, rather than relying solely on visual input. According to Waltzman and Roland (2006), children who have cochlear implants have a fast rate of language learning and overall language achievement.

As with hearing aids, it is important for teachers working with learners who have a cochlear implant to know how to monitor the implants, know the parts of the cochlear implant, how each part works and be familiar with the settings of the device (Mahshie, et al. 2006). The teacher is also then able to assist in teaching the child how to independently monitor and check his/her own device.

### 2.8.3. Frequency Modulation (FM) systems

Hearing aids and cochlear implants can be used alone to enhance the child's language and overall development (Mahshie et al., 2006). As their effectiveness is greatly reduced in some situations, they are often used in conjunction with other devices (Mahshie et al., 2006). According to Mahshie et al. (2006) the combination of devices is essential in the school and classroom setting (Mahshie et al., 2006).

The FM system may assist the child with the following (Davies, et al., 2001):

- The distance the child is from the teacher.
- The background or environmental noises (i.e. air conditioning system, road traffic).
- The sound reverberation (i.e. the persistence of sound reflecting off hard surfaces) within the classroom.

The FM system requires the teacher to clip a microphone near to their mouth (e.g. on shirt collar) and the transmitter can be clipped onto their belt or pocket (Scherer, 2003). The signal is then directly transmitted to the learners' hearing aid through ear-molds, headphones

or a loop depending on which FM system is chosen. The benefits of using FM systems for the learner include the following:

- The signal to noise ratio is reduced, thus improving the clarity of speech heard and increasing the child's language development, speech understanding and academic progress.
- With a decreased signal-to-noise ratio, the child's attention span is improved, distractibility is reduced and sound awareness improved.

With the implementation of assistive devices for the hearing-impaired learner, which would be dependent on their individual needs, the acquisition of skills can be addressed.

## 2.9. Skill development, which may require additional support for hearing-impaired learners

All children, regardless of the difficulties they may have, require a certain set of skills in order to learn (Marschark et al., 2002). Some hearing-impaired learners may require extra support in learning these skills due to their hearing impairment. It is therefore important for teachers to have the knowledge regarding the different components of cognitive development (i.e. sensorimotor, proprioceptive and operational) in order to understand the unique characteristics of hearing-impaired learners (Marschark et al., 2002). Knowledge of those skills will allow the teachers to develop instructional materials, teaching strategies and learning environments that will assist the hearing-impaired learners to focus on using their strengths to compensate for their area of difficulties identified or faced (Marschark et al., 2002).

### 2.9.1. Developmental skills

A child's developmental skills include the below stated areas.

#### 2.9.1.1. Motor skills

The children's motor developmental skills are based on their capabilities to move

around and to control deliberate movements of various body parts (Owens, 2008). These movements require both muscle development as well as a mature age-appropriate central nervous system (Hannaford, 2005). The children's various movements assist in integrating new information and experiences in their world, as it is a vital part in all actions made and thus increases learning and understanding of their world (Hannaford, 2005).

The children's motor skills can be divided into gross motor (i.e. large muscle) and fine motor (i.e. small muscle) movements. As their motor skills develop, the hearing-impaired learners are able to develop more specific and refined language and academic skills (Horn, Pisoni & Miyamoto, 2006). According to Willis (2008), gross motor activities can be defined as the movements children make using their whole body (e.g. walking, jumping, running). Gross motor skill development occurs prior to fine motor development (Brown & Brown, 1996). When children do not have the opportunity to play and explore their environment, their gross motor development is delayed, thus delaying other areas of their development (Lieberman, et al., 2004). According to various research studies conducted, Brown and Brown (1996) state that children who do not develop efficient gross motor skills will experience failures in development at school, both academically and socially.

It has been reported that hearing-impaired learners generally experience difficulties in gross motor skills, namely balance, dynamic coordination, visual-motor skills, reaction time and catching a ball (Horn, et al., 2006). Horn, et al. (2006) also state that the neurological difficulties of a hearing-impaired learner may be responsible for the delays in their motor skills, as well as environmental factors such as type of schooling and parental involvement in physical activity also appear to influence their motor development. Therefore, in order for a hearing-impaired learner to develop their gross motor skills, they need to actively partake in every aspect of movement and balance (e.g. climbing, riding a bike) which may need to be as part of an intervention program specifically developed for the hearing-impaired learner

(Hannaford, 2005). Intervention programs for hearing-impaired learners are developed in such a manner that they could be used with all other students in the class if shown to the teachers, as the majority of children enjoy gross motor activities (Hannaford, 2005). Borker (2010) has stated that activities conducted outside are an ideal situation to encourage hearing-impaired learners to actively partake in activities and develop their gross motor skill set.

The following are some activities that can be used by teachers in the regular school setting to develop gross motor skills (Rasmussen, 2004):

- Running races, "catches" or climbing games: Assist in the possible promotion of coordination and balance.
- Hopscotch and skipping: Promotes balancing body on feet.
- Ball and bat games: Although these are more difficult, they encourage overall gross motor skills.

Fine motor skills involve the use of the small muscles in the fingers, the manipulation of hand and arm, and control and usage of tools and materials (Owens, 2008). Another important fine motor skill that is required as the foundation for writing and drawing is hand-eye coordination (Owen, 2008). Coordination skill development is essential in order to attain other important skills. According to Horn, et al (2006), hearing-impaired learners often develop fine motor skills at a slower rate than their hearing peers. Due to the link between coordination and the attainment of other developmental skills, the assumption would be that there is a link between motor skill development and language development, suggesting that auditory deprivation leads to atypical motor development, and that motor and language skills share common cortical processing resources. The structure of a hearing-impaired learners' environment also plays a role in their motor skill development (Marschark et al., 2002). Hearing-impaired learners often feel frustrated and anxious, which may lead to low self-esteem when they have poor fine motor skills, as they experience difficulties in performing

everyday tasks. This may cause the teacher of hearing-impaired learner to develop a negative attitude towards them as a fear of lack of knowledge of how best to assist the hearing-impaired learner's needs (Marschark et al., 2002).

The following are various ideas for teachers of hearing-impaired learners to assist in fine motor development (Owens, 2008):

- Traditional activities, such as threading, drawing, painting, gluing or cutting with scissors.
- Hide objects inside play-dough or Thera putty for the children to find.
- Add textures to the play-dough to make it more interesting (e.g. rice, sand).
- Use tongs or large tweezers for sorting items into categories or placing in dishes.
- Any range of construction materials (e.g. Lego, blocks), or carpentry tools.

*2.9.1.2. Sensory skills*

The most important factor to consider in a child's development is how the child is able to integrate their senses in order to learn from their environment (Kurz, 2006). These senses include the most common systems which most people are aware of: sight, hearing, tactile, smell and taste. However, there are other systems that also impact on the child's development. These include body awareness within space, laterality, vestibular, rhythm and awareness of time. According to Zwierzchowska, et al. (2004), hearing-impaired learners normally obtained average or high scores in tests evaluating motor adjustment, space orientation and body awareness. However, they found that they scored low on tests of laterality and balance, proving to be a hearing-impaired learners' most problematic area.

Laterality can be explained as an individuals' internal awareness, or knowledge, that their body has two sides and that these sides are different. Although children may be aware that their bodies have two sides, they are not always aware of the names of the sides (i.e. left

and right). Once the child is aware that they have two sides to their body, they are now able to move each side in a different manner from the other, or opposite side, and they are therefore able to execute desired movements (Cheatum & Hammond, 2000). According to Hovivian and Hovivian (2009), a hearing-impaired learner will have left-side dominance, and show patterns of movement that is more left-side dominant compared to their hearing peers for unilateral hearing impairments. Children who present with laterality difficulties have been reported to have letter and number reversals both in written and reading forms (Hovivian & Hovivian, 2009). It was also reported that children with laterality deficits have difficulties with mid-line crossing (i.e. moving from left over the center to the right and vice versa) which greatly impacts on their sporting abilities, reading and writing skills (Hovivan & Hovivan, 2009). The following exercises can be used to increase laterality skills and assist the right side to work independently (Cheatum & Hammond, 2000):

- Tossing light weight objects in the air and catching with right hand.
- Rhythmic music (i.e. drumming) can be used to accompany exercises involving one limb only, two limbs simultaneously or two limbs alternatively.
- Tug of war games between peers where they are only allowed to use their dominant side and then their weak side.
- Crawling like a cat promotes midline crossing.
- Placing objects on the right side of table, and the child is required to pick up with right hand and place in bucket on left side of the table and vice versa.

The other sensory system that is greatly affected in hearing-impaired learners is that of balance. This is a biological system that enables the child to know where their bodies are in the space and assists in maintaining that position without falling over or feeling dizzy (Zwierzchowska et al., 2004). Thus, due to their difficulties with balance, hearing-impaired

learners tend to be clumsy and accident prone.

According to Seevers (2009), the following activities may assist teachers to improve the hearing-impaired learners balancing skills:

- Standing on one foot for short periods of time.
- Balance beams which they are required to walk along.
- Gymnastic activities.
- Cross crawls and other brain gym activities that are completed slowly.
- Walking up a hill or up stairs.

Consultation with therapists who are trained in sensory integration would greatly benefit the hearing-impaired learner, where an individualised program can be developed for them, as well as effectively training the teacher to correctly carry out the activities during school hours.

#### *2.9.1.3. Perceptual skills*

Perceptual skills can be defined as the ability to add meaning to information obtained through your senses. Limitations experienced by the auditory system may lead to decreased abilities of all the child's senses (Erden, et al., 2004). The main perceptual difficulties experienced by the hearing-impaired learner are visual and auditory perception.

There is no evidence-based research that proves that hearing-impaired learners use their visual perception more effectively than their hearing peers. However, their visual modality is important. Marschark, et al., (2002), reported that there is no evidence to support that the hearing-impaired learner performs better, worse or the same as their hearing peers on visual tasks. In fact, when doing activities involving visually oriented movement coordination, hearing-impaired learners showed lower performance and lower reaction time than hearing learners (Savelsberg, et al., 1991).

The following activities are ideas for the teachers to stimulate visual discrimination, spatial relationships and memory skills (Kurtz, 2006):

- Sorting shapes according to shape, colour, size, or other attributes.
- Stringing beads according to colour or shape sequence copying a picture given to the child.
- Playing bingo or lotto games using colours and shapes.
- Building puzzles and tracing shapes or letters on a piece of paper.
- Reading a comic strip to the learner, then cut apart the segments and the learner is required to re-arrange the story in the correct order.
- Show the learner a group of objects then cover them with a cloth and remove one. Ask the learner to name the object that was removed.
- Create a design using blocks, beads, pegs, or crayons, hide the design and ask the learner to copy it from memory.

On the other hand, auditory perception involves the ability to interpret and organise stimuli perceived by the auditory sense (i.e. hearing), including auditory discrimination, auditory memory or sequencing, auditory figure-ground discrimination and auditory comprehension or decoding. Severe auditory difficulties are noted with hearing-impaired learners due to their inability to efficiently hear (Dechant, 1991). This can be seen due to their slower language development, inadequate articulation skills and poor speech intelligibility skills, poor performance in auditory discrimination tasks, difficulties correctly following oral instructions and poor recall (Dechant, 1991).

The following activities can be used by the teacher to assist with stimulating auditory skills (Paul, 2008):

- Identifying single items at the beginning of sentences, the end of sentence and then in

the middle of the sentence.

- Identifying objects by listening to the descriptions given.
- Listening to a story and answering questions directly related to the story.
- Ask the learner to listen out for a particular word (e.g. fire truck or doorbell) while the teacher reads a story with a repetitive theme. The learner can perform an action whenever the target word is heard.

*2.9.1.4. Concentration*

Hearing-impaired learners present with difficulties in their ability to concentrate and their attention span, when compared to hearing learners. This is especially true in the presence of background or environmental noise (Marschark, et al., 2002). Hearing learners have the ability to simultaneously listen to the person who is talking and visually pay attention to their environment (Marschark et al., 2002). Whereas hearing-impaired learners, will shift their attention to visual attention in order to receive a message from their communication partner; thus dividing their attention between the environment and the person communicating with them (Adams, 1997). This is known as divided attention. Therefore, if a task requires attention in a single dimension, the hearing-impaired learner will perform in the same manner as a hearing peer. However, for tasks that require two or more dimensions simultaneously, the hearing-impaired learner will perform more poorly than their hearing peers (Marschark, et al., 2002).

Hearing-impaired learners present with enhanced visual attention to peripheral stimuli (Marschark & Hauser, 2008). This is more than likely a developed coping mechanism, which will assist the hearing-impaired learner to pay attention to danger, peers or teachers seeking their attention and environmental factors, which will lead to learning. Thus, teachers of hearing-impaired learners would need to be aware that visual stimuli could possibly distract the hearing-impaired learner from other forms of stimuli and activities (Marschark & Hauser,

2008).

The activities below can be used by teachers to assist the hearing-impaired learners' concentration skills (Ballard, 2008):

- Puzzles, word games, guessing games and memory games and other games that require an active brain.
- Establishing routines within the classroom.
- Teaching the learners patterns and sequences.
- Encourage shared reading to increase visual cue focus and encouraging the child to ask questions which increases comprehension.
- Listening carefully for specific instructions and then performing the required actions (e.g. Simon Says).

#### *2.9.1.5. Memory*

Memory involves how the child stores information received and then how they retrieve this information when required (Reed, 2005). There are mainly two types of memory:

The first, is known as short-term memory or working memory. This fundamental system allows learners to retain presented stimuli for short or brief periods of time (Marschark & Spencer, 2003). Research has reported that hearing-impaired learners demonstrate with inconsistent intentional initialization of prior knowledge when attempting to recall information and that they failed in remembering stimuli within a multi-dimensional nature. It was also reported that hearing and hearing-impaired learners encode information differently, and that hearing-impaired learners verbal-auditory recall is lower than that of their hearing peers (Schultz, 2000).

Short-term memory skills can be enhanced with the following activities (Marschark & Spencer, 2003; Marschark & Meyer, 1998):

- The teacher shows the learner a picture or object for a brief moment, then place object behind their back and ask the learner to tell the teacher what they saw.
- Play naming games, where the learner must either repeat items named by the teacher, or take turns naming items while increasing the list. For example: I went to the zoo and saw a lion. Then the learner says, I went to the zoo and saw a lion and a monkey. And so on.
- The teacher can show the learner a sequence or pattern. The pattern is then moved away, and the learner is required to repeat the pattern. This can be done with letters, blocks or any objects.

Long-term memory, or semantic memory, on the other hand, refers to the information learned from a variety of external sources, which needs to be retrieved at any given stage, even when not used immediately or often (Marschark, et al., 2002). This access to information stored needs to happen spontaneously within the context the child finds itself. Long-term memory skills impact on the child's learning abilities in conjunction with short-term memory skills. When comparing hearing-impaired learners to their hearing peers, it was found that verbal concepts of hearing-impaired learners was less homogenous, and that they had word meaning concepts that were less interconnected, not as readily available and not as clear in understanding (Marschark & Spencer, 2003). Therefore, memory retrieval, problem solving, reading and semantic meaning was not as directed. Thus, emphasis should be brought to understanding of cognitive skills and knowledge in order to increase academic success.

The following techniques can be utilised by the teacher of hearing-impaired learners to assist with long-term memory (Stevens, 2007):

- The teacher can provide tasks that require word retrieval skills, like cross word

puzzles and convergent thinking games. These tasks stimulate thought processes and the ability to recall.

- Memory card games where the child is required to remember where pictures are or were seen and match with new turned over card.
- Place objects around the room and allow the child to walk around finding them, then when the child returns to the teacher, they are required to name all the objects they found.
- Once a child has developed the above stated developmental skills at an age appropriate level, academic success can be more readily attained.

### 2.9.2. Academic skills

Below are the academic skills required in the development of language skills for both hearing and hearing-impaired learners.

#### *2.9.2.1. Language*

A normal part of a child's developmental skill set is the development of their language skills as they discover the world in which they live. Hearing-impaired learners often only begin to develop language post the important age of language acquisition due to insufficient access to communication. According to Marschark, et al., (2002), a hearing-impaired child's parents and teachers often struggle to find a balance between fostering effective early communication skills which, according to research findings is usually best achieved through sign language, and the provision of English skills needed for literacy and academic success.

Watermeyer, Swartz, Lorenzo, Schneider and Priestley (2006) state that when a hearing-impaired learner has access to Sign Language, their social development is not hindered. However, in regular school systems like Dubai, where there is a vast variety of nationalities, both with teachers and children, it would be near impossible to implement one

form of Sign Language. It has also been stated that hearing-impaired learners are best supported and educated by teachers who are also hearing-impaired (Watermeyer, et al., 2006). This would cause further implications within regular private Dubai schools, as the difficulty will be faced for the hearing learners within the class of a hearing-impaired teacher using sign language as a mode of communication and teaching. They also maintain that deaf learners who are prevented from using Sign Language become isolated from the Deaf community. Thus, the social isolation that an orally educated hearing-impaired individual can suffer comes from not feeling comfortable or fully capable in either the Deaf or the hearing community. On the contrary to the before stated, is the oral approach to communication and teaching of hearing-impaired learners, in which auditory-verbal communication is advised. The oral approach includes the use of auditory training, speech and lip-reading as forms of learning language. The main aim of this approach is teaching the hearing-impaired learner to use their residual hearing in order to learn and develop (Doyle & Doyle, 2002).

Although both approaches to language development and communication are on opposite ends of communication modes, both approaches have strengths, which can assist the hearing-impaired child in developing their language and academic skills. A combination of both of these approaches is known as the "Bilingual Approach to Deaf Education" (Engelbrecht & Green, 2003). This combined approach uses Sign Language of the Deaf community as the child's first language, and spoken language as the child's second language, thus showing how hearing-impairment is not a barrier to language development, academic success and social integration (Engelbrecht & Green, 2003), ensuring that the hearing-impaired learner is able to participate fully in both the Deaf community and the hearing world. However, in order for the hearing-impaired learner to fully develop spoken language, a strong support team is essential, including the educational programme set in place for the child supporting both oral and aural information (Marschark, et al., 2002).

*2.9.2.2. Reading*

At any stage of development, regardless of early intervention or not, reading skills are a complex and challenging task for all children. In order to develop successful reading skills at any level, a variety of skills are required to work simultaneously and with ease. Second language reading learners, in the case of the schools involved in this research, English, pose an even greater difficulty and should not be over-looked. The most common difficulties faced are for those children who struggle with decoding skills at any or all levels, access to vocabulary and grammar skills (Kelly, 1995). Hearing-impaired learners often lack in reading experience and thus show reduced decoding abilities during spontaneous tasks (Kelly, 1995). It was reported that hearing-impaired learners often do better when reading in context and when sentences are simple and repeated within the passage read (Marschark, et al., 2002).

Another factor which negatively impacts on the hearing-impaired learners' ability to develop fluent reading skills, is that hearing impairment prevents incidental language acquisition resulting in limited vocabulary and syntactic comprehension (Marschark & Spencer, 2003). Their limited understanding of syntactic cues will also negatively affect their ability to rely on context cues to derive meaning from what was read. Grammatical structures that present as the most difficult are questions, pronouns and embedded meanings (Marschark & Spencer, 2003).

The following can be used by teachers to assist with increasing the hearing-impaired learners reading skills (Marschark, et al., 2002):

- Find what the child is interested in and provide reading materials related to this.
- Encouraging the child to read aloud, or reading to the child while they follow in the book.
- The teacher can pick out new vocabulary in the book to be read and explain the meanings to the child prior to reading the book. Creating a mini word dictionary for

the child also assists with this.

- Ensure that the new vocabulary is understood within the child's natural or everyday context to enhance understanding of the words.
- After reading, give the child the opportunity to explain the story in their own words to test their comprehension of what they have read.

*2.9.2.3. Writing*

Many children, both hearing-impaired and their hearing peers, have difficulty in producing work in written form (Rief & Heimburge, 2006). There is a known discrepancy between what a child knows and is able to express verbally, to what they produce on paper (Rief & Heimburge, 2006). For the child who has difficulty verbally expressing their thoughts and knowledge, written form will prove even more difficult for them (Rief & Heimburge, 2006). Thus, hearing-impaired learners will produce shorter, simpler sentences in written form than their hearing peers. They also have greater difficulty with figurative writing tasks and tend to produce concrete literal sentence forms (Marschark, 2007). Hearing-impaired learners will also leave out words when writing sentences, use fewer descriptive words as well as use minimal adverbs and conjunctions when writing. As the hearing-impaired learners often follow the simple subject-verb-object (SVO) sentence formation is their writing tasks, the use of nouns and verbs was equivalent to their hearing peers (Landsberg, et al., 1999). These errors in writing are found to be equivalent to those learners who are second language learners.

Teachers are able to use the following activities to assist with writing skills (Wallace, Stariha & Walberg 2004):

- The teacher can allow the child to plan their writing task first, either with the use of a mind-map or writing a draft. The child is then able to edit their work and add any additional information they may come up with.

- Allow the child to read good literature in which they can model their writing on in terms of grammar and syntactical components.
- Ask the child to write about topics that they are interested in, or where their vocabulary set and knowledge of the topic is greater.
- Encourage the hearing-impaired learner to first talk about the topic prior to expecting them to write about it.
- Constantly praise the child for their efforts and provide positive encouragement throughout the writing tasks. This will aid in developing a positive self-esteem, confidence and willingness to continue with the task at hand.

*2.9.2.4. Comprehension*

Children and adults alike read in order to gain comprehension and understanding of messages with a textual content. Comprehension is the main objective of reading. The level of comprehension attained depends on the reason for reading text, the level of text difficulty and their own knowledge of the topic at hand (Gunning, 1998).

According to the research conducted by Marschark, et al., (2002), they have stated that the main challenge for hearing-impaired learners within an education setting, is that of comprehension when reading. Marschark, et al., (2002) further stated that this difficulty with comprehension was mainly based upon their level of vocabulary. Hearing-impaired learners are more likely to "guess" word meanings rather than base the meanings on the content of the text. Although the hearing-impaired learner may be able to recall what was read, their comprehension of the text is often disjointed, less organised which may reflect as a lack of global comprehension. As hearing-impaired learners often gain auditory input that is degraded due to the hearing aid capability, they will miss parts of information, misinterpret other parts and depend more on visual cues more than their hearing peers (Marschark, et al.,

2002). Due to a lack of simultaneous access to both visual and auditory stimulation, hearing-impaired learners may be at a disadvantage with their incidental learning and they will miss exposure to a variety of cause-effect relationships involving multiple agents, objects and actions (Marschark & Hauser, 2008). Hearing learners may be at an advantage in gaining better comprehension, as they are able to utilise a combination of visual and auditory modalities (Marschark & Hauser, 2008). This also assists them in their learning and memory skills.

The following can be used within the classroom setting to assist the hearing-impaired learner (Gillet & Temple, 1990):

- Provide the learners with questions directly related to what they read. Encourage the learners to explain what they have read in their own words, or to act out the story.
- Use chunking in order to break up the text into sentences or paragraphs, where the children can either write one word showing meaning, or draw a picture next to the paragraph.
- The teacher can explain the main idea of the text to the children as well as explain new vocabulary.

*2.9.2.5. Mathematics*

In order for learners to reach their full potential, proficiency in mathematics is essential as mathematical learning teaches children patterns and relationships, and it has its own language describing terms and symbols (Ray, 2001). A learner whose hearing acuity is within normal limits acquires mathematical knowledge at a very young age and subconsciously learns the mathematical concepts required at each stage of their development. These concepts include pairing, comparison, sorting and quantity (Lewis & Norwich, 2005). With hearing-impaired learners on the other hand, these skills need to be taught at school. Thus, hearing-impaired learners are often behind in mathematical skills when starting school;

however, not as to such a degree as they are with their literacy skills (Lewis & Norwich, 2005). For example, studies have shown that the pattern of errors made by hearing-impaired learners in mathematics, are similar to that of their hearing peers.

It has been reported that various factors may prevent hearing-impaired learners from successfully comprehending mathematical knowledge. For example, a hearing-impaired learner has great difficulty taking part in group discussions and that they find it difficult grasp the mathematical concepts of volume, shape, size, comparisons and reasoning due to the specific language required in understanding these concepts (Ray, 2001). Hearing-impaired learners also have difficulties with comprehension of prepositions (i.e. spatial concepts; e.g. under, behind, in front of) as well as the language required for sequencing, manipulation of events and word-problem solving (Gregory, 1998). The reason for this, according to Ray (2001), is that hearing-impaired learners will rapidly proceed through the problems, rather than pause to think them through and thus create a logical plan.

Therefore, Ray (2001) recommends a "hands-on" visually engaging approach to assist hearing-impaired learners in cognitively developing mathematical knowledge, in a wide range of meaningful experiences. It is thus proposed that activities be purposeful and have relevance to everyday life so that the hearing-impaired learner experience the concepts in a context other than a purely mathematical one.

Teachers could therefore use the following strategies to assist the hearing-impaired learners in acquiring knowledge of mathematical concepts (Ray, 2001):

- Learners could also use pictures and drawing sets in order to visualise the mathematical problem at hand. This creates a contextual meaning to the problem.
- Allow extra time for the hearing-impaired learner to separate the image (e.g. diagram, chart) from the background and then the teacher can explain what is being shown.
- As the hearing-impaired learner has difficulty integrating both visual and auditory

cues, they are unable to view diagrams at the same time as listening to the explanation, thus, allow separation between the two.

- The teacher can introduce new vocabulary to the hearing-impaired learner prior to incorporating it into mathematical problems.
- The teacher needs to encourage the hearing-impaired learners to process new information, as well as encourage them to ask questions and relate new concepts to everyday life.
- The teacher may need to rephrase instructions or ideas until the hearing-impaired learner understands them, utilising all the senses by providing verbal, auditory, visual and tactile experiences.

In order for all areas of academic and social skills to develop for the hearing-impaired learner, certain accommodations and modifications within the classroom would need to be put in place, thus enhancing the hearing-impaired learners' development.

**2.10. Classroom accommodations and modifications required in order to support hearing-impaired learners**

The term "accommodation" has been used interchangeably with the term "modification," and there is a lack of consensus as to their formal meaning (Thurlow, Hurley, Spicuzza, & El Sawaf, 1996). This means that both accommodation and modification may be deemed as the same depending are where you are. Hollenbeck, Tindal & Almond (1999), made an attempt at clarifying the two concepts psychometrically in order to give two different meanings to these terms. They defined them as the following:

Accommodations are defined as the changes made in both testing and response methods so that the child is able to show their understanding and knowledge about the content without the teacher changing the construct, grade level and performance requirements. It was also stated that there needs to be a differential boost or differential access to the

content. Fuchs (1999) noted that an accommodation is justified when students with disabilities perform higher because of the test alteration than students without disabilities receiving the same alteration.

On the other hand, a modification is when changes in the test (i.e. how it is given, completed or what construct is being measured) works equally well for all students. The result of the modification made would not be interpreted in the same way as when no modification is made.

The main confusion that has been made, is distinguishing between what qualifies as an accommodation and what a modification. Typically, the board governing the educational system in place, in the case of this research, the KHDA, would decide these.

Within private inclusive Dubai schools, the teacher of the hearing-impaired learner, with guidance from the SEN department, are required to develop an Individualised Education Plan (IEP) in order to assist in determining the accommodation(s) or modification(s) that the hearing-impaired learner requires (KHDA, 2017). Often, the decisions regarding the accommodations and modifications are made without adequate training of the teacher as according to Karaman (2011), teachers are required to only have a bachelor's degree in education and do not require further qualifications and training in order to teach children with special needs, including hearing impairment. Another challenge for the teacher in developing the IEP, is for the teacher to know whether a particular accommodation works for a specific leaner, and that often generalised modifications and accommodations may not be viable for the hearing-impaired learners. Therapists in Dubai are often actively involved as an outside entity to the school, in assisting the teachers in correctly developing individualised educational plans for the hearing-impaired learners within private inclusive Dubai schools (Arif & Gaad, 2008).

According to Tindal and Fuchs (1999), the following areas on instruction, which

should be taken into account when accommodations and modifications are made:

- Timing/scheduling (e.g. frequent breaks, time of day most beneficial for the child to learn new information).
- Classroom setting (e.g. reducing distractions, lighting, noise buffers, smaller groups).
- Administration of instructions and learning material (e.g. FM systems, visual cues).
- Presentation format (e.g. simplifying instructions, audio amplification devices, sign language/gestures).
- Response format (e.g. computers, sign language/gestures, auditory and visual aids).

**2.11. School for all policy: The journey into inclusion**

In the strife to achieve inclusion of all children in the UAE including those learners with hearing impairment, the "School for All" policy was initiated from Federal Law No.29/2006 on the Rights of Disabled People.

> *"The state guarantees for people with disabilities, equal opportunities for education within all educational and vocational institutions through regular or special classes if it is required, with the provision of educational curriculum on sign language, Braille or other methods/accommodations as required. Disability should not constitute a reason for denying application for distance learning, or admission/entrance to any educational institution whether it is a government or private institution."* (Federal law No. 29, article no. 12, 2006; Regarding rights of people with disabilities)

This policy initiative promotes the transition of learners with special needs into the regular classrooms. However, it must be noted that this policy does not require for the closure of special needs schools or rehabilitation centers, as well as stopping the 'pull-out' system within regular schools, but rather promotes equal opportunities for all learners to acquire the same educational advantages as their peers without special needs (MSA, 2006, article 15).

This can be reflected in the understanding of the regulations and guidelines of the "School for All" initiative, which states the following:

> *The Ministry of Education of the United Arab Emirates supports the national and international educational philosophy of inclusion, which means that being educated in regular education classrooms with peers in their age range, in their neighbourhood schools with necessary supports is the optimal environment to meet the educational, social, emotional and vocational needs of individuals with special needs.* (MOE 2010, p. 7)

The guidelines of the "School for All" policy as well as the regulations set within the policy define six different settings for the education of learners with special needs following an initial assessment conducted by the school's support team. These include:

1. Inclusion in Regular Education Classroom with Community-Based Support.
2. Inclusion in Regular Education Classroom with Classroom-Based Support.
3. Inclusion in Regular Education Classroom with School-Based Support.
4. Inclusion in Regular Education Classroom with Resource Room Support.
5. Basic Special Education Classroom.
6. Community-Based Education Programs (Rehabilitation centers/ Special Schools).

The evolution of inclusion within Dubai private schools, is moving within a social model framework of disability, where the "School for All" policy is based mainly on removing the barriers faced by the hearing-impaired learners' participation and learning within the regular classroom setting, rather than the adjustment of set curriculums to suit the individual child; however, the guidelines provide general considerations regarding academic and behavioural difficulties faced by the hearing-impaired learner. Thus, according to Arif and Gaad (2008, p.166), private regular schools in Dubai are using what is referred to as a 'para-curriculum', which is based on deleting challenging lessons and studying fewer

chapters. Arif and Gaad (2008, p.166) have also found that there was a misalignment in the education system with respect to curriculum development, curriculum delivery and curriculum assessment. They thus concluded that there is a need for developing new curriculum to support the effective inclusion of learners with special needs in Dubai private regular schools.

According to the KHDA (2017, (b)) school fees framework, tuition fees and costs for services which are included in the tuition fees (for example buses, uniforms and school books); however, any additional costs and services are excluded from the tuition fees and parents are required to pay additional for these services. Private school fees in Dubai average between 50 000aed to 71 000aed for early years with government funding only directed towards public schools (Karman, 2011). Therefore, the cost for additional support from schools and third-party entities for the learners lands on the shoulder of the parents, who may not be able to afford these additional costs. When teachers are fully trained to assist the hearing-impaired learners within the regular classroom, the additional support and thus costs for the parents' decreases, and the hearing-impaired learners are able to achieve their optimum.

The conclusion drawn is that the "School for All" policy is fairly new within the Dubai private regular schools and thus remains a "work in progress". The challenge that appears to be apparent in the school system is between what the policy and guidelines require of the teachers with regards to inclusion of hearing-impaired learners, and the teachers' perspective of the policy, as well as their knowledge, expertise and experience working with hearing-impaired learners.

## 2.12. Chapter Summary

The introduction and literature review, chapter 2, aimed to serve as an introduction to the research study, provided the necessary information regarding background to the research and clarified key terminology that was used throughout the research study.

This chapter included the discussion of what a hearing impairment is, the etiology of hearing impairment and the possible causes of hearing impairment. It also included the ways in which auditory information is accessed and the use of technology as a means in which hearing-impaired learners can be successfully included into Dubai private inclusive schools.

Teachers of hearing-impaired learners would need to acquire the knowledge regarding the manifestations of hearing-impaired learners and take into consideration the cognitive development of the learner in order to successfully include hearing-impaired learners into the school. The teacher requires knowledge and training on academic support and classroom accommodations/modifications, which are unique for the hearing-impaired learner.

Finally, this chapter discussed the "School for All" policy implemented by the Ministry of Education of Dubai under Federal Law 29, and the successes and challenges the teachers encountered, within Dubai private school in the implementation of the inclusive education policy.

# Chapter Three: Methodology

## 3.1. Introduction

This qualitative research study conducted served as an indispensable source of practical information for teachers, schools and education boards, in investigating the practice of inclusion of hearing-impaired learners in the private inclusive school settings within Dubai, UAE. In chapter 1, the context was described, and the outline and the aims of the research were stipulated. The nature of hearing impairment was described in chapter 2, along with the etiology of hearing impairment and the possible causes of hearing impairment. It also included the ways in which auditory information is accessed and the use of technology as a means in which hearing-impaired learners can be successfully included into private schools. The areas in the development of hearing-impaired learners were also explained, and how they affect the learners' ability to develop within the classroom if intervention is not provided.

The researcher hypothesised that the teacher questionnaires completed, along with the focus group discussion and observations conducted, could possibly provide valuable information for achieving a comparative analysis of both the successes and challenges faced of integration, thus providing a holistic view regarding the teachers' perspective of the integration of hearing-impaired learners within Dubai private schools in order to strive for inclusion.

Chapter 3 will give a description of the research design and method used as part of the current research. Key patterns and ideas that emerged from the literature study, teacher questionnaire and focus group, along with the observations made by the researcher, provided the basis for the discussion of the outcomes of the research results. The information gathered enabled the researcher to give meaning to the data and draw conclusions regarding the teachers' perspective on inclusion in private Dubai school, as well as what they felt would assist them in effectively supporting the hearing-impaired learners.

### 3.2. Background to research and research questions

Hearing-impaired learners may present with certain difficulties, which they need to overcome in order to achieve age appropriate development (van Dijk, 2003). In order for successful inclusion to be achieved within Dubai private schools, adequate support and appropriate teaching strategies need to be set in place, as well as confident, knowledgeable teachers who believe in and support the inclusion process (Kumar, 2015).

At various private inclusive schools in Dubai, UAE, where the researcher was working as an external speech and language therapist (employed by a privately-owned medical centre), it was a consistent concern that hearing-impaired learners were not effectively catered for within the schools. Although all schools in Dubai have specialised learning departments who provide extra support for the children within the school, as well as having external entities of therapists who assist the learners on a weekly day to day basis, there was no specialist unit established solely for hearing-impaired learners. From the information gathered by the researcher from the heads of learning support at various private inclusive Dubai schools, there were no reported school which specifically catered for hearing-impaired learners who are not citizens of Dubai. It was also stated by one of the teachers, upon discussions with the researcher, that there is only one school within Dubai that specifically catered for visually impaired children. Through her own inquiries, she found out that the school is only for Emirati nationals, which was confirmed through written research (Alborno's (2017). Karaman (2011) states that the number of private schools in Dubai have increased over the past three decades due to a large number of expatriates moving to Dubai in addition to a high demand of schooling that is needed for expatriate children. Karaman (2011) states that government schools cater for only 26.5% of Emirati children and that 70.3% of these children are now enrolled in private Dubai schools due to the parents' desire for the children to learn English. In public schools, the language of instruction is Arabic,

whereas the majority of private schools have a language instruction of English (Karaman, 2011). Thus, as the two special needs schools in Dubai are government public schools, due to the research stated by Karaman (2011), the language of instruction is Arabic. Hearing-impaired learners who thus are not first language Arabic, would attend private inclusive Dubai schools due to the language of instruction. However, upon research and inquiring conducted by the researcher, there is no written evidence that the schools are only for Emirati children, and that it is up to the discretion of the school who they grant admission to. This would thus go against the "School for All" policy, which states that all children are to be granted equal opportunities for education. However, since the hearing-impaired learner may not be Arab and thus not speak Arabic, the assumption would be made that their parents would enrol them in an English-speaking school, which would thus be in the private inclusive Dubai school sector.

All hearing-impaired non-Emirati learners are thus attending private inclusive Dubai schools under the "School for All" policy. The classes consist of both hearing and hearing-impaired learners, and the hearing-impaired learners are thus not transitioned from special needs schools, to mainstream classrooms catering solely for the hearing-impaired learner to finally being placed in fully inclusive schools. The hearing-impaired learners are thus required, or expected, to learn in the same manner as hearing learners, regardless of having prior teaching support or not. They are also assisted through a "pull-out" system, in which the hearing-impaired learners are taken out of their classroom and away from their peers in order to obtain extra support, which is not provided within the classroom. Thus, this support system goes against the inclusion system, as well as the "School for All" policy, as the hearing-impaired learners are segregated from their peers. The purpose of inclusion is to assist the hearing-impaired learners in coping and developing within a hearing world, and thus preparing them for their future as independent individuals. The teachers within the inclusive

education system are therefore required to assist the hearing-impaired learners' development, both academically and socially, without the support of sign-language interpreters, solely utilising an oral mode of communication. Teachers thus need to be effectively supported and empowered to assist the hearing-impaired learners.

As a speech and language therapist who has worked with school-aged learners, assisted teachers and school corporations in Dubai through an external therapy centre, the researcher has had constant contact with learning support teams, teachers and principals within private inclusive Dubai schools, as well as other medical professionals who have assisted the learners with special needs in the Dubai private inclusive school system. The researcher was thus able to discuss the effectiveness of the integration of hearing-impaired learners within private inclusive Dubai schools with teachers, who felt that they were sufficiently competent to assist the hearing-impaired learners, as well as those who felt that they lacked the knowledge, training and experience to assist the hearing-impaired learners.

Since the hearing-impaired learners require a complex array of extra support in order to develop effectively within the hearing world, as well as an array of professionals to work together to assist in developing these needs, it is imperative that all involved are well educated and experienced in this field, including the teachers. It is also noted that the needs of hearing-impaired learners are not always obvious, that these needs often create specific issues for the teachers within the inclusive classroom setting (Pottas, 2005). The researcher believed that this study would highlight the perspectives and needs of the teachers of the hearing-impaired learners in Dubai private inclusive schools, forming a baseline of curricular and classroom setting modifications stipulated by the teachers. It was aimed to gain information from the teachers as to, if required, what extra training workshops they may need in order to effectively assist the hearing-impaired learners.

### 3.2.1. Orientation of the current research

The researcher decided on this specific topic of research due to her close involvement and work within private inclusive schools in Dubai who were implementing the "School for All" policy, as well as the researcher conducting various professional development training seminars for the teachers within Dubai private inclusive schools. The researcher also has a personal interest in the inclusion of hearing-impaired learners within schools and successfully assisting the hearing-impaired learner in both academic and social development. Being a speech-language therapist and audiologist, and working with hearing-impaired learners on a one-to-one basis within Dubai private inclusive schools, as well as being Head of Schools, there was opportunity for the researcher to communicate on a daily basis with the teachers in order to gain knowledge and insight regarding their perspective on inclusive education. This includes discussing if they felt inclusion was working and discussing the teachers' possible frustrations in lack of knowledge regarding hearing impairment. These discussions, and consistently assisting in accommodations within the classrooms, influenced the researcher's decision to further investigate and describe the "School for All" policy, the cognitive development in hearing-impaired learners and the teachers' perspective on inclusive education. Research in this field is essential in successfully implementing the "School for All" policy as well as effectively assisting hearing-impaired learners within the Dubai private inclusive schools, especially since the" School for All" policy is relatively new.

### 3.2.2. Formulating the research questions

The problem statement ensures that the researcher has a good grasp of the specific problem which is to be investigated (Johnson & Christensen, 2000), and is thus the most critical part of the problem statement. The research questions based on the objectives of the study include:

1. How do teachers perceive the "School for all" policy in Dubai private inclusive schools?
2. Do teachers have concerns regarding inclusive education of the hearing-impaired learner within the inclusive school classroom?
3. Do teachers feel that they required further training in order to correctly assist learners with hearing-impairment?
4. What are the current policies set in place by the schools in order to assist learners with hearing impairment, and are there challenges the teachers faced in correctly assisting the hearing-impaired child in the classroom?
5. What adaptations, of the classroom and curriculum, have teachers made in order to effectively assist the hearing-impaired learner?

**3.3. The research questions and statement**

Dubai in general is a relatively new country, as it has only been constituted for the past 40 years (Sheik Mohammed bin Rashid Al Maktoum, 2012). The Ministry of Education within the UAE has only implemented Federal Law 29 in 2006, and thus inclusive education is also a relatively new concept within the country, and considering that there is insufficient knowledge among teachers about the nature of hearing impairment as well as the "School for All" policy (Alborno, 2013), the following research question was posed:

*What are the teachers' perspectives on inclusion of hearing-impaired learners, and what possible support strategies do teachers in private inclusive Dubai schools require in order to effectively assist hearing-impaired learners within the classroom?*

The main research questions for this research study were to 1) determine if teachers within Dubai private inclusive schools felt that they were adequately supported and prepared to assist hearing-impaired learners within the classroom, and 2) what were their perspectives regarding the current nature of inclusive education within the private inclusive schools in

Dubai by integrating hearing-impaired learners into the schools.

The following research sub-questions emerging from the main research questions were as follows:

1. What is the nature of hearing-impairment for school aged learners?
2. Which developmental skills of hearing-impaired learners require support in an inclusive classroom?
3. Which academic skills of hearing-impaired learners require support in an inclusive classroom?
4. Which support strategies could assist teachers of hearing-impaired learners?
5. How does the teachers' perspective and knowledge on inclusive education influence their ability to assist the hearing-impaired learners?

**3.4. Main aim of the research study**

The aim of this study was to gain information regarding the teachers' perspective and implementation of the inclusion of hearing-impairments learners within Dubai private inclusive schools under the "School for All" policy, which was set by the Ministry of Education (MOE) in the UAE.

**3.5. Sub-aims of the research study**

The sub-aim of the research was to obtain information regarding how the teachers have implemented the "School for All Policy" guidelines and regulations of inclusion for the hearing-impaired learners based on their perspectives of the policy and inclusion.

**3.6. Objectives of the current study**

The research objectives were:

- To review the current situation within Dubai private inclusive schools from the teacher perspective in order to provide provisions as to how to facilitate schools towards successful inclusion of hearing-impaired learners with respect to school

policies, culture and practices.

- Identifying the structures set in place, which are working to assist the teachers with inclusion of hearing-impaired children.
- Assist in identifying if teachers have concerns regarding the integration of hearing-impaired children within inclusive schools within Dubai.
- Identifying adaptations which have been made by the teachers and if there were further gaps within the current set policies that would need to be addressed.
- Through observations of the classrooms, view the structural setting of the classroom is at the optimum for the hearing-impaired learner (e.g. classroom acoustics).

## 3.7. Research design

### 3.7.1. Introduction

The research design can be described as the "overall approach" used by the researcher in a study, as well as an explanation of how the research was conducted, who participated in the research and where the research took place (Marshall & Rossman, 1995). The purpose of this aspect of research is to provide the most possible valid and reliable results, which are within an appropriate inquiry mode, as well as answer hypothesised research questions (Schumacher & McMillan, 2001).

### 3.7.2. Interpretative Theory

The interpretative theory was developed by Jonathan Smith (e.g. Smith, Harré and Van Langenhoven, 1995) to allow rigorous exploration of idiographic subjective experiences and social cognitions of the participants within a research study (Biggerstaff & Thompson, 2008).

The interpretative theory originally stems from the theory of interpretation, where the meanings an individual relates to any event they experience are of central concern but are

only accessible through an interpretative process (Biggerstaff & Thompson, 2008). The interpretative theory acknowledges that the researchers' engagement with the participants of the research has an interpretative element, and that it assumes an epistemological stance through careful and explicit interpretative methodology, thus making it possible to access the participants' cognitive inner world (i.e. their thoughts) (Biggerstaff & Thompson, 2008).

The interpretative theory further explores how the participants create meaning behind what they experience in their interactions with the environment. Thus, Biggerstaff and Thompson (2008) state that the participants' viewpoint carries the authority for the data information, and it recognises that how the participants perceive and talk about their experiences and views is likely to vary, and may well differ from the researchers' perceptions.

In order for a researcher to acquire knowledge regarding a certain area of study, information is needs to be obtained through a variety of modes, including observations, descriptions of relevant peoples' intentions, beliefs, values and reasons, creating meaning from the information collected and understanding the data to form results (Henning et al, 2004). The researcher should thus obtain this information from a variety of places and different people. The types of discourses or frameworks used within the research process thus become key in interpreting data (Henning et al., 2004).

The interpretive theory was utilised as a basis for this research as the researcher examined a variety of data and different sources, as well as methods of analysis in order to obtain valid and reliable results. A key aspect for interpretive research is to obtain meaning within a contextual basis (Klein & Myers, 1999). Therefore, the subject matter and participants of the research, along with observations conducted by the researcher, are carried out within the natural context of what is being investigated.

### 3.7.3. The qualitative paradigm

This research is qualitative in nature as it uses a combination of literature reviews,

empirical investigations, questionnaires and a focus group discussion. Qualitative research can be defined as the process in which a researcher collects data through interactions with participants, real-life observations of the context, describing participants' individual and collective believes, thoughts and perspectives (Schumacher & McMillan, 2001). Schumacher and McMillan (2001) add that qualitative research design is concerned mainly with understanding the social phenomena from the participants' perspectives and beliefs. This understanding can be obtained through interviews of participants, questionnaires completed by participants and creating an overall meaning through analysis of the combination of these. When interpreting the data collected, qualitative research gives meaning and understanding (Neuman, 2006). It must, however, be taken into consideration that the meaning attached is directly influenced by the point of view of the participants of the study conducted. Therefore, the data being interpreted is based solely on the perspectives, beliefs and view-points of the participants in the study. According to Johnson and Christensen (2000), qualitative research is a paradigm in which a researcher will collect data in a current natural setting without attempting to manipulate the context. Thus, as the context is dynamic and changing, research should be over an extended period of time.

### 3.7.4. Why a literature review is completed

The literature review plays an important role in research studies by providing a conceptual framework of the qualitative research design used. This aspect of research involves the researcher identifying and analysing a variety of texts that are related to the research problem, as well as filtering out the ones, which are not relevant (Johnson & Christensen, 2000).

The main reason for a literature review is to ascertain what research has already been conducted in the areas of the researchers' interest (Johnson & Christensen, 2000). Previous research literature can aid in how to proceed with the research design as well as provide the

researcher with answers to problems faced, or assist the researcher in locating tools required and participants needed.

Once all data collection has been conducted, and the data analysed, the researcher will also use the literature to compare findings to that of previous research and information found (Johnson & Christensen, 2000). At the final stage of research, the results are communicated to the reader by comparing their data to that of the literature. The literature should be reviewed for a second time, so that the existing literature can support the findings of the researcher and assist in further development of the area of concern, or it may show a conflict between the existing literature and that of the current research conducted, thus encouraging further investigations (Johnson & Christensen, 2000).

### 3.7.5. Ethnographic research

Ethnography is often used as an additional approach with qualitative research and is specific to the interpretive theory. According to Johnson and Christensen (2000), "ethnography" literally means writing about people and involves descriptive data collection. Ethnography represents the research of how people interact within a social group setting; in this case, teachers within regular private Dubai schools, and shows cultural descriptions (Burns, 2000). As part of the ethnographic research design, participants' attitudes, values, norms, practices, patterns of interaction, meanings, interpretations and perspectives are thus analysed. Therefore, this type of research engages in a holistic approach in order to describe how the participants of a group interact and how they come together to make up the whole (Johnson & Christensen, 2000). This approach employs many different methods of data gathering, including observations, interviews and questionnaires (Henning et al, 2004).

Components of ethnographic research design was chosen by the researcher, in conjunction with other chosen designs, in order to obtain valuable information from a variety of sources and modes, by observing the hearing-impaired learners, as well as their teachers in

the classroom, observations of the classroom setting and structure, focus group discussions and teacher questionnaire. The components which were focused on for the current research included:

- Participant attitudes and perspectives towards the inclusion of the hearing-impaired learner;
- The participants' practices implemented to assist the inclusion of hearing-impaired learners, the practices of the schools and management and the required practices stated in the "School for All" policy;
- The interpretation of the "School for All" policy by the participants and schools.

## 3.8. Selection of participants

### 3.8.1. Participants and sample size

According to the Knowledge and Human Development Authority (KHDA) school consensus 2013/2014, more than 89% of the Dubai population are enrolled in private schools. The medium of instruction in government schools is required to be predominately Arabic, whereas privately owned schools may select the predominant language medium (e.g. English) (KHDA Annual report, 2009). The study targeted classroom teachers in the fundamental stage or kindergarten grade (i.e. early intervention), at three private regular English medium co-educational schools in Dubai who have pre-diagnosed hearing-impaired learners. Schools were chosen due to convenience and accessibility (Denzin & Lincoln, 2005). Convenience sampling is the selection of a sample of the participants from a population based on how accessible and available the group of participants are (Salkind, 2010). Three Dubai private regular schools were chosen for the research and 20 teachers from each school were randomly selected.

#### *3.8.1.1. Inclusion criteria of Schools*

- The schools chosen followed the inclusion approach set out by the Ministry Of Education.
- The schools had English as their predominant medium of education as the researchers' first language is English and the questionnaires used were in English.
- Learners who are hearing impaired were enrolled in the foundation phase at the school at the time of the research.

*3.8.1.2. Exclusion criteria of schools*

- Schools that do not use English as the medium of instruction; thus government schools were not approached for the research, as their predominant language of instruction is Arabic.
- Schools that did not actively follow inclusive education in Dubai schools set by the Dubai Ministry of Health.

*3.8.1.3. Inclusion criteria of teachers*

- The teachers needed to be from the foundation stage of school (i.e. teachers of 3-5-year olds) as the earlier the intervention of therapy input and language development.
- The teachers were fluent in and had a clear understanding of English due to the questionnaires being written in English.

*3.8.1.4. Exclusion criteria of teachers*

- Teachers, who were unable to fluently speak, write or understand English.
- Teachers who were not in the foundation stage of the school.

**3.9. Data collection procedures**

Three English medium regular private schools across Dubai were selected. To avoid possible language barriers which may have occurred between the school and the researcher, and the language medium of the questionnaires used (i.e. English). The schools selected

followed the language medium of the researcher (i.e. English medium). The schools that were chosen included children who have diagnosed hearing impairment, at the time of the research. The schools were contacted, and both the school and the classroom teachers were invited to participate in the research (Appendices A and B). Being part of the research included completion of a questionnaire (Appendix C) and possibly being part of the focus group discussion as this was based on random selection. The selected classroom teachers received an information letter inviting them to participate in the study (Appendix A). Once they had agreed to participate in the study, and once they had signed and returned the informed consent, they were requested to complete the questionnaire provided to them by hand. The first names of all teachers who agreed to participate in the study were placed in a draw-string bag. A colleague of the researcher, who did not know the teachers nor was informed of the names of the school where the research was conducted, was asked to place a hand in the bag with their head turned and requested to take out six pieces of paper. These names then formed the group of teachers who would be asked to participate in the focus group discussion. The teachers randomly chosen to participate in the focus group discussion, were sent an electronic invitation to participate in a group discussion, (Appendix D) at one of the schools in which the research had taken place. The teachers then handed the researcher the signed consent indicating their agreement to partake in the focus group.

The classroom teachers at the schools were of diverse nationality groups, including British, South African, American, Pilipino, Australian and Irish, who spoke English and were teaching at an English medium school. As the researcher is English speaking, the research was conducted in English and it was imperative that the participating teachers were able to read, write and speak English so as to not obscure the results due to misunderstanding and second language comprehension. All teachers, and schools, were also informed that the

participation in the study was voluntary and signed a consent form once they had agreed to participate. No incentives were offered to the schools and the participants of the research.

An application was submitted to the school principals, which was signed and returned to the researcher prior to commencing the proposed research, which gave the researcher permission to conduct the research and for the participation of the teachers in the school. Once the approval had been obtained, request letters were obtained informing the selected staff within a school memo to cooperate with the researcher upon her request. The letters of approval cannot be published in the research dissertation, as the letterheads have the names of the school clearly stated, and thus to keep confidentiality, the letters have been excluded from the dissertation report. The final results of the study will be shared with the participants, which may be beneficial to the schools in adjusting school polices accordingly, if necessary.

### 3.9.1. Data collection procedures

The researcher conducted semi-structured observations of the hearing-impaired learners in the classroom setting, gave the teachers questionnaires to complete and conducted a focus group discussion in order to collect data on the teachers' perspective of inclusive education in Dubai private regular schools. The combination of observations, questionnaires and discussions added richness to the data. These data sources helped the researcher to describe the different aspects of the teachers' perspective of the hearing-impaired learners in the classroom setting. The researchers' observations and field notes (Appendix E) were also part of the data collection process.

#### *3.9.1.1. Observations*

The field notes are made by the researcher during completed observations in order to explain what the researcher saw and experienced, as well as their perceptions, interpretations and experiences (Liamputtong & Ezzy, 2005).

The observer is the individual who performs the observations on site, makes notes and

interprets what they see (Henning et al. 2004). In the case of this study, the researcher acted as the observer. The researcher initially explored several areas of interest at different schools within Dubai, and then selected the schools that were accessible to her to study in detail in order to search for patterns of behaviour and relationships (Schumacher & McMillan 2001).

The main aim of the research study is intended to gather information regarding the teachers' perspective of the "School for All" policy, and their attitudes towards inclusion of hearing-impaired learners within Dubai private regular schools, and to establish the accommodations and modifications made in order to successfully assist the hearing-impaired learners. Therefore, imperative for the researcher to observe the interactions of the hearing-impaired learners with both their teachers and peers, the way in which the classroom was set out, the structure of the classroom and the modifications made to assist the hearing-impaired learners (De Vos, 2005).

**3.10. Site collection for the current research**

The schools chosen by the researcher were three regular private schools in Dubai with English as their medium of instruction. Each school has an established learning support department, as well as therapists from outside centres, coming to the school to further assist the hearing-impaired learners and any other learners who have special needs. These therapists include speech and language, occupational and physiotherapy. The learning support department and the therapists assist the learners with a variety of needs, including learners with learning difficulties, autism, dyslexia and hearing impairment on a "pull-out" system. It was also decided that the focus in each school would be the foundation phase teachers, due to the notion of early intervention. Since there were no male teachers employed at any of the schools at this phase of teaching, only female teachers participated and were observed by the researcher.

The teachers within the three schools were observed over a three-month period while

the researcher continued to work with the learners at the schools as a speech and language therapist. They were observed in their natural school setting throughout the mornings. Particular attention was paid to how the classrooms were set out and where the hearing-impaired learner was within the setting. The researcher drew the set-up of one class in each school as each classroom was set up and structured in a similar way (Appendix F). She was not permitted to take photographs of the classrooms, but only allowed to make sketches. The observations made by the researcher are a means to add to the data collected by discussion and questionnaire, in order to compare the information obtained by the teachers to the actual classroom set-up.

The observation entailed, among other things, how the teachers and hearing-impaired learners interact, how the teachers communicate with the hearing-impaired learners, how language was used, and where the hearing-impaired learner was placed during key learning times.

### 3.11. Data collection instrumentation

#### 3.11.1. Teacher questionnaire

An open-ended questionnaire was used to gather information regarding the teachers' perspective of inclusion of hearing-impaired learners within Dubai private regular schools, and their perspectives regarding the "School for All" policy. According to Avramidis and Norwich (2002), studies showed that attitudes towards inclusion differ according to teacher gender, years of teaching experience, grade level taught, experience of contact with special needs children, training, socio-political views and aspects of educational environment. Although perspectives of teachers may differ according to gender, all teachers in this research were female, due to regulations set by the Ministry of Education regarding teacher gender in early years; thus, gender was not an influencing factor in the research. The questionnaire included 20 open-ended questions aimed to elicit the teachers' attitude towards inclusion of

hearing-impaired learners, years of experience in education of learners, current education level and special needs training. The questionnaire was developed by the researcher based on "Index for Inclusion Indicators" (Booth & Ainscow, 2011) (Appendix G). Adaptations to the index were made in order to relate to the schools chosen for the research and the research questions (i.e. hypothesis).

For each question, the participant was given the opportunity to express their opinion without being probed. Open-ended questions allow the participant of the research an opportunity to express their opinion without being influenced by the researcher and thus avoiding bias (Reja, Manfreda, Hlebec & Vehovar, 2003).

The 20 questions were grouped as follows:

- Overall perspective of the "School for all" policy for learners with hearing impairment.
- Perceived effects on learners without hearing impairment.
- Perceived affects on learners with hearing impairment.
- Beliefs regarding teacher skills required to assist learners with hearing impairment.

The initial questionnaire was used to gather information regarding the teachers' perspective of the "School for All" policy, the adaptations that they have made within their classrooms which they perceive as effective, educational training received regarding hearing loss and "School for All" policy, and areas in which they feel they would require further information or assistance within their classroom in order to assist learners with hearing impairment to reach their full social and academic potential. This assisted the researcher in finding positive aspects of, and negative concerns regarding the current "School for All" policy for learners with hearing impairment and thus the gaps within the current policies from the teachers' perspective.

### 3.11.2. Focus group

The focus group was aimed at gaining further information from six, randomly selected teachers who completed the initial questionnaire regarding the information obtained through the questionnaire.

A focus group is a group discussion organised to further discuss specific issues raised through research, with no more than five to seven participants required (Kitzinger, 1994). It is considered to be "focused", as it involves a specific discussion of a collective idea or view (Kitzinger, 1994). This provided evidence-based information regarding further research and possible training for the teachers.

Based on Krueger (2009), the following steps were followed:

- An invitation was sent out to the teachers who were previously randomly selected for the focus group via email.
- Consent forms were returned by the teachers.
- Focus group discussion was conducted.
- Analysis of the process while in the group.
- Analysis of the process after the group using notes taken and recorded viewing.
- Comparison between the questionnaire information received and the focus group discussion.
- Report prepared for results of research and to be given to the schools involved in the research.

On the morning of the focus group discussion, the teachers all completed and signed the consent forms given to them; however, as the teachers did not all agree to being videoed as part of the focus group, it was instead decided that a voice recording would be utilised with the use of the researcher's iPad. Although six teachers were invited to attend the focus

group discussion, an additional teacher requested permission to join the discussion. The researcher hand drew the seating positions of each teacher and labelled each teacher placement accordingly from 1-7, and labelled researcher as "R", as seen in figure 3.

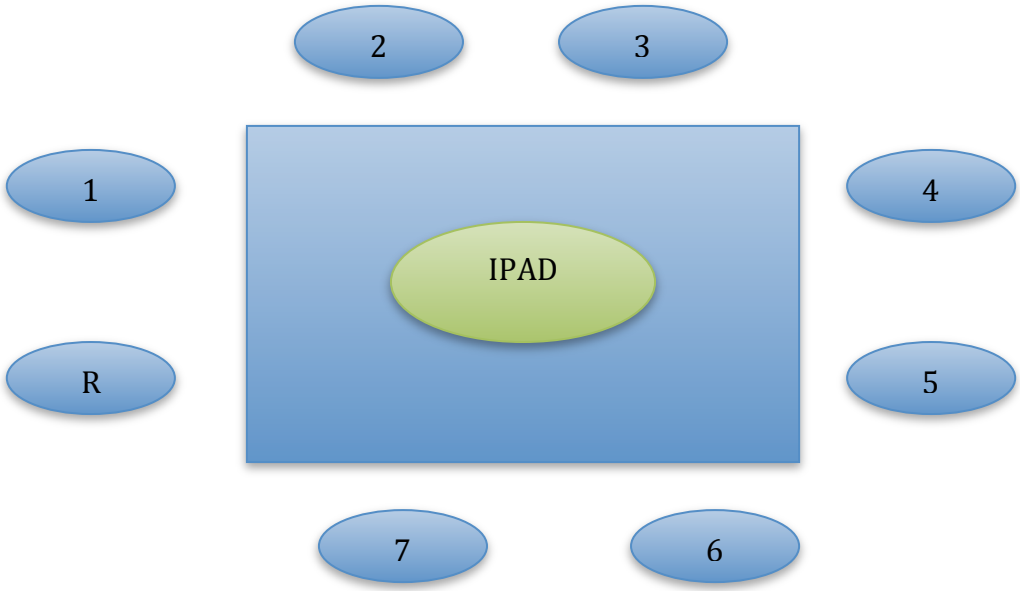



*Figure 4. Seating arrangement of focus group discussion*

According to Barbour (2007), the location of a focus group discussion should provide a safe, familiar and comfortable setting, and be easily accessible for participants. Thus, the researcher decided on school one as it was centrally located, and there was a private room away from distractions where the participants could openly and freely discuss their perspectives. Of the seven teachers, six were invited via email to attend the meeting after been randomly selected as discussed in the methodology section of the study, and one teacher had requested to attend the meeting as she had spoken to the researcher and expressed that she would like to be involved in further discussions regarding inclusion of hearing-impaired learners in schools.

The teachers and researcher were seated at a large square table, with two people seated at each side of the table. A square table also ensured that there was no "head of the table" (which may have created a feeling of inferiority for the other members at the discussion), and thus all members were noted as equals with equal importance of their opinions.

During the discussion, the researcher then marked with numbers 1-7 and "R" who was answering and/or speaking, so that when the voice recording was transcribed later that day, she knew who was speaking each time.

The following key questions or themes were discussed as part of the focus group: 1). How to assist teachers who felt that they did not have sufficient training in hearing-impairment, 2). The "School for All" policy and how teachers felt they are supported in implementing this, 3). Ways in which teachers can effectively implement inclusive education for hearing-impaired learners, 4). Training and workshops to assist the teachers, 5). Teachers who felt that there would be negative connotations to completing questionnaires. The researcher also took notes about any interesting stories that emerged from the teachers, as well as noted any experiences that they may have discussed which would influence their attitudes and beliefs (Barbour, 2007).

After the focus group discussion, the research listened to and transcribed the audio recording, which was taken during the discussion (Appendix H). This was done so that she was able to immediately recall and note the discussion points and perspectives of the teachers. The researcher then gave the audio recording to a colleague who was not involved in the research, and she too transcribed the recording and noted emerging themes. These were discussed with the researcher as part of the data collection process and analysis.

**3.12. Pilot study of the questionnaire**

As part of the development of the teacher questionnaire, the questions were pilot tested. The questionnaire was given to a colleague who was not included in the research. She is a speech and language therapist working at the same medical centre as the researcher, and who has 16 years experience in her field. The aim of the pilot study was to ensure that the meanings of questions and statements were easily understandable, to gauge their level of difficulty, to develop suitable code values and to ensure reliability and validity (Keeves,

1997). As a result of the outcome of the pilot study, some questions were omitted from the questionnaire in order to minimize the length of the questionnaire, thus saving time for the teachers who took part in the research. There were some questions that required word changes in order to ensure clarity.

Changes made to the teacher questionnaire sheet included the following:

- The questions were adapted from closed-ended questions to open-ended questions so as not to imply answers or lead the teachers to the answers that the researcher was hypothesizing.
- The questions which included medical terms were explained rather than the medical term used, than the medical a tertiary, professional level as to not offend the teachers.
- Questions which could lead the teachers to specific answers were adapted so that their opinions could be given. For example, instead of asking "Do you feel that…" the question stated, "What is your opinion regarding…"

**3.13. Data design, analysis and interpretation**

The constructivism research approach according to Howell (2004) was conducted in order to establish the current teachers' perspective of inclusion of hearing-impaired learners within private regular Dubai schools. Constructivism is a research paradigm, which was incorporated into the data collection to obtain reliability and validity of the results. This paradigm views knowledge as socially constructed and changes within different circumstances (Johnson, 1997). The view of knowledge and reality is dependable on human practice constructed through interactions between humans and their world and developed through social contexts (Patton, 2002). In contrast, the positivism approach regards research as scientific and made up of measurable facts (Golafshini, 2003). The constructivism approach measures the physical world by assigning numbers to objects or events according to specific set rules (Johnson, 1997). Constructivism uses standardised measures so that varying

perspectives and experiences can fit within limited number of predetermined response categories, which does not allow the participants the freedom to express their opinions beyond the set answers given (Golafshini, 2003). Thus, for the research to remain objective and open the participant to freedom of opinion, both the teacher questionnaire and focus group data collection were based on a constructivism paradigm. This allowed the teachers to express their opinions and the researcher to narrate these in order to draw conclusions regarding the hypothesised questions. Conclusions were thus drawn regarding the perspectives of teachers regarding inclusive education of hearing-impaired learners within private regular schools in Dubai. The focus group assisted the research in gaining a deeper understanding of the teachers' perspective regarding inclusion of hearing-impaired learners by discussing the perspectives obtained through the completed questionnaire.

Constructivism adheres to data triangulation by applying an open-ended perspective and allowing participants to assist in answering the research questions (Golafshini, 2003). This further assisted in identifying both structures and policies which were positively assisting learners with hearing impairment, and the areas which required further assistance in regular Dubai schools. By creating a triangulation, credibility of the research is increased as different methods are incorporated in order to achieve data collection, and thus individual limitations of each method are compensated for (Shenton, 2004). Researcher bias is thus reduced, as numerous data analysis situations assist in eliminating obscuring results to reach the research objective.

As qualitative research and data collection is dependent on interpretation requiring several explanations due to the amount of data collected, a thematic analysis was used for this research. The initial step under this principle was to compact the data into a clear structure (Alhojailan, 2012), which was achieved with the use of tables and figures. By organising data into a clear structure, the researcher is able to identify, compare and find relationships within

the data collected (Alhojailan, 2010). In order to analyse data, both software and manual analysis can be used (Alhojailan, 2010), both presenting with pros and cons of their use. Welsh (2002) stated that using software may not always be as helpful as thought due to the fluid and creative manner in which themes may occur. Thus, for this research, a manual analysis approach was selected.

Thematic analysis is used to analyse presenting themes (patterns) related to the data collected in order to illustrate detail and diverse subjects via interpretation (Alhojailan, 2010). Thematic analysis allows the researcher to associate frequency of themes within a whole content and thus assists with accuracy to enhance the meaning found by the researcher (Alhojailan, 2010). Qualitative research requires an understanding of diverse data and thus thematic analysis gives an opportunity to understand the data more widely for interpretation, and thus determine more precisely the relationships between themes and compare these with replicated data (Alhojailan, 2010). Therefore, by utilising the thematic analysis approach, the researcher was able to link the ideas and opinions from the different teachers and compare the themes that arose for analysis.

- Phase 1: Teacher questionnaire

The primary data collection instruments were the questionnaires completed by the classroom teachers. This assisted the researcher in identifying the areas that the teachers felt are assisting the hearing-impaired learners, and the areas where they required further adaptations, as well as their perspective on inclusion of hearing-impaired learners. When the researcher collected the completed questionnaires, each completed questionnaire was numbered so as to reference the participant teachers via a number on the questionnaire.

- Phase 2: Classroom observations conducted by the researcher included the following (Appendix E)

1. Classroom layout with site drawings in order to gain a perspective of both advantages given and possible barriers created for the hearing-impaired learner.
2. Interactions between the teacher and hearing-impaired learner.
3. How the hearing-impaired learner appears to be coping in the classroom.
4. Seating position of hearing-impaired learner in the classroom.
5. The learning environment and any adaptations made by the teachers to assist the hearing-impaired learners' learning and understanding.

The researcher first observed how the lesson was taught by the teachers within the classroom setting. In order to obtain credibility (Shenton, 2004), the researcher developed a familiarity with the schools and the cultures within the schools. This assisted in creating a relationship of trust between the researcher and the participating teachers. According to Shenton (2004), by establishing a relationship of trust, the participants of a study will be honest and not mislead answers of questionnaires in their favour in the fear of being "caught". The observations of the lesson included noting of the class environment, positioning of the hearing-impaired learners, accommodation and modifications (if applicable) made by the teachers, as well as interaction of the hearing-impaired learners with their teachers. Notes were taken by the researcher, and although photographs would have assisted, these were not permitted, thus the researcher made brief sketches of the classrooms, with the aim of producing a comprehensive description which would reinforce the trustworthiness, and credibility of the study. The observational data recorded by the researcher was used in collaboration with the teacher questionnaires and focus group discussion, in order to compare results and draw conclusions.

- Phase 3: Data analysis

Once the data was collected, it was analysed using content thematic analyses. Themes were formulated from the data. The three phases of analysis included: 1) coding - initial

tabulation and coding of answers obtained in order to organise the data, 2) categorization to distinguish between the various ideas and responses collected by counting and analysing individual and group answers using tables, 3) identification of themes that arose from both the teacher questionnaires and the focus group discussion (Creswell, 2009). During this phase of data analysis, the researcher involved an outside researcher to evaluate the themes. According to Alhojailan (2010), by involving an outside reviewer at this stage of research assists the researcher in testing themes identified and establish whether the themes are compatible or not. The main purpose of an outside reviewer is to build reliability in thematic analysis coding (Alhojailan, 2010).

- Phase 4: Focus group

The participants for the focus group were randomly selected from the total number of teacher participants, by placing first names in a draw-string bag, and a colleague of the researcher blindly selecting six names from the bag. The selected teachers were given a written electronic invitation to participate in the discussion group to discuss main points and themes that arose from teacher questionnaires. These themes were extracted from the teacher questionnaires by both the researcher and an outside reviewer. The teachers selected for the focus group were requested to inform the researcher if they were willing to participate in the discussion, and given consent forms to sign on the day of the focus group discussion. The venue chosen for the focus group was chosen by the researcher ensuring that it was easily accessible for all teachers partaking in the discussion group and within a 10 minute drive from their respective schools as the focus group was held on a morning during the school week. The researcher verbally discussed the reason for the focus group, why it was an essential part of the research and the reason for the specific venue chosen with the principal of the school. She then obtained verbal permission from the school principal and the administration team for the use of the school and they assisted her in a room allocation,

which suited the school timetable and would not disrupt the learners. It was thus agreed that the focus group would commence and end prior to school timing, which suited all teachers as their schedules and timetables were not affected.

Post the focus group discussion, the researcher listened to the voice recording, made notes and transcribed the discussion verbatim. This was completed within hours of the group discussion so that the researcher was able to 'relive' the discussion experience afterwards (Patter, 2014). The voice recording assisted the researcher to extract any 'missed bits' (Patter, 2014) of the focus group discussion. By transcribing the discussion herself, the researcher was able to listen to the group discussion again in great detail, and thus be able to note what needed to be recorded and what did not (Patter, 2014). An example was this would be to record if 'silence' or conversation filler (e.g. um, uh, aww) from the participants was meaningful or not, whereas an outside transcribe would not make note of these non-verbal conversational markers (Patter, 2014). Transcription is a translation or transformation of sound from a recording (Davidson, 2009). Davidson (2009) states that this selective process should not be seen as a problem, but rather that selectivity should be understood as a practical and theoretical necessity.

Another factor taken into consideration was the cost involved in hiring a professional transcriber. Hiring a transcriber is expensive and often "out of the researcher's budget" (Patter, 2016), thus many researchers opt to transcribe their own research discussions. However, according to Patter (2016), there are 'serious advantages' for transcribing your own data, which get the researcher closer to the data and make better end results. When the researcher is part of the discussion which needs to be transcribed, they are able to remember words which may be muffled on the voice recording, points where the participants may have shaken their head, and other little details which affect the meaning of the discussion (Patter, 2016). According to Patter (2016), when a discussion is moved to text, a lot of nuances are

lost, and the transcriber makes subject choices around this migration; thus when a researcher transcribes the discussion, more nuances are captured which changes the data results in a positive manner.

- Phase 5: Presentation of the results

Based on the points discussed in the focus group, the results were tabulated and conclusions were made regarding the way forward for inclusion of hearing-impaired learners, and the needs raised by the teachers. The transcriptions of the focus group, after verbatim transcription, was written by the researcher and themes were extracted. These were then summarised in a table form and compared to the themes that arose from the completed teacher questionnaires, ensuring that the teachers' identities remained confidential. These results can then be shared with the schools that participated in the research, as well as the KHDA.

Data triangulation was used to compare the results obtained between the qualitative data results. Triangulation refers to the use of more than one approach in the investigation of research questions (Bryman, 2012), by comparing the results to analyse if the same conclusion regarding inclusion of hearing-paired learners is obtained. Data triangulation involves gathering of information from several sampling strategies and from a variety of people (Bryman, 2012). This was achieved through the use of the teacher questionnaires, and the focus group interview. Overall reliability is increased when different data displays are utilised to describe the comparisons of data collected (Alhojailan, 2010); thus, through the tables and figures, the researcher was able to compare the results from the observations, teacher questionnaires and focus group, in order to form a conclusion of results. Both similarities and differences from the participants' perspectives assisted in providing a global view.

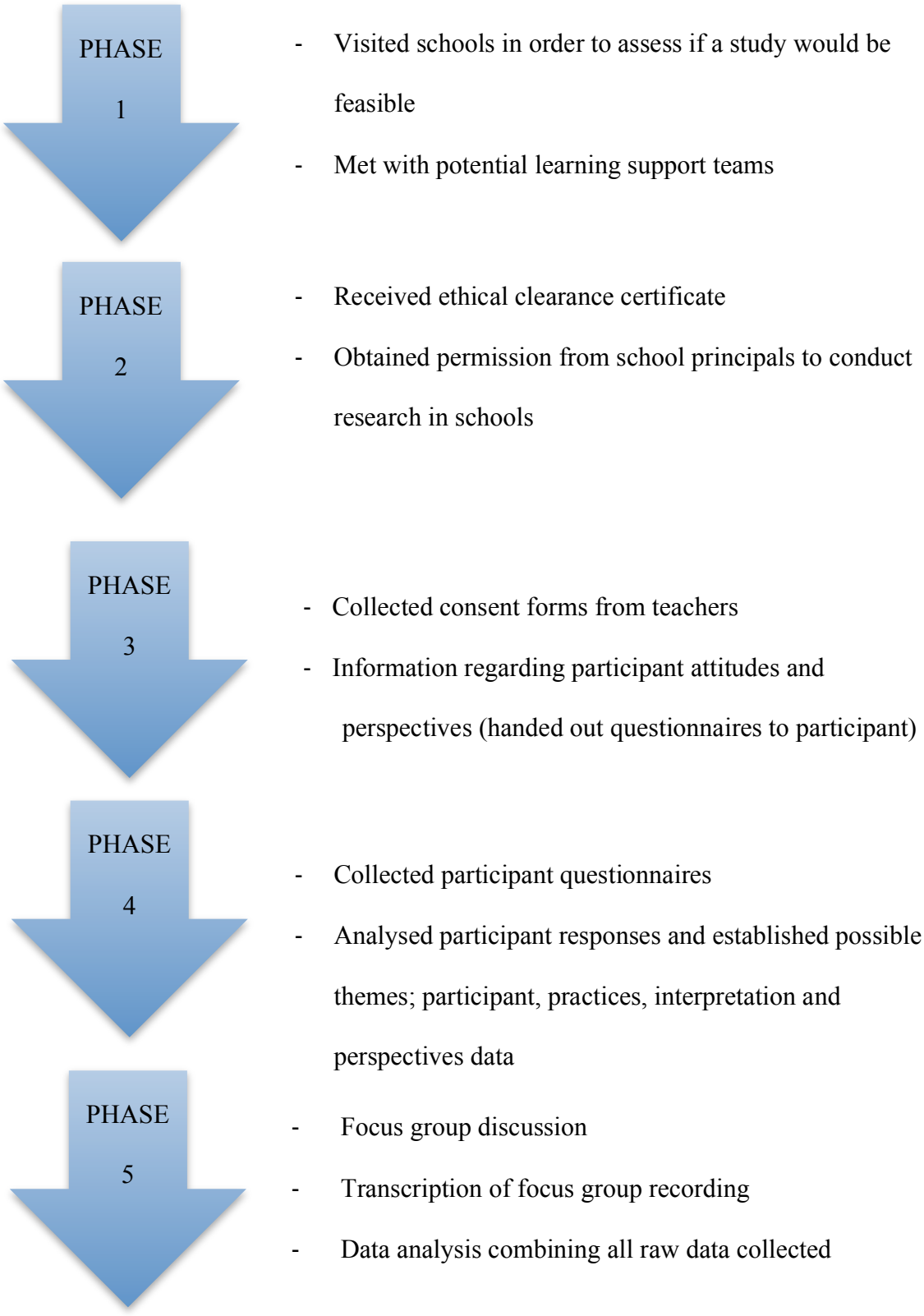



*Figure 5. Graphic representation of research phases from pre-data collection through to data analysis*

### 3.14. Validity and Reliability

The use of a predominately qualitative, naturalistic research approach seeks to understand a perspective within a context-specific setting (Golafshani, 2003), such as can be found in private regular Dubai schools. The findings for the research were derived from a real-world setting so that teachers' perspective could unfold naturally and the information collected could not be manipulated to answer the hypothesised questions.

A good qualitative research approach elicits an understanding of information or perspectives that were once confusing, thus increasing the quality of the research (Golafshani, 2003). Good quality qualitative research reliability can be defined as concept that elicits understanding and ensures trustworthiness (Golafshani, 2003). In order to assist in enhancing the reliability of the research, the consistency of the data collected was verified through examination of raw data collection, observations and process notes (Golafshani, 2003). Trustworthiness in qualitative research is often questioned by other forms of research, namely positivists (Shenton, 2004), as positivists believe that qualitative research cannot address validity and reliability. Guba (1981) however, proposed criteria in order to achieve trustworthiness which addresses credibility, transferability, dependability and conformability.

Credibility can be defined as the researchers' ability to ensure that the study measures or tests what is actually intended (Shenton, 2004). According to Shenton (2004), credibility is achieved through the following ways:

- Adoption of research methods well established in qualitative investigations and information science. In order to achieve this, the questionnaire that was used was adopted from a previously used teacher questionnaire and research. The adaptations made are to specifically include hearing-impairment and not a general questionnaire of special needs.

- The development of familiarity with the culture of participants and organisation. The researcher had established herself within the school for 4 years prior to conducting their research as she was the third-party speech and language therapist who attended the school on a twice weekly basis to assist with learners requiring additional support.
- Random sampling of individuals to serve as informants. By randomly selecting the participants of the focus group, random sampling ensured that unknown influences were distributed evenly through the results.
- Triangulation was achieved by using different means of data collection. These included observations, questionnaires and the focus group. These form the major data collection strategies for the research. By using different ways and means of data collection, individual strengths of all approaches are achieved and compensations of individual limitations are eliminated.
- Tactics to help ensure honesty of the participants by giving the participants the opportunity to refuse to participate which allows for the data received to be genuinely willing to partake and to be honest in the responses. This was achieved through providing the participants with an information sheet stipulating the before stated.
- Interactive questioning was achieved through the use of the focus group in which the participants were given the opportunity to relay further information and perspectives.
- Peer scrutiny of the research project. The researchers' peers and colleagues were requested to read through results and opinions, and offer feedback and view of the research.

Transferability refers to the ability of the findings of the research to be applied to other situations (Shenton, 2004). Although each research is unique, it should also be applied to a broader group, and thus the prospect of transferability should not be immediately rejected

(Shenton, 2004). As this research was only applied to three regular private schools in Dubai, it poses as a limitation to the results; however, the questionnaires and focus group can be applied to further schools in Dubai. In order for the research to be applied top public schools in Dubai, the questionnaires would need to be translated into Arabic, which may pose as a complication to the transferability of the research. Ultimately, the results of this qualitative study could be understood with a broader geographical area and more schools, creating a baseline of research in this area (Shenton, 2004).

Dependability refers to the notion that if the research was repeated, in the same context, with the same methods and participants, the results would be similar (Shenton, 2004). Due to the changing nature of the phenomena scrutinised by qualitative researchers, this renders problematic (Shenton, 2004). The issues which would be faced related to the dependability of this research is that the teachers have not remained consistent within the schools, and turn-over of teachers has happened, thus, if the research was to be repeated, the participants may not be the same and thus results may be shifted.

Patton (2002) stated that in any qualitative research, reliability is a consequence of validity. Validity is related to the structure of both doing and documenting the quality of the research (Golafshani, 2003). Thus, obtaining generalisation of the results increased the validity of the research. The validity of the research was thus achieved by collecting data from different schools within Dubai, and participation from numerous teachers from different backgrounds. A limitation of this is that due to policies set by the Ministry of Education (MOE), only female teachers are permitted to work in the foundation phase of schools. Thus, gender bias may have influenced the results of the research; however, this could not have been overcome due to rules stipulated regarding male teachers in the foundation phases.

Triangulation was used as part of the research to enhance reliability and validity. This is defined as combining methods of research and using both qualitative and quantitative

approaches (Goladshani, 2003). A quantitative approach was used, by collecting percentages of results based on the teacher questionnaires completed. Triangulation also involves data collection from several sources and multiple perceptions within a natural realistic setting (Golafshini, 2003). This was obtained through the data collection from different schools in Dubai.

**3.15. Ethical considerations**

Ethical clearance was obtained by the researcher from the University of the Witwatersrand, Johannesburg, Human Research Ethical Committee (Medical) with ethical clearance number M150872 (Appendix I). The approval was confirmed on the 23/09/2015 with unconditional approval.

Ethics can be defined as the way in which research conduct is followed and the manner in which a complex problem is analysed (Gajjar, 2013). Participants of research should be respected while they contribute to the social good and the research (Emanuel, Wendler & Grudy, 2000). Research is required to add value and contribute to any improvements or adjustments needed by generating important knowledge (Emanuel, et al., 2000). This research was aimed at obtaining information from the teachers about what they perceive as a working policy in regular private Dubai schools which follow an inclusive education system, and how they perceive the changes, thus adding value to the "School for All" policy.

At all times, the data results were recorded and kept, and not changed by the researcher in order to prove the hypothesis which was set out, thus ensuring that the results were not fabricated or falsified.

According to the parameters of ethics, the following was completed:

1. The purpose of the research, the expected time and the procedure was explained to the participants both verbally and in written letter format.

2. The research remained voluntary, and it was at the discretion of the teachers and schools to participate.
3. The right to withdraw was clearly stated in the letter of invitation to participate in the research and the participants received no negative consequence should they have chosen to not participate in the research or if they chose withdraw.
4. The benefits of the research were explained, as was the fact that there were no incentives offered for the participation.
5. The questionnaires and information given at the focus group remained anonymous and confidentiality was upheld throughout the research.
6. The participants for the focus group were selected at random so to obtain objective data results.
7. The rights and requests of the participants were respected at all times by the researcher.
8. It was clearly stated who the participants could contact should they have required any further information or chosen to withdraw from the study.
9. The results will be shared with the participants; both the schools and the teachers.
10. The teachers were requested to hand the researcher the questionnaires by placing face down in a box so as to continue to ensure that their identities were not revealed, and their answers remained anonymous. The box of questionnaires was kept locked away at all times by the researcher. However, four teachers requested to email the researcher their answers for two reasons. One teacher was sick at home and requested to scan the questionnaire and email to researcher, and three teachers lost the questionnaires given and requested that new ones be emailed to them as they did not want to lose another questionnaire. Although confidentiality was explained again to these teachers, they informed the researcher that they did not feel that it would be a

problem for them. Once the questionnaires were received via email, the researcher printed them and immediately deleted the emails from her email account. The four teachers who emailed the questionnaires did not however return the signed consent forms, and when asked all felt that as they had emailed the researcher that this could serve as consent.

11. During the focus group, the teachers who attended placed their hand in a dark draw-string back, and through "blind selection" pulled a piece of paper out of the bag with a number on it. This number was used to refer to the teacher throughout the focus group discussion. The teachers were given the opportunity to select the number from the bag according to the order in which they arrived at the discussion. It was also stipulated to the teachers that what was discussed within the group would remain confidential and that by signing the confidentiality form, they could not discuss what the other teachers were reporting during the discussion.

**3.16. Contribution and originality**

The research may contribute in gaining a detailed account of the teachers' perspective regarding implementation of the "School for All" policy for the inclusion of hearing-impaired children in Dubai private regular schools, in an attempt to effectively implement the "School for All" policy, and the theory that effective inclusion of hearing-impaired learners can be successful within the current regular school systems. It will assist in obtaining evidence-based data regarding the teachers' perspective and subsequent strategies which are incorporated within the classrooms in order to assist the hearing-impaired learner, and identify the positive system characteristics of the policy. This evidence-based data may assist as an insight to guide in possible implementation in the future for possible strategies to assist teachers, and future teachers when it comes to inclusion of the hearing-impaired learner, and will provide evidence as to how the "School for All" policy is implemented to assist learners

with hearing impairment. This may lead to the development of teacher training workshops and sharing of ideas across schools in Dubai regarding inclusion of hearing-impaired learners. The evidence-based practice currently incorporated by the teachers may assist in future adaptations of the current "School for All" policy, as the teachers are able to provide further information regarding effective teaching and adaptations needed for inclusion of hearing-impaired learners.

### 3.17. Chapter summary

Chapter 3 focused on the description of the qualitative research design as well as a discussion regarding the research methods used, sampling techniques, participation selection and reliability and validity. Ethical considerations and the contribution of the research was also discussed. A brief description of each of the three schools utilised for this research study is also stipulated in this chapter. This chapter discussed he research design with a description of the paradigm and approaches used as part of this research study.

Chapter 4 focuses on the results of the research including tables and figures to illustrate the raw data obtained.

# CHAPTER 4: RESULTS

## 4.1. Introduction

According to Schumacher and McMillan (2001), qualitative research can be defined as the process in which a researcher collects data through interactions with participants, real-life observations of the context, describing participants' individual and collective beliefs, thoughts and perspectives. Thus, by using a qualitative approach to the research, an understanding of the teachers' perspective can be obtained, and evidence from literature and data collected assists with drawing conclusions regarding hypothesised questions. The observations conducted by the researcher, teacher questionnaires and focus group discussion complement the literature reviewed in order to gain valuable information when comparisons are made, thus providing an overall holistic view on the perspectives of inclusive education of hearing-impaired learners. In this chapter the researchers' observations, teacher questionnaires and focus group discussion are analysed in an attempt to gain useful knowledge from the data collected in order to complete a summary of the teachers' perspective regarding the "School for All" policy and inclusive education of hearing-impaired learners within regular private Dubai schools, as well as possible requirements or changes the teachers may request in order to successfully assist hearing-impaired learners.

## 4.2. Brief description of each school

Information regarding the schools was taken from each schools' website and through observations conducted by the researcher. Due to confidentiality, the names of the schools are not given in this research, and thus the websites cannot be cited. Table 3 gives a tabulated comparison of the three schools selected by the researcher.

### 4.2.1. School 1 as per Table 3

School 1 was founded in 2004 as one of the larger schools in Dubai, UAE. The school provides education from early years to primary up to and including secondary years. Learners within the school age from 3 years to 17 years old. According to the schools' website, the school strives to equip the learners holistically with skills, knowledge and character, offering comprehensive range of outstanding international curricula. The education programme is offered through the nurturing approach of all the teachers for the benefit of not only the learners, but also their families. The schools' mission is to encourage curiosity and enthusiasm, creativity and independence, and compassion and communication through an exciting, rich and engaging learning experience.

School 1 is an authorised International Baccalaureate (IB) World School for the Primary Years Programme (PYP) and Diploma Programme (DP) and also offers the IB's Middle Years Programme (MYP). The International Baccalaureates' Primary Years Programme (PYP) is designed to encourage curiosity in all the learners. It focuses on developing the learner as being inquisitive and to ask questions not only within the classroom but also in the outside world. The school offers six subject areas for the learners within each year age group, including language, social studies, personal, social and physical education, mathematics, science and technology and arts.

### 4.2.2. School 2 per Table 3

School 2 was founded in 2005. The school offers education from Foundation Phase (FS) to year 6, with learners aged 3 years to 10 years old. The school offers the National Curriculum for England, taught by British trained and experienced teachers. Teachers are encouraged to show creativity in motivating a child-centred environment. The school states that they recognise the important role of parents in their child's learning and so the school offers a range of opportunities to develop effective home-school partnerships. School 2

follows the aim of inspiring the learners' curiosity, creativity and empathy, to enrich the learners with knowledge through enjoyment, provide intellectually challenging programmes, and to ensure the highest level of achievement. It also follows a holistic learning approach in which children are encouraged to learn not only from the classroom but also the sport field and at home. The school follows a multi-faceted approach to learning in order to prepare the learners for the rigors of higher learning and equip them with the skills and versatility they require for professional employment. The school encourages independent learning, empowering learners to take on responsibility so that the learners become confident, tolerant, resilient people of integrity, capable of both leadership and compassion.

#### 4.2.3. School 3 as per Table 3

School 3 was established in 2014**.** It is a modern purpose built school designed for education in the 21st century, offering education for learners from Foundation Stage (FS), with plans to expand to year 13. At the stage the research was conducted, the school grade level was until year 10 (i.e. learners aged 14 years). The school teaches the English curriculum from which learners are able to gain university entrance once completed school. The International General Certificate of Secondary Education (IGCSE) curriculum that students will follow from Year 9 is internationally recognised and used in over 150 countries throughout the world. It sets widely accepted educational standards, supports a modern curriculum and promotes international understanding. In addition to developing specific skills and competencies, the curriculum emphasises independent thinking skills, enquiry, creativity, planning and a range of skills needed to meet the challenges of the future. The school states that they will provide high quality education to all learners of all nationalities and abilities. As an English curriculum school the school prepares the learners for internationally recognised IGCSE, AS and A Level qualifications through carefully designed programmes, and with quality teaching expecting the learners to attain high grades in external

examinations. However, the school recognises that children are unique and school is more than academic attainment. Opportunities are thus provided for wider participation in sport, cultural, creative and aesthetic activities, allowing the learners to enrich their own learning experience and develop personal strengths and talents. The school acknowledges that academic performance is important because academic qualifications are the passport to accessing a good university but also believes in a values-based education**.**

*Table 3: Summary comparison of the three schools*

| | **School 1** | **School 2** | **School 3** |
|---|---|---|---|
| **Curriculum followed** | IB | British | British/ IGCSE |
| **Teaching assistant present** | Present plus extra helper | Present | Present |
| **Grades/years** | Pre-K to Grade 12 | FS1 to Year 6 | FS1 to Year 10 |
| **Ages** | 3 – 17 years old | 3 – 10 years old | 3 to 14 years old |
| **Doors present per class** | Glass door and glass windows | No; arches present | Glass doors |
| **Setting of classrooms** | 4 classes centred around central play area. 2 pods were grade. No classes built above. | Classes situated to left of passage with swimming pool area to right. Play areas outside of classrooms on school perimeter. 2 more levels of classes built above for higher grades | Classrooms situated on either side of tiled passageway. No classes built above. |
| **Carpet insulation** | Mats placed only in front of white board and none found in rest of classroom | Mats placed only in front of white board and none found in rest of classroom | Mats placed only in front of white board and none found in rest of classroom |

### 4.3. Findings

Findings from the current research results have been presented following the teacher questionnaire responses, the answers and results obtained from the focus groups, and the

themes which arose from the combination of the questionnaire and focus group findings. These themes are embedded within the questionnaire and focus group discussion.

### 4.3.1. Participant teacher questionnaire findings

The researcher had initially aimed at 20 teachers to participate in the research study from each school, however, in school three, only 12 teachers were available to accept the questionnaires when the researcher attended the school to provide them with information letters, consent forms and questionnaires.

When the researcher collected the completed questionnaires, the returned questionnaires were counted and tabulated results as per table 4, which stipulated how many questionnaires were completed compared to the number of questionnaires initially given at the schools.

*Table 4: Teacher participation consent and questionnaire completion*

| | Number of completed questionnaires | Number of teachers who chose to not participate | Number of teachers who did not return forms |
|---|---|---|---|
| School 1 | 15 | 2 | 3 |
| School 2 | 11 | 5 | 4 |
| School 3 | 7 | 1 | 7 |

Surprisingly, school 3 (the newest school of the three schools chosen in this study) had the fewest number of participant teachers willing to participate in the study. It was where only one out the 15 participant teachers given the questionnaires expressed that she was concerned of negative consequences participating. Seven out of the 15 teachers did not complete the questionnaires, and when the researcher inquired into this, was informed that they did not feel it was beneficial for them. School three, is also the school where inclusive

education and integration of learners with additional needs is the highest, and on further inquiry, has been named the school where inclusive education will be their main focus. School 1 and school 2 had similar participation numbers (15 and 11 teachers respectively) in all three areas respectively of completed forms, teachers who chose not to participate (2 and 5 teachers respectively) and teachers who did not complete and return forms (3 and 4 teachers respectively). It should also be noted that one teacher in school three completed the questionnaire up to question six then stopped.

The themes and perspectives below are based on the participant teachers responses on the questionnaires:

1. *How do you feel learners react to the hearing-impaired learner in the class?*

It was expressed that due to the age of the learners in the foundation phase of school, the children are too young to fully understand or notice if one of their peers is hearing-impaired. For the learners who are wearing hearing aids, their peers are more curious as to what they are, and once they have received clarity from the teacher, they no longer negatively react to them. It was also stated that the learners at this age are too young to stigmatise their peers regardless of the possible aid or impairment their peers may have and that at this stage, children are nurturing to any child with any form of need, from a crying peer to a peer with hearing-impairment. The learners are inquisitive and this is seen in a positive light by the teachers, as it encourages learning and acceptance of others. The majority of the teachers felt that the children in this phase of schooling are able to adapt easily to new situations and those around them, and they more easily accept differences amongst themselves and thus not exclude the hearing-impaired learner from their social activities.

It was reported by one teacher in school 3 that:

*"At a young age I do not think they see them as any different to other children within the class. They still interact through play, shoving and touching them to lead the way",* P34.

It has also been reported that children are encouraged by their teachers to socialise with all children, regardless of their similarities and/or differences, especially in a country like Dubai where there are many nationalities and religious beliefs in one classroom. It is thus the role of the teacher to encourage the other learners to not isolate the hearing-impaired learner, and inform the other learners of how to communicate with, understand and assist the hearing-impaired learner. It was reported by one teacher that the hearing-impaired learners' peers may use more actions when communicating with hearing-impaired peer and begin to use a louder voice when talking to them. This also shows how children at this age easily adapt to their peers and how they learn new means of communication skills in order to socialise with all children, thus encouraging social development of the hearing-impaired learner.

On the other hand, it was stated that as the learners are young and do not fully understand. For example, they often relate the hearing-impaired learners' behaviours as being naughty when the hearing-impaired learner did not hear the teacher requiring repetition of instructions. The other children may see the hearing-impaired child as not have listened to the teacher. Thus, when not fully understood, the hearing learners may become impatient with the hearing-impaired learner. Another teacher in school 3 stated:

*"They can be quite ignorant to their needs. They would also be impatient with them not understanding their challenges",* P30

A second thought that arose was that at times, the hearing learners may believe that because the hearing-impaired learner is not interacting or communicating with them, that they do not want to be "their friend" and thus choose to rather leave the hearing-impaired learner and play with other children as they are unsure of how to react to the hearing-impaired learner. It was stated by one teacher that if the hearing learners are not fully aware or understand hearing impairment, they may use harsh words towards and about the hearing-

impaired leaner (e.g. he's deaf) and that it is thus the responsibility of the teacher to inform the children about hearing impairment.

In order for the teachers to ensure that the children in the classroom fully understand hearing impairment, and the needs of a hearing-impaired learner, it was stated that it is critical for the school to raise awareness regarding hearing impairment, and that the teachers are fully informed.

Thus, the general theme arising is that although children at this age are nurturing and do not understand differences amongst peers, it is essential for teachers to ensure that the children are fully aware and understand hearing impairment and the needs of hearing-impaired learners' so as to prevent any possible stigmatisation and exclusion of the hearing-impaired learners.

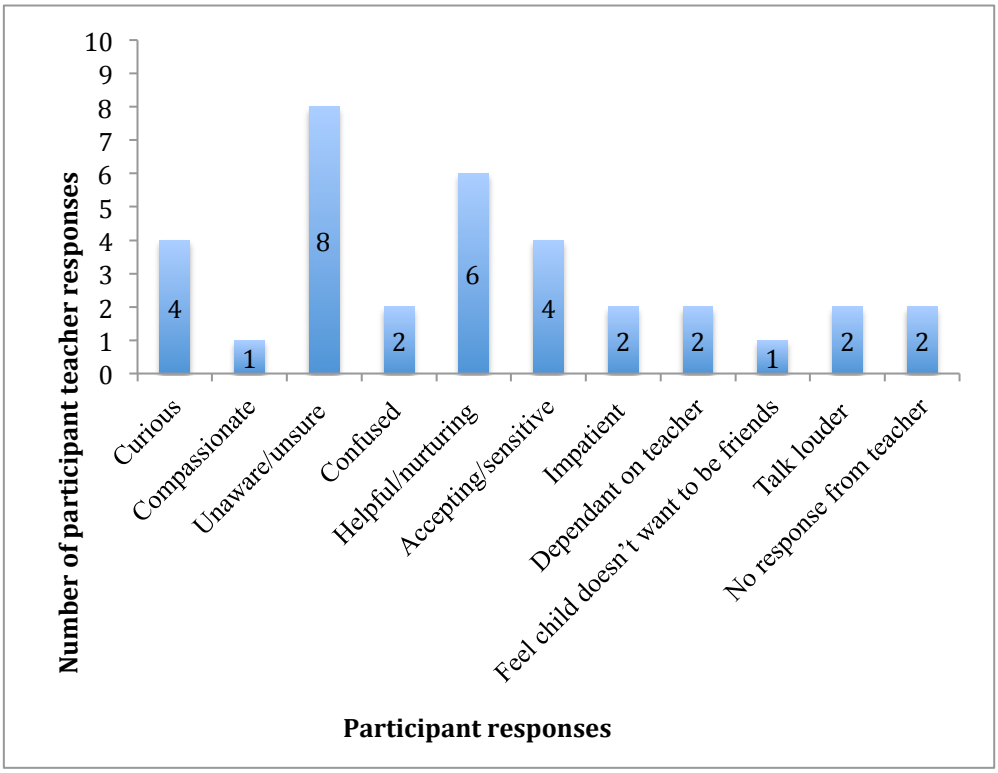



*Figure 6. How the participants felt learners react to hearing-impaired peers.*

2. *How do you feel that your colleagues implement and co-operate with the "School for All" policy?*

It was stated that the teachers and their colleagues are accepting and welcoming of the "School for All" policy and are willing to work with children who have additional needs. However, the concern that was raised was that the child may not be able to access the set curriculum.

*"Welcoming. Equality. Creating a comfort zone for all",* P17.

The above are the words used by a teacher in school one regarding her thoughts on the "School for All" policy and how it is implemented within the school.

Thus, teachers are wanting to create a welcoming and comfortable zone for all learners where there can be equality among all. The teachers also feel that although a school for all can be a challenging task, it is also a rewarding one which supports the "no child left

behind" idea. It was felt that once the teacher understands the child's needs, then implementing the policy is a positive task.

Another perspective is that although teachers try their best to assist the hearing-impaired learners, inclusion requires communication, professional development and awareness. The teachers attempt to cater for the needs and abilities of all the children in their class, but have the challenge of insufficient resources and incorrect infrastructure for the hearing-impaired learners. It was reported that although most teachers are devoted to assisting the learners as best they can, most teachers do not like the extra work that this entails. Although the schools are accepting children with hearing impairment, the teachers feel that the schools do not cater for the hearing-impaired learners. This may cause the teachers to become stressed, especially when they do not have the correct training or knowledge.

*"Although it is encouraged, it may not happen most of the time since the pressure a child with needs in a classroom may be challenging",* P 30.

It was reported that some teachers either did not know that there was a policy formed for the "School for All" initiative, and it was also reported by two other teachers, in different schools, that the school where they worked did not have such a policy in place. This reiterates the importance of fully informing and training all teachers of the KHDA and MOE requirements. It is also alarming to note that although the teachers are based at schools where integration and inclusive education is promoted, that there are teachers who do not know that this exists within the school. Although the term "School for All" is known amongst the majority of the teachers, the researcher was unable to locate a teacher in any of the three schools who had read the policy or was trained in it. This indicates that no teacher was aware of the policy's full requirements and vision.

The general theme is that the majority of the teachers are willing to and attempt to accommodate and adapt to assist the hearing-impaired learner and to follow a "School for All" policy. However, the teachers would require more training and resources, and some even need time in order to do this effectively.

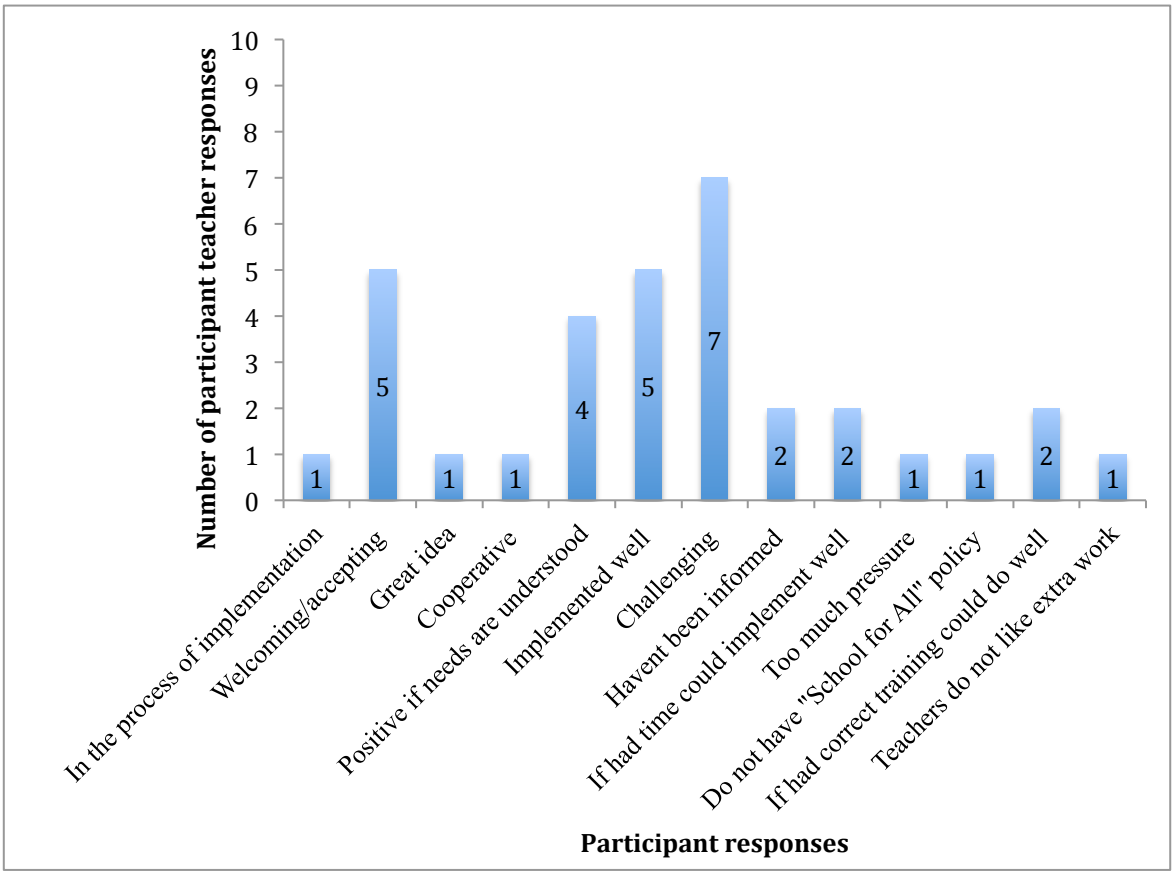



*Figure 7. The participants' perspective regarding how the "School for All" policy is implemented by colleagues.*

3. *As a teacher, how do you assist the hearing-impaired learner in their social development (i.e. making friends with children who do not have a hearing impairment)?*

Expanding from question one in the opinions of the teachers, and that children of this young age will instinctively socialise with all their peers. The teachers felt that their role would be to assist the children in how to communicate with the hearing-impaired learner,

rather than to encourage the initial socialisation. It was also started that group activities, both in and out of the classroom, and role-play activities encourage children to socialise with each other regardless of their peers needs. Thus, the teacher will provide opportunities that encourage play and communication in different situations. Another suggestion that arose was having a buddy system to promote one-on-one interactions and then to gradually introduce more group play.

Direct teaching of turn-taking, sharing and making friends was reported as an option, as well as stories that promote play and friendship among all children. Creating a comfortable zone within the classroom that encourages play and socialisation with the use of modelling, although this is supervised and controlled. Another in-class approach was to use a "free-flow" where activities were placed around the class and the children are encouraged to move between the activities as they wish and play with different children. Two teachers from School 1 stated the following as suggestions to assist the hearing-impaired learner.

*"Group activities, social games in the class and out on the playground including role play, and videos and discussions to support social development",* P16.

*"By providing opportunities for one-to-one or small group interactions at first and then by explaining to the other students and demonstrating different ways they could communicate",* P 28.

On a more severe level, where the hearing-impaired learner is having difficulties with socialisation, the schools offer social skills groups and counselling, as well as the teacher encouraging parents to set up play dates either one-on-one or in a small group.

The general consensus was that encouraging socialisation with hearing learners and hearing-impaired learners would be no different, and thus the same strategies would be used for hearing and hearing-impaired learners. The thought is that hearing-impaired learners would attempt to socialise and make friends just like any other child would. There was

however one teacher who clearly stated she is not trained in this area and would not know what to do.

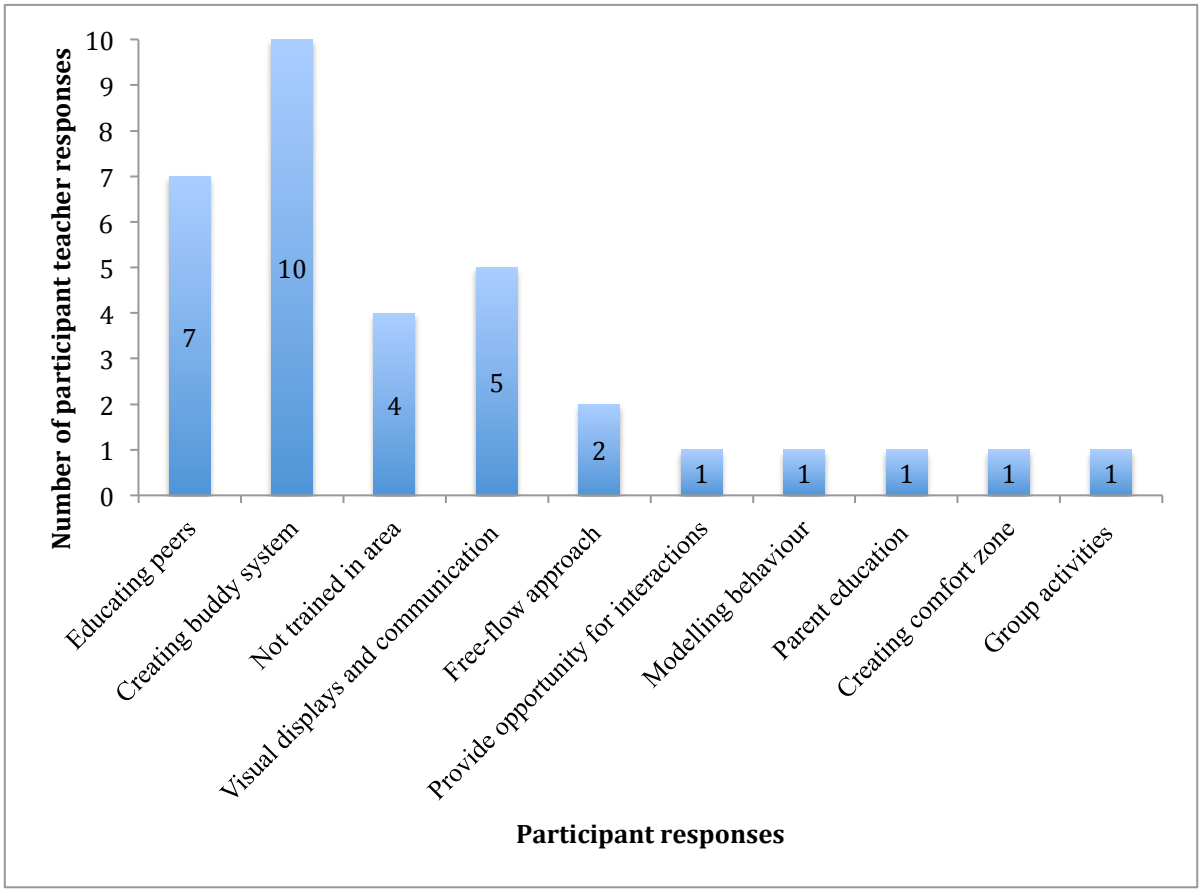



*Figure 8. How the participants reported they assist hearing-impaired learners in social development*

4. *Who are the role players in the hearing-impaired learners' life that assist him/her in the classroom?*

According to the teachers who completed the questionnaires, the following are noted:

- Teachers, including the learning support departments.
- Teachers and parents.
- Teachers, parents and therapists forming a consolidation of support.
- Teachers and peers.

- Home, school, community and therapist.
- One teacher stated that this was not applicable.

As can be seen from the above, it is perceived that teachers play the biggest role in the hearing-impaired learners' classroom development. Training of the teachers is thus ssential in order to provide the hearing-impaired learners with informative and correct assistance in all areas of academic and social development.

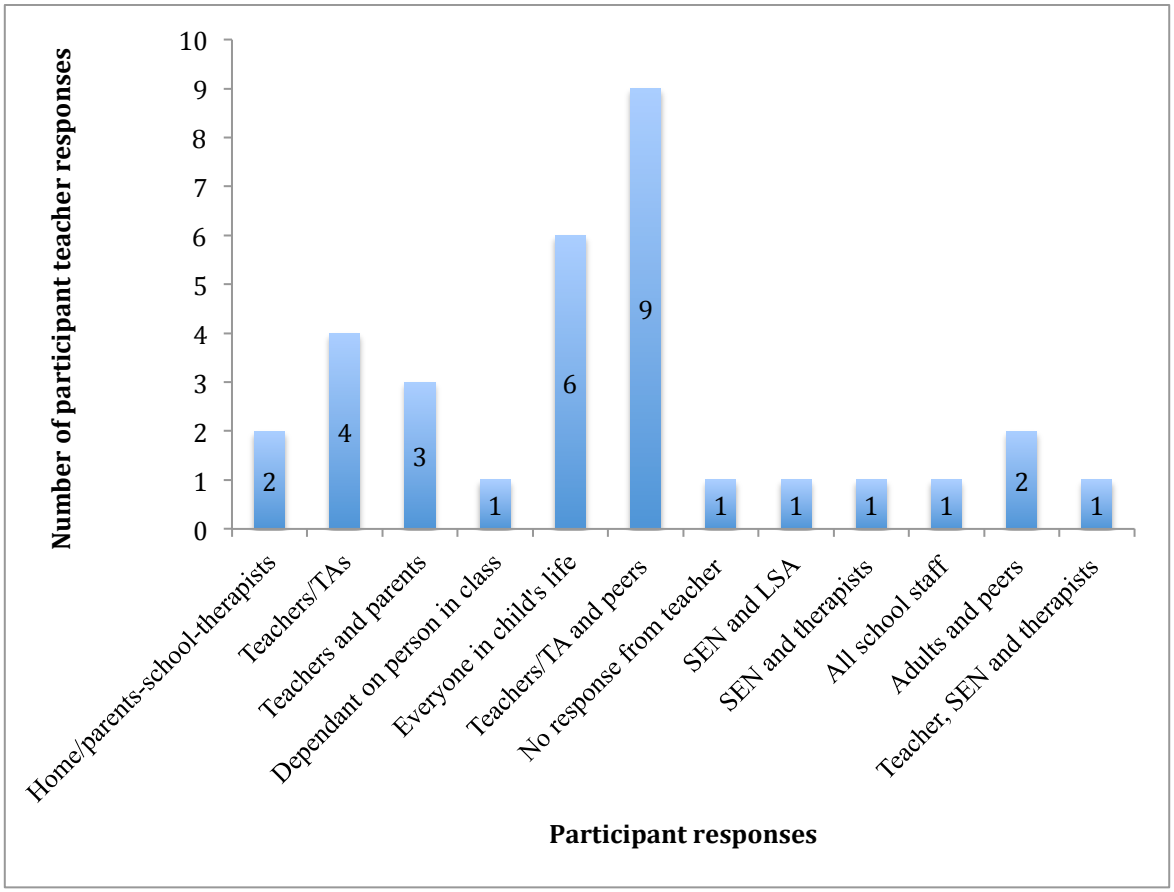



*Figure 9. Participants perceived as the role players for a hearing-impaired learner within the classroom*

5. *Describe the working relationship between the school management and teachers when assisting the hearing-impaired learner.*

The relationship between the school management and teachers has been described mainly in a positive light. Although the communication is open where the management attempts to provide the teachers with all resources they require, at times details in information giving is lost due to teachers having numerous roles within the school.

*"There is a good working relationship. Always have help and support from management and SEN staff",* P32.

The learning support department is often known as the "middle ground" between the teachers and the school management. Where the learning support team are the first point of contact for the teachers, and will assist where possible prior to contacting the school management team. However, it has been reported that the learning support team is often too small to assist all the teachers needs and often the teachers are required to adapt on their own.

It has also been reported that although the school management is aware of hearing-impaired learners in the classroom, the management team is not involved in the classroom support of the learner. As reported by a teacher in school 2:

*"Just give and walk away",* P5.

On the other hand, it was reported that the school management provides a set of programs which are specific to the learners' needs and the teachers are required to implement these in their teaching.

One teacher had a negative point of view in this, where the management team briefly visited her classroom to observe the hearing-impaired child and offered her no guidance or assistance. It was also stated that the school management give the teachers instructions, ensures that policies are completed and are not involved in the classroom learning as they trust the teachers to assist the hearing-impaired learners. Where other teachers have reported

that they have had no experience with the school management team, and rely mainly on the learning support team for assistance.

What has been noted most by the researcher in this area, is that within all three schools, there were conflicting views regarding the school management, and what the school management role is within the inclusion of hearing-impaired learners. The majority of the teachers reported that they rely more on the learning support department and that the school management does not assist the teachers when needed, leaving all responsibility on the teachers. As can be seen in contrast to the above quote, another teacher from the same school has stated:

*"Daily support. Positive working relationship",* P6.

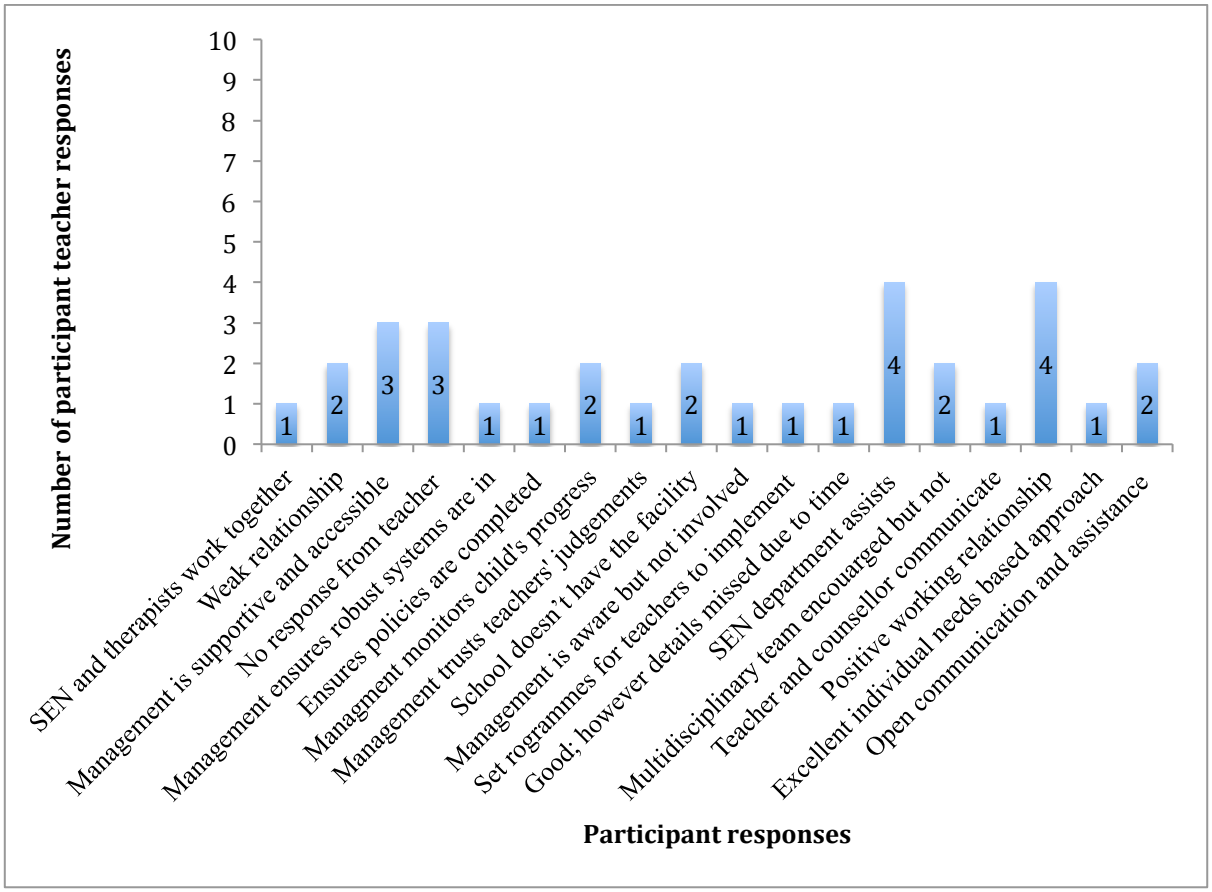



*Figure 10. The participants' perspective regarding the working relationship between teachers and school management.*

6. *How does the school encourage an understanding of the hearing-impaired learners' needs?*

It was felt that the school encourages understanding through social stories and emphasising awareness of hearing impairment, in order to provide an atmosphere where strengths are emphasised. It was noted that this also assists with a full understanding of inclusive education and group discussions. Visual language and other means of communication are also encouraged so that the hearing-impaired learners are able to partake in activities. Another perspective was that outside entities are used to assist with the understanding of how to help and encourage the hearing-impaired learner within the classroom (e.g. speech and language therapists).

*"Head of SEN provides strategies according to child's needs. Involves the external agencies if needed",* P4.

Other teachers felt that the school does not encourage this, and that it is up to the teacher to contact the learning support department for assistance. As reported by a teacher in school 2:

*"Leave up to the teachers and must identify without training or therapist",* P5.

It was also reported that an understanding of hearing impairment has not been discussed, and that other difficulties have been the focus at the schools, and that hearing impairment has not been a main focus within the schools.

Teachers have reported that the needs of students are discussed on a case-by-case basis and that they have not been given an overall discussion or training regarding hearing impairment. The schools have provided talks on inclusion during the introduction of new staff. However, these were general talks and not specific to hearing impairment.

The majority of the teachers from school 3 have stated that the learning support department and the teachers are responsible for encouraging an understanding regarding

hearing impairment, and that they do their own research or contact outside entities for assistance.

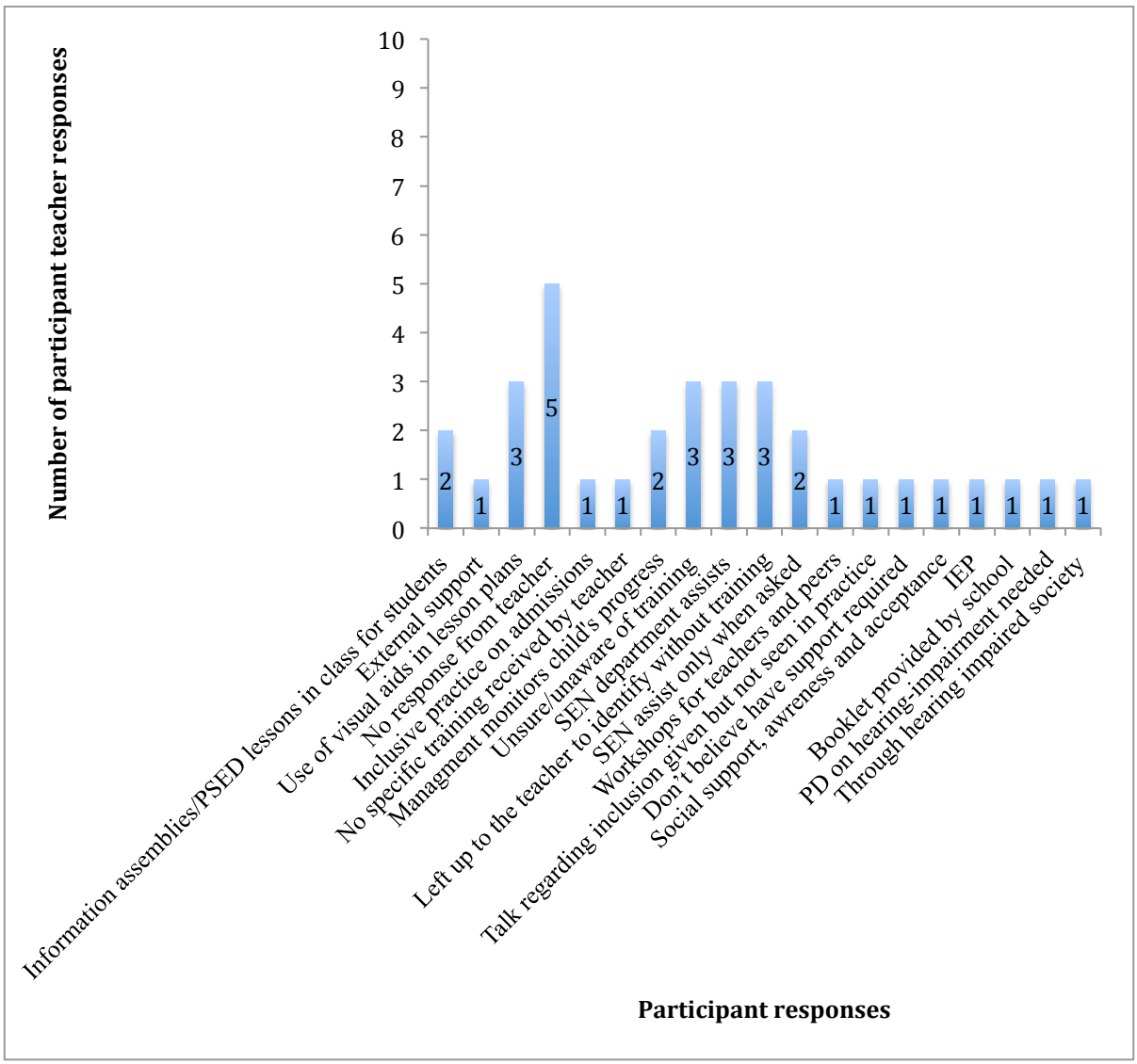



*Figure 11. The participants' perspective of how the school encourages understanding of the hearing-impaired learners' needs*

7. *How do you feel a link between what happens at school and at home to help the hearing-impaired learner is established and maintained?*

Teachers felt that if there was a link between the school and home, parents would feel more at ease about the child and their learning progress. Strategies should be shared with the

learners' parents so that progress can be made within the shortest time frame. These strategies are shared via emails, meetings and a communication book. It has been reported that establishing and maintaining this link is the responsibility of the teacher as is conducted on a teacher-parent level. This would involve weekly meetings with the parents so that concerns and adjustments can be made and progress reported to the parents. Teachers have reported that in the case of hearing-impaired learners, it is essential that parents provide the school with reports and updates regarding any changes to hearing and/or hearing aids.

> *"Communication with parents is key for this. Communication can be via the child's personal blog or a book that the child brings to school and takes home every day",* P13.

In other cases, it was stated that the learning support is responsible for the parent-school linkage and that they coordinate between the teacher and the parents. However, it remains the consensus that this would be the responsibility of the teachers and/or learning support team and not school management.

One negative thought expressed by the teachers, is that this communication may not occur if the parents are not actively involved in the child's progress. This may be due to various reasons and is dependent on the household environment.

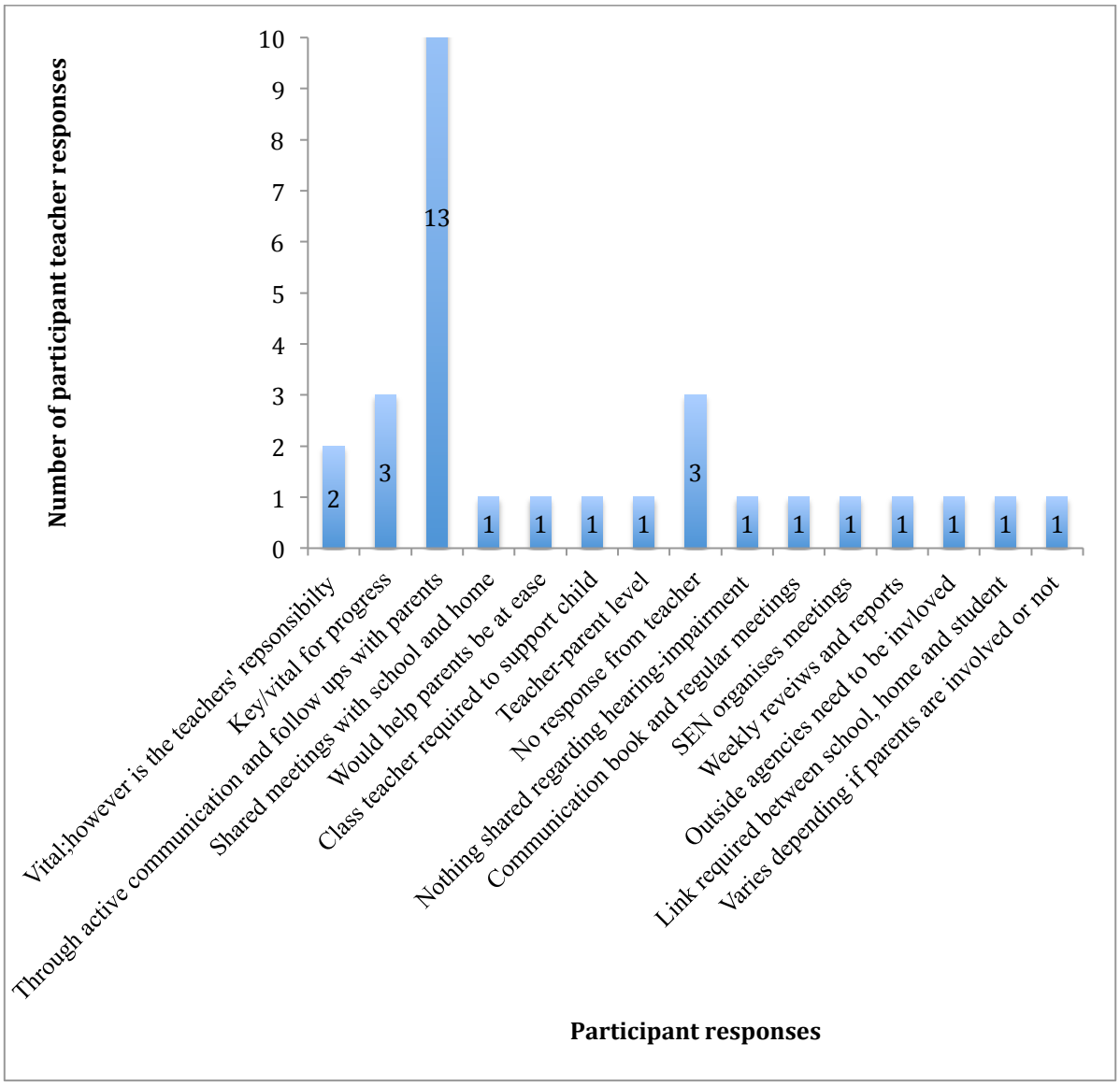



*Figure 12. The participants' perspective of the link between the learners' home and school*

8. *Do you feel that the school has shared inclusive values for hearing-impaired learners?*

At the time of the research study, it was reported that this was a work in progress and not as yet established specially for hearing-impaired learners. However, the inclusion policy was set in place and a general inclusive approach being reflected. At the time, hearing-impaired learners were focused on more in class and as part of a class-based learning process,

but that as of yet not enough had been done to assist the integration of hearing-impaired learners. Stated by a teacher from school two;

*"Not at the moment. However, this is something the school is working on",* P8.

It was also stated that shared inclusion is across all needs because the schools offer support assisting the learners, regardless of their impairment, as the values are open ended. It was stated that, *"Our inclusion policy, admissions policy and LSA policy reflect inclusive approach",* P12.

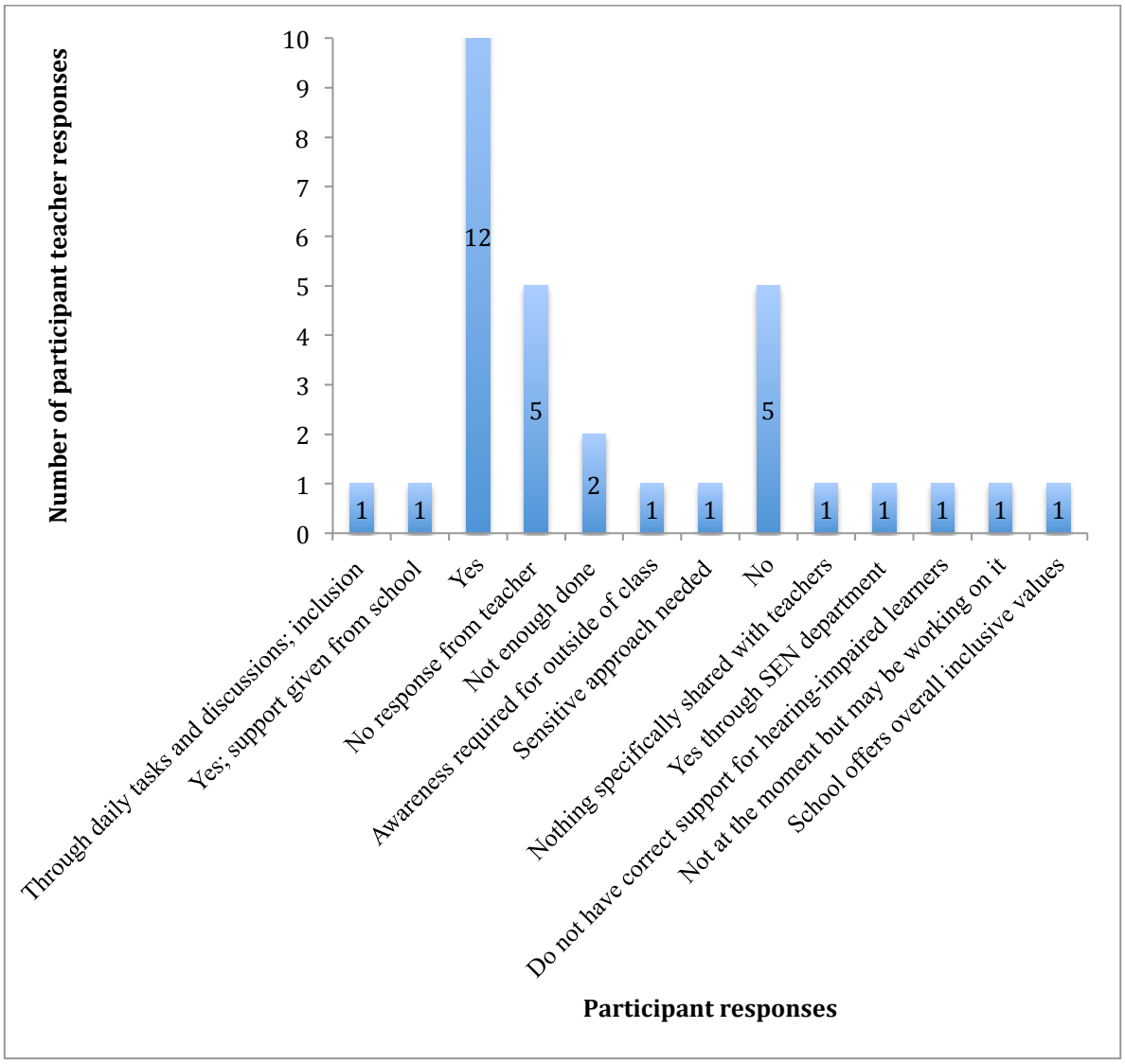



*Figure 13. The participants' perspectives of the schools' shared values for hearing-impaired learners*

9. *How is the "School for All" policy implemented within the school to assist the hearing-impaired learner?*

It was felt that staff provisions and awareness was at this time the means to implement the policy specifically towards hearing-impaired learners, and that the learners are supported as needed. The progress of the hearing-impaired learners and how they are integrating within the school is reviewed termly and changes made where required. This is often achieved

through the IEP and external therapists who assist at the schools. Hearing-impaired learners are most often taken out of their classrooms as part of the "pull-out" system and thus excluded from their class for a period of time.

*"We have therapists available to us as well as the SEN department to assist with hearing impaired learners",* P28.

*"Yes. We have a student support department to closely monitor and communicate with teachers and the child. Every term, an IEP of the child is made and revised depending on his/her progress",* P16.

It was also stated that teachers, staff and other children need to be made aware of the hearing-impaired learners' needs in order to effectively implement the "School for All" policy. And that at the time, the policy is only mentioned on a need to know basis, rather than to all staff and learners. Thus some teachers reported that they are not aware of this policy and that it is not actively implemented. The teachers would then work closely with the learning support department and the hearing-impaired learners' parents in order to effectively integrate the learner into the mainstream school system. Participant 20 from school one stated *"I have not seen this in action"* with participant 22 stating, *"We do not have one"*.

Another perspective was that the school would prefer to implement their own policies and procedures rather than the general "School for All" policy.

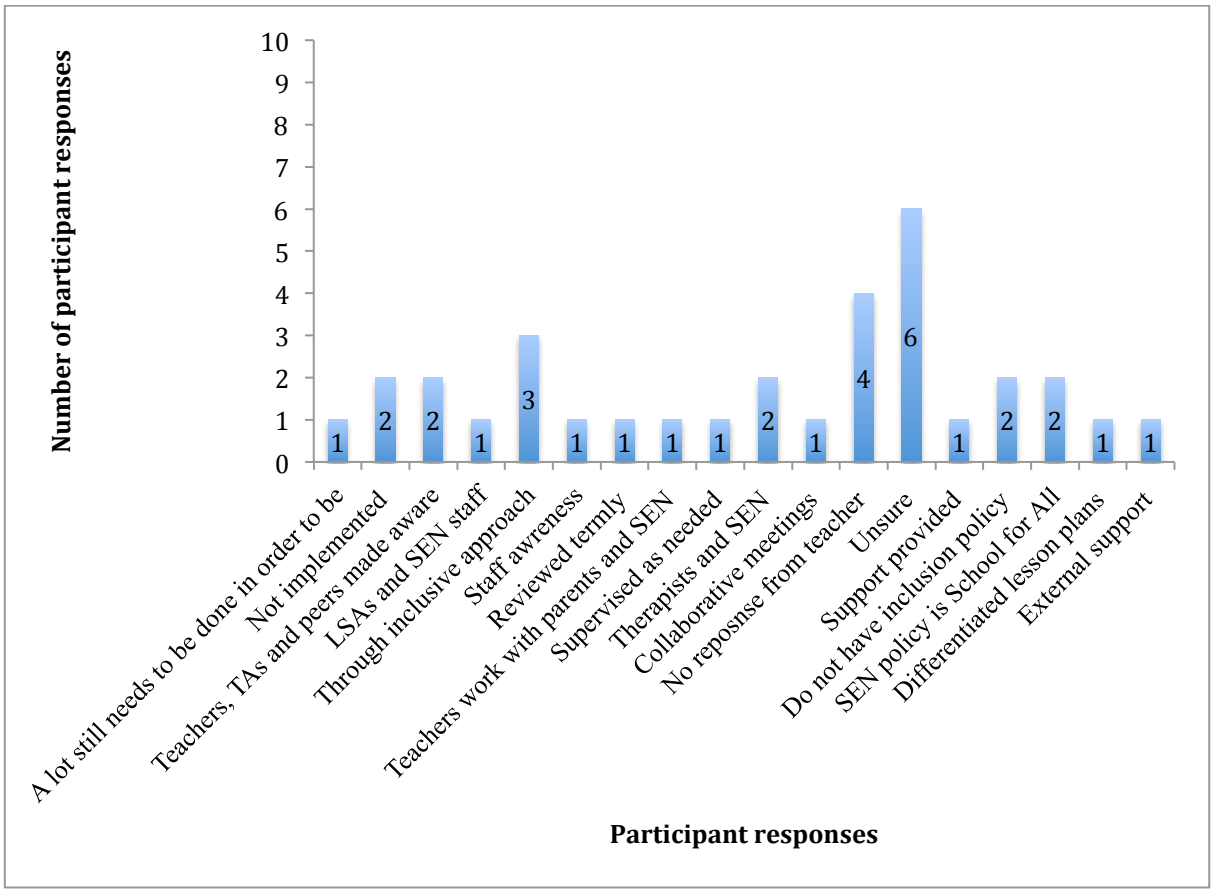



*Figure 14. The participant perspectives regarding how the "School for All" policy is being implemented.*

10. *In your perspective, is the "School for All" policy followed by your school and your colleagues, and how is this monitored?*

The participants felt that with the support of the learning support department and the English Language Learning (ELL) teams that the "School for All" policy is being implemented within the schools. It was also stated that annual reviews regarding policies were conducted by both the learning support department and the KHDA. However, the outcome of these reviews were not shared with the researcher nor were any disadvantages and changes to the policies shared.

Participant 29 in school 3 stated the following:

*"In my perspective, there is a lot to be done for this to be implementing appropriately. First, the number of the learning support team is extremely sparing in relation to the number of children who need extra help including children with hearing loss. Second, class teachers do not like it when they do extra work for such children especially that they do not get paid for it so even when it is done, it is not done with a heart. As to monitoring, the only way this is monitored though is the SENCO. Following up with the class teacher periodically to make sure the plan is followed".*

However, participants expressed that they do not feel that is followed, nor correctly monitored within the schools and that the school follows their own policies set by school management. It has also been stated that the teachers are unaware of who is monitoring the "School for All" policy and how it is being monitored, and some teachers stated again that they are unaware of the policy in general.

*"Not monitored. It depends on each teacher's beliefs about learning, but they do put labels a lot when in meetings",* P23.

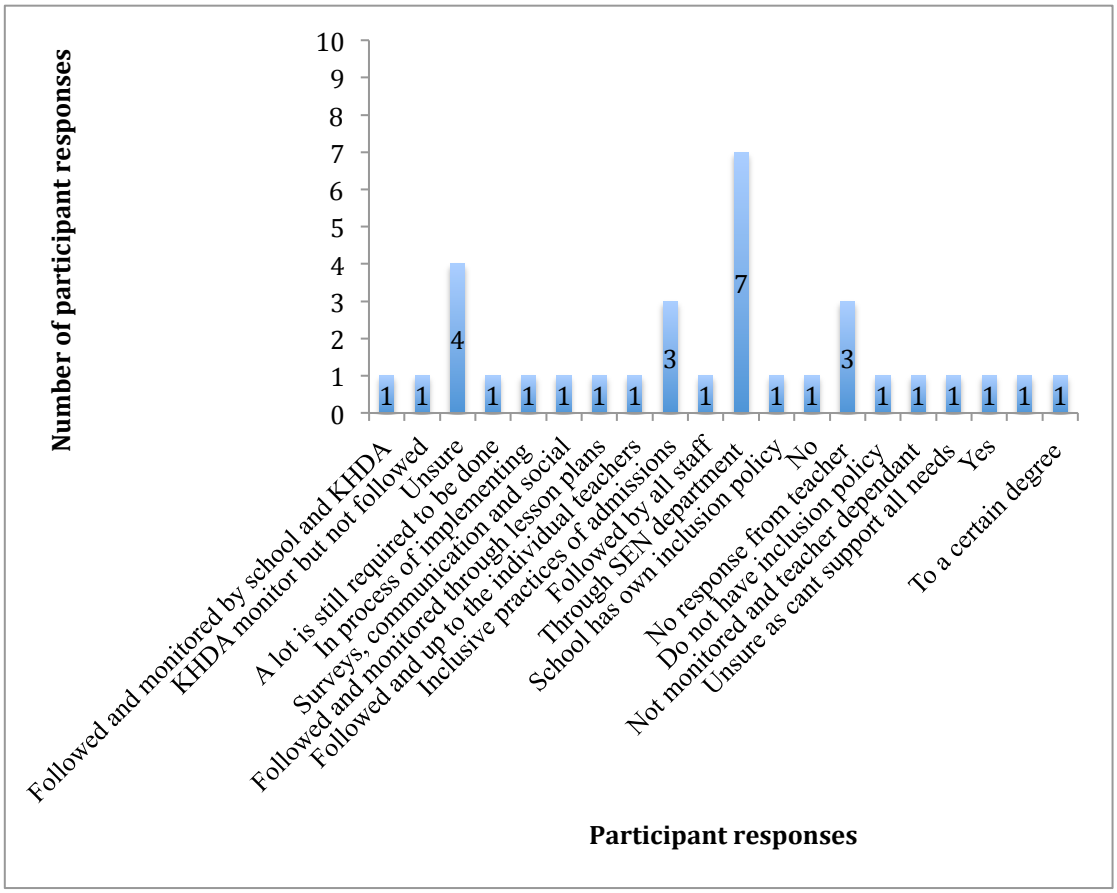



*Figure 15. The participants' view regarding if the "School for All" policy is implemented and monitored.*

11. *What expectations do you feel are too high for the hearing-impaired learners?*

The participants reported that age-related expectations in their opinion are too high for hearing-impaired learners and that some phonics-based learning may be too difficult for the hearing-impaired learner. The level of full concentration required, 100% participation and the verbal tasks are challenging for a hearing-impaired learner. Teachers would thus need to bear in mind that when assessing a hearing-impaired learner, their specific needs should be taken into consideration. Special examinations and tests, or criteria should be set for the hearing-impaired learner, as the curriculum is not easier for the hearing-impaired learners.

However, some participants stated that they did not feel that there were expectations that could not be met by a hearing-impaired learner, and that the school caters to the individual needs of each child. The school curriculum can be adapted to suit the child's needs and often an individual education plan (IEP) is set out for the hearing-impaired learner.

*"I personally believe that no expectations are considered too high if the child is provided with all the appropriate services he needs and there's collaboration and teamwork amongst the professionals and teachers involved in his rehabilitation especially when the child does not have any other diagnoses than hearing loss",* P29.

Some cases require that the hearing-impaired learner receive extra support from the learning support department or outside therapists in order for the child to meet expectations, even when adapted for them.

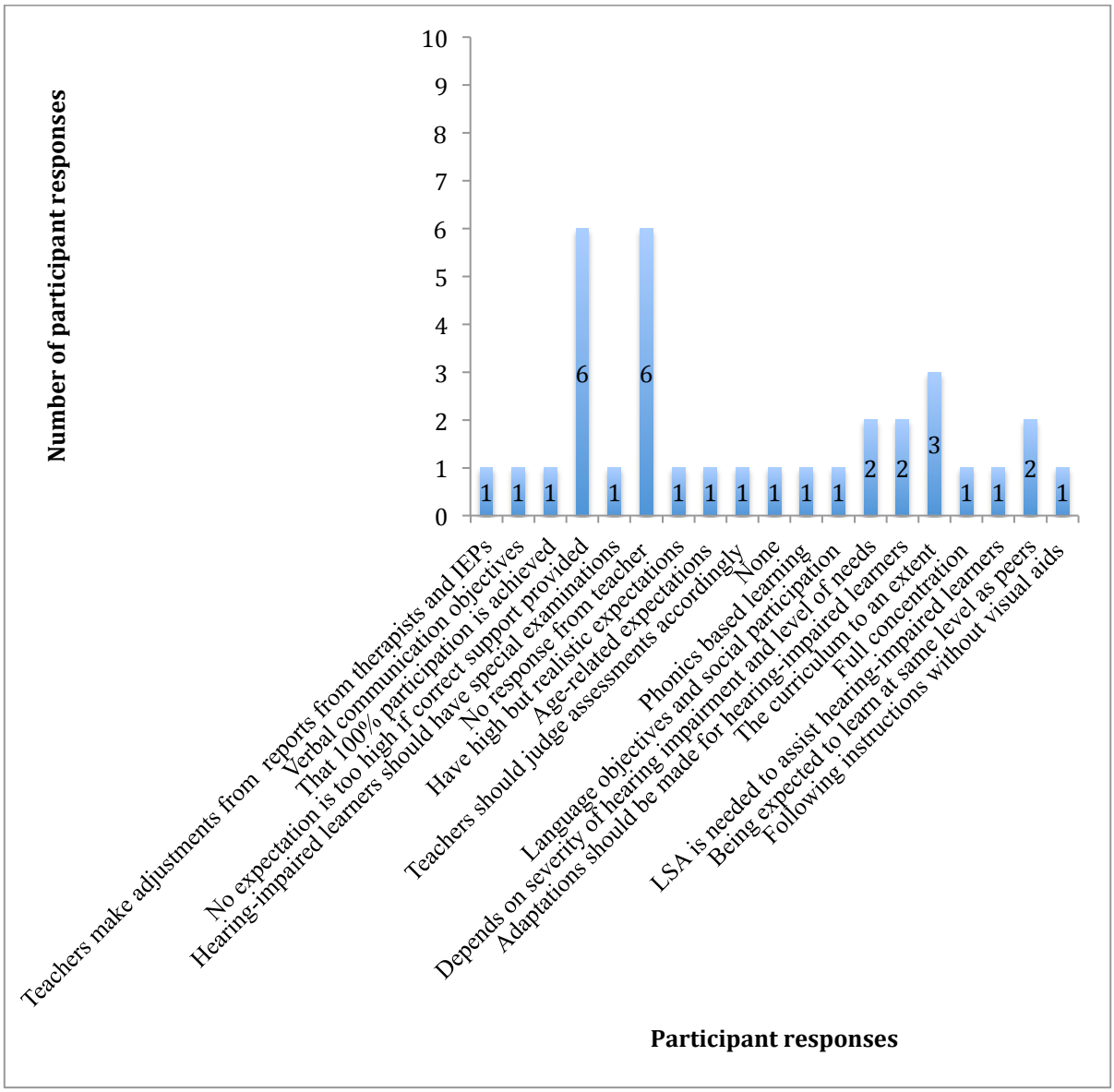



*Figure 16. The participants' view of the expectations required of hearing-impaired learners.*

12. *Do you feel that as a teacher you are able to easily adapt curriculums set for the hearing-impaired learner, and how do you do this?*

The adaptations of curriculum are completed with the learning support department where possible, as teachers felt that they were not experienced in this area and that additional training would be required. The participants reported that at times these adjustments were difficult as there are other learners in their classes (between 25-30 children) who follow the

curriculum set by the school as well as the time constraints in order to complete the set curriculum and objectives set.

*"No it is not easily adapted because they struggle to be on the same page as others. As a teacher it is a learning process",* P17.

The adaptations would need to be personalised for the hearing-impaired learner, and consider the following 1). Social development, 2). Background noise, 3). Extra time allowances, 4). Adaptation of instructions and 5). Physical environment.

It was reported that without the correct training, adaptations would be a challenge for the teacher as well as time-consuming.

*"Not really due to the time constraints and not a lot of training with hearing impaired",* P33.

Other participants stated however that making specific adaptations with the foundation phases would not be an issue, but that it may become a bigger challenge in the higher-grade levels.

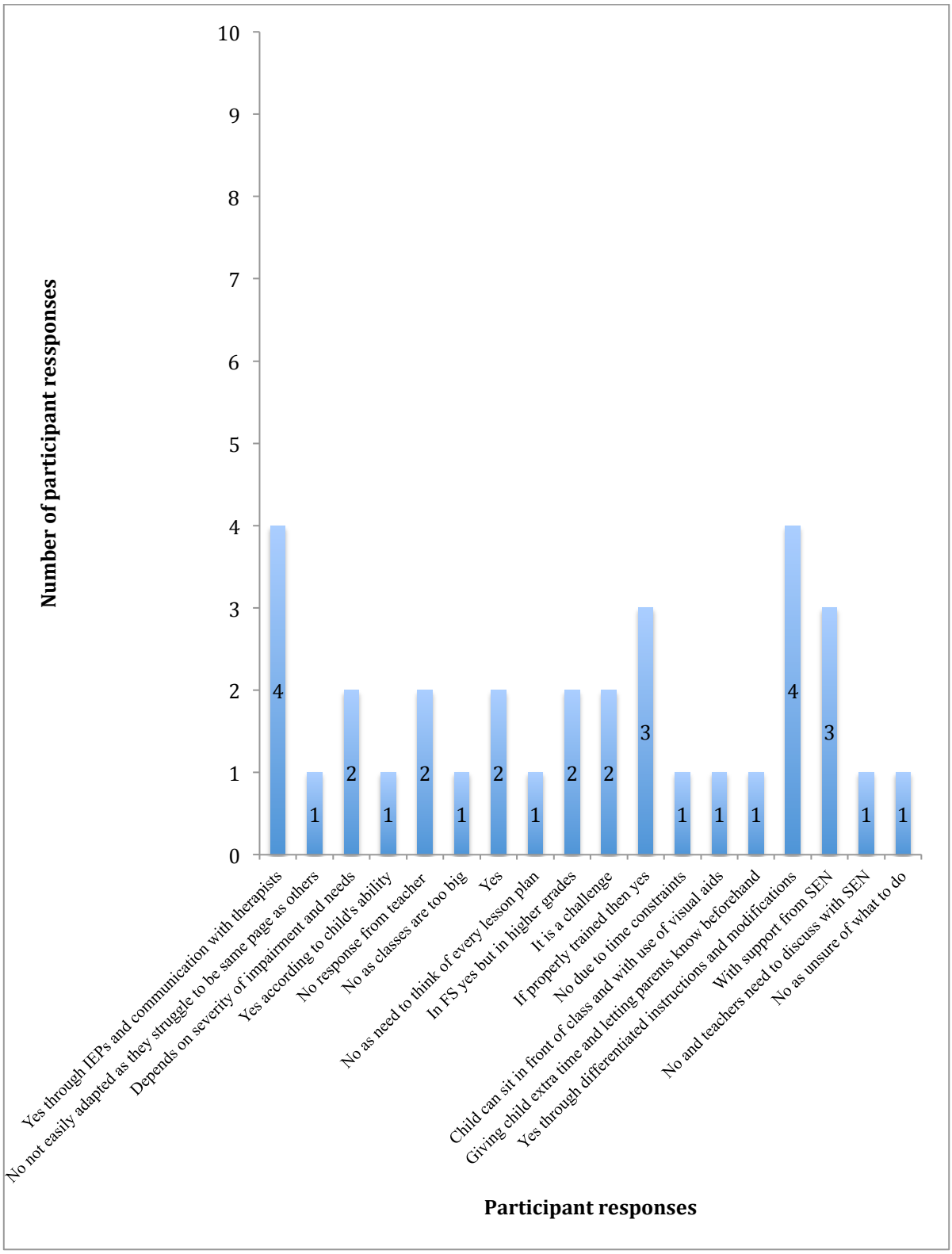



*Figure 17. The participants' view regarding curriculum adaptations to cater for hearing-impaired learners*

13. *Do you feel that staff expertise is known and used appropriately? If not, please explain why.*

The participants felt that the learning support department was used for their expertise in special needs, and often the external support from therapists was requested especially with special cases like hearing impairment. Collaborative planning and internal workshops assist in sharing of expertise.

Other participants stated that the expertise of their colleagues was not effectively utilised within the school, and often teachers are not informed of the expertise of other staff members, especially when not in the same grade.

*"No. Staff could have skills that are not shared or highlighted",* P15.

The example given was that there are teachers trained in Makaton. However, this is neither shared with the majority of teachers, nor is a training workshop offered.

It was also stated that if there are teachers trained especially in hearing impairment, hearing-impaired learner should be placed in said teachers' class.

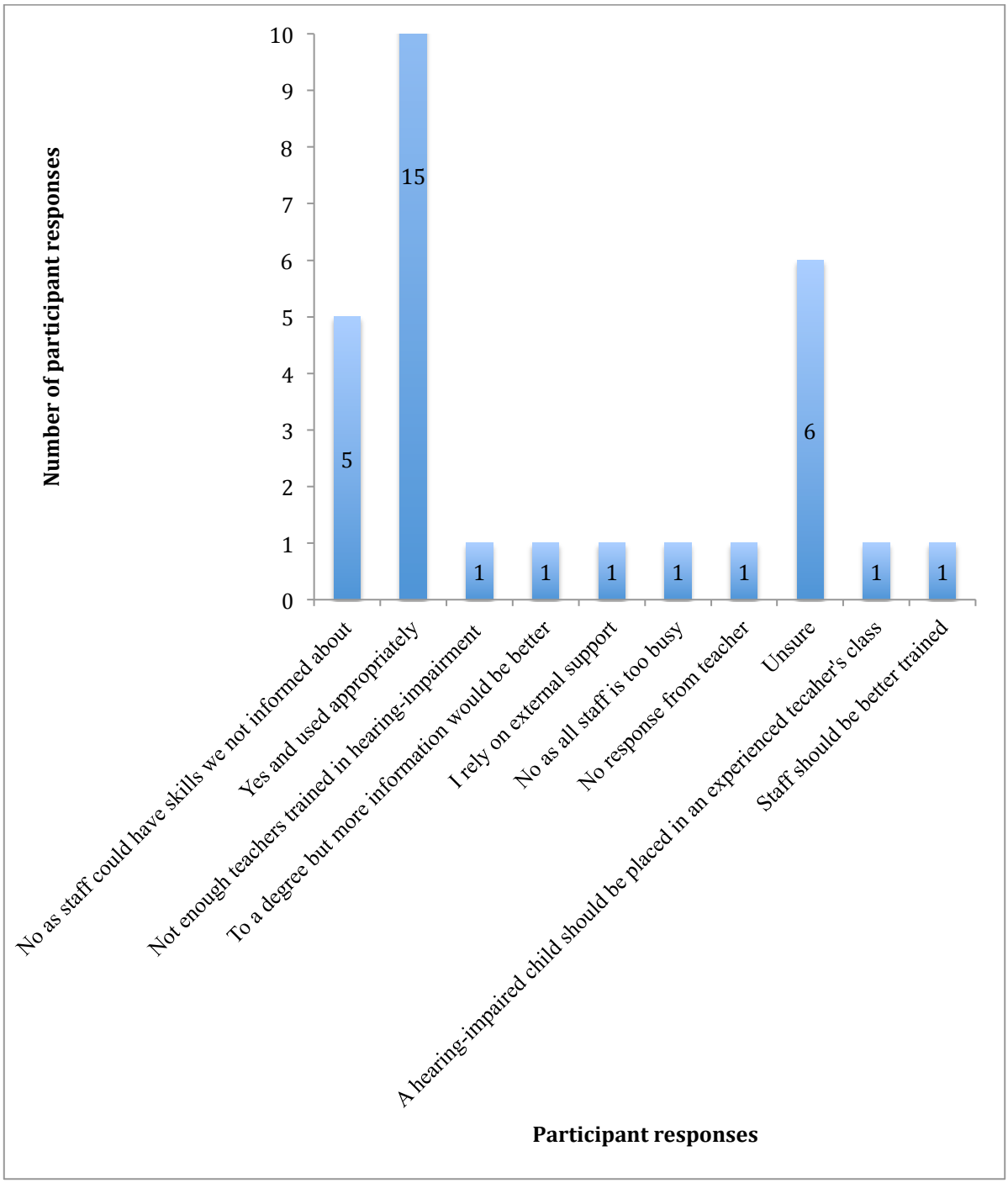



*Figure 18. Participants' view regarding staff expertise and knowledge thereof.*

14. *How are you as a teacher assisted when requested for the hearing-impaired learner?*

When assistance is required, the teachers contact the learning support department for help, the "pull-out" system and through the IEPs. However, they do not feel that they are

fully supported in the area of hearing impairment. The teachers are also able to contact the therapists who attend the schools on a weekly basis. However, this process can take time due to the procedures which need to be followed first.

> *"Teachers are assisted as they have the SEN department to support their teaching (ideas, strategies, resources), SEN for in class support and pull out system",* P16.

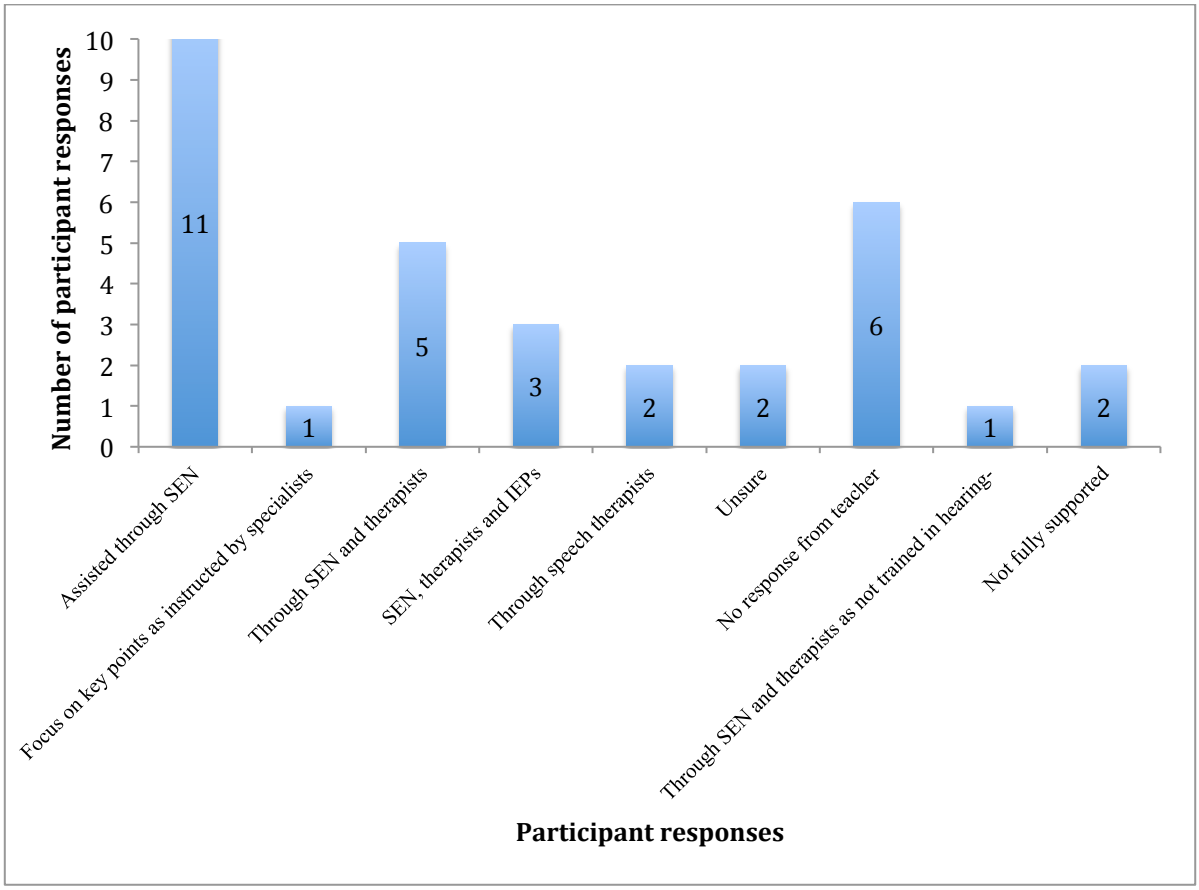



*Figure 19. The participants' view of how they are supported with the hearing-impaired learner*

15. *How do you feel that teachers' ideas are implemented to assist the hearing-impaired child?*

It was felt that the teachers are fully supported by the school in relation to their judgement and ideas, and that strategies are discussed with the learning support department and in department meetings. The teachers are also required to inform the school of any changes and ideas through the learners' IEP, which is given on a termly basis to the learning, support department. Once the learning support department has reviewed the ideas, the teacher is then able to implement them within her classroom.

*"Most of teacher's ideas and initiatives are well implemented as they are supported by the SEN department",* P16.

However, teachers preferred not to comment on this as they felt that their ideas were not taken into consideration, and reported that although ideas are shared, they are not implemented as the teachers are unsure of how to implement them.

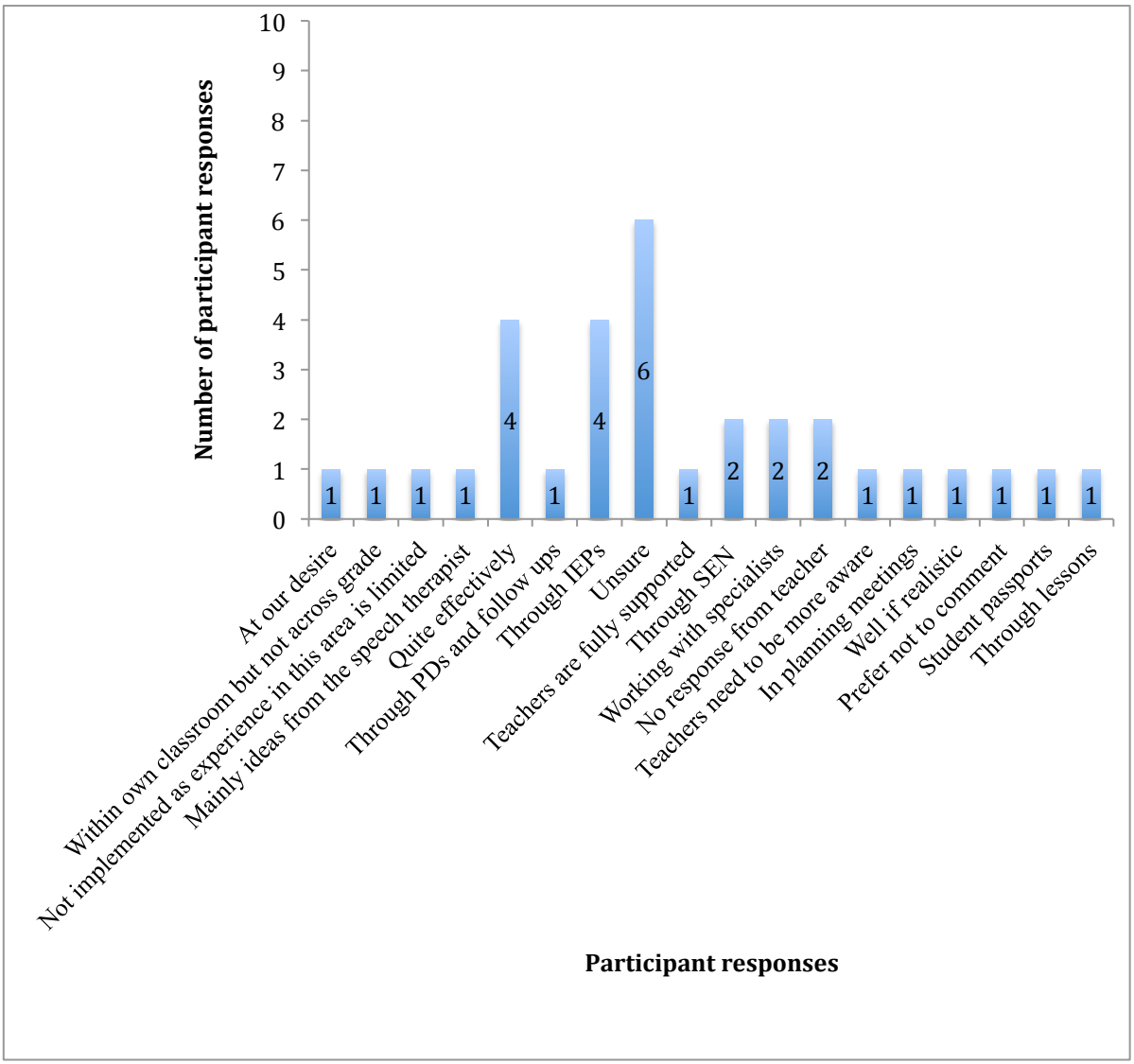



*Figure 20. The participants' view regarding how their ideas are implemented to assist hearing-impaired learners*

16. *What further training do you feel is needed to correctly assist the hearing-impaired learner? If you do not feel that training is needed, please elaborate.*

The participants stipulated the following training ideas:

- How to relate to the hearing-impaired learner and their challenges.
- Courses/workshops to learn about the needs of hearing-impaired learners.
- How to support the learners in the classroom and at home.

- Classroom set-up/modifications and resources needed.
- Individual training based on learners' needs.
- Sign language.
- Expectation levels for hearing-impaired learners.
- How to assist the learner with their hearing aid.

*"We need updates on hearing impairment. We constantly need training for the benefit of the child"*, P27.

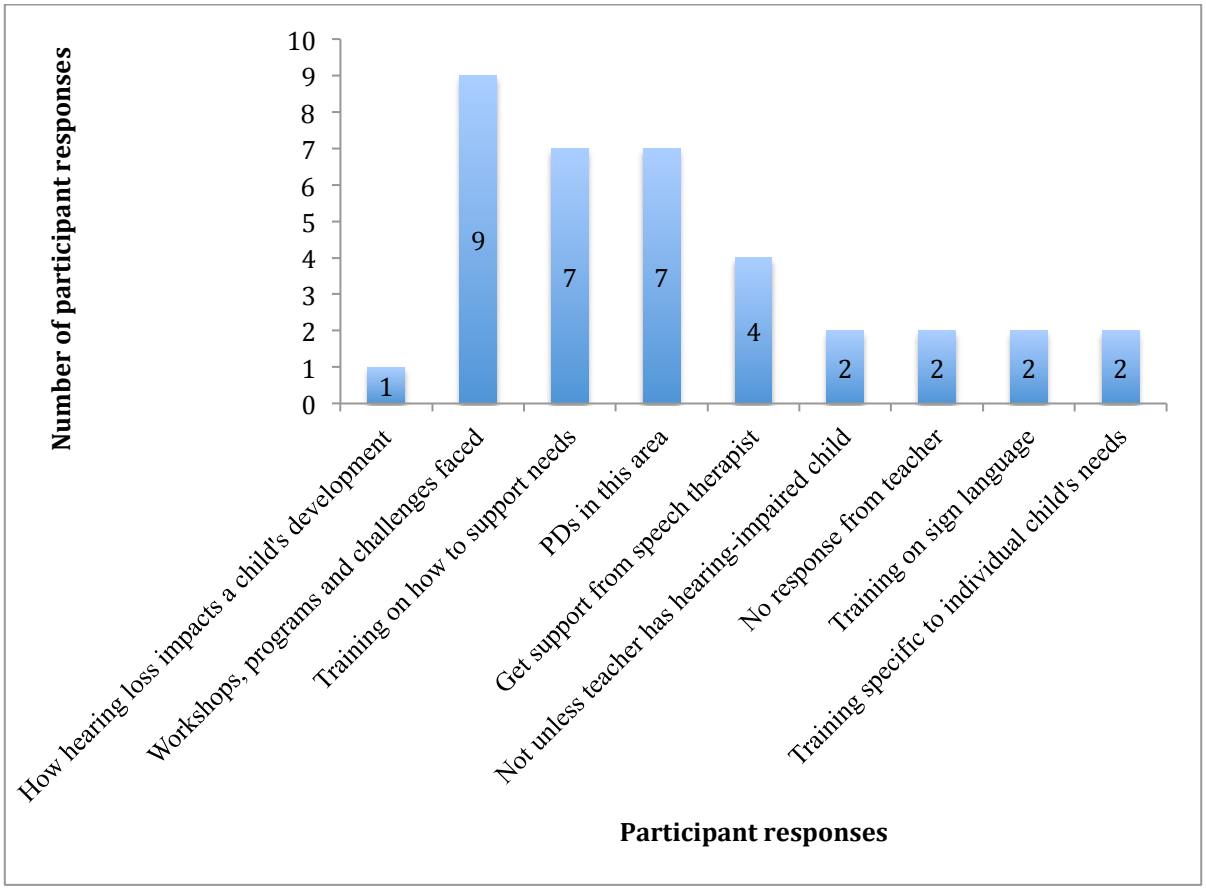



*Figure 21. The participants' perspective on further training required*

17. *How have the classrooms and grounds been developed to support the participation of the hearing-impaired learner?*

Participants have stated that either no changes have been made or that they are unaware of changes that have been made to accommodate the hearing-impaired learners. Teachers are required to closely monitor the hearing-impaired learners, especially during play times. Many of the participants have stated that the schools have not been built to accommodate hearing-impaired learners. With participant 26 in school 1 clearly stating *"They haven't"*.

*"School still requires adaptations to ensure full integration. Never-the-less, teachers and support staff work hard to meet the children's need",* P16.

*"Not yet developed to the capacity where it can help hearing impaired child",* P17.

Whereas some participants have stated that "quiet areas" have been made specifically for the hearing-impaired learner, as well as visual aids being placed around the classrooms. Hearing-impaired learners are also encouraged to look at the teacher while she is speaking so that they can watch the teachers' facial expressions and lip movement.

*"In the classroom, lots of visuals, proper equipment and correct seating for the child so that they have clear view of the teacher",* P13.

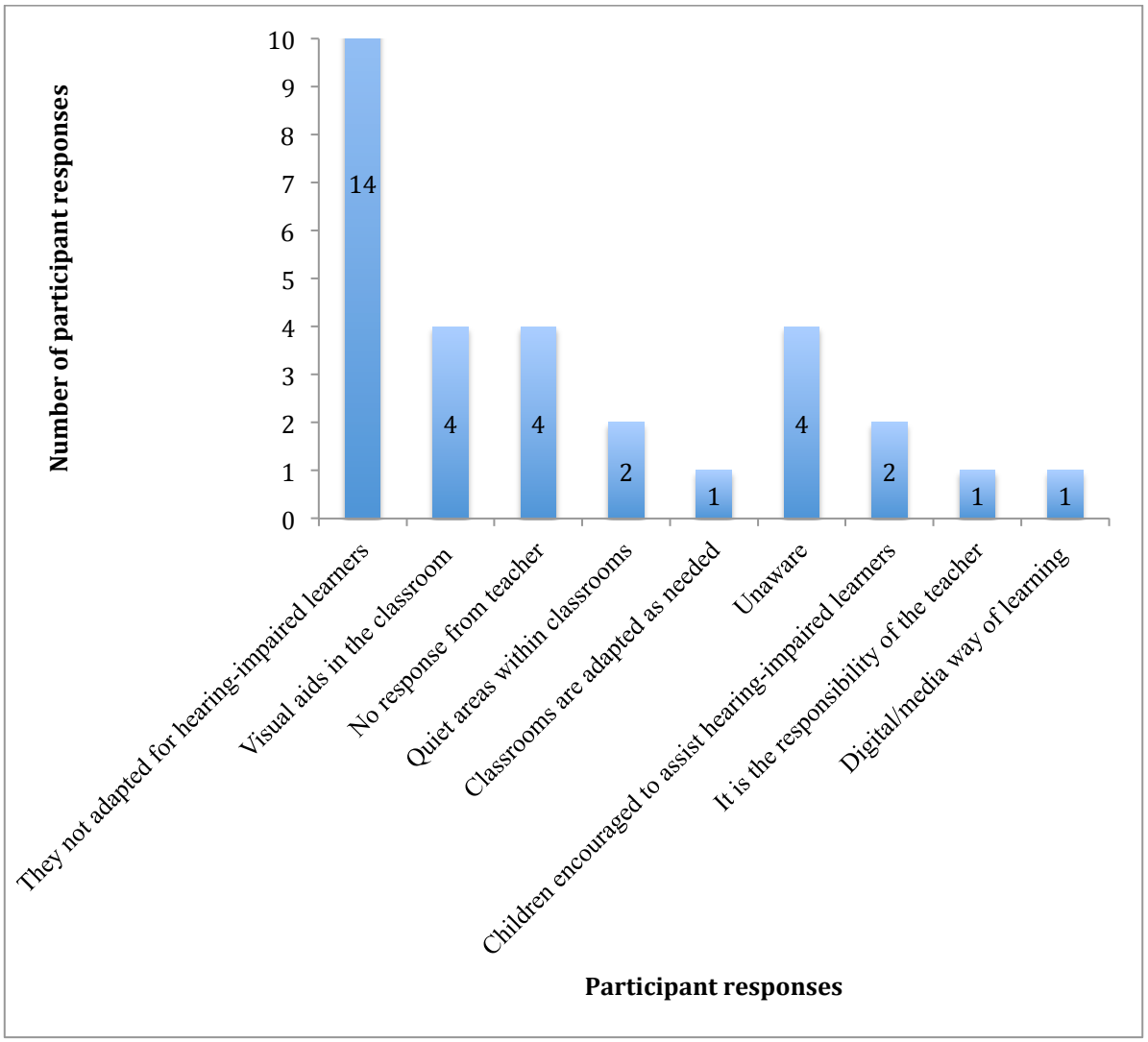



*Figure 22. The participants' view on structural adaptations made within the school to assist hearing-impaired learners*

18. *How do you feel the teaching and learning groups are arranged to assist the hearing-impaired learner?*

Teachers take on different learning approaches within their classrooms when planning for the class as well as the learners who require extra assistance. It will also depend on the activity and the subject that they are teaching at the time. The different arrangements,

according to the participants, will depend on the learners' needs and their ability in the activity.

*"It varies on teachers but most of the time groups are arranged by the following: ability, subject and support",* P20.

Pairing the hearing-impaired learner with a buddy can assist in group activities, as well as ensure that there is a friendly supportive environment, and not making the hearing-impaired learner feel discouraged. At the same time, ensuring that the hearing-impaired learner is included in all activities, even if smaller groups need to be formed.

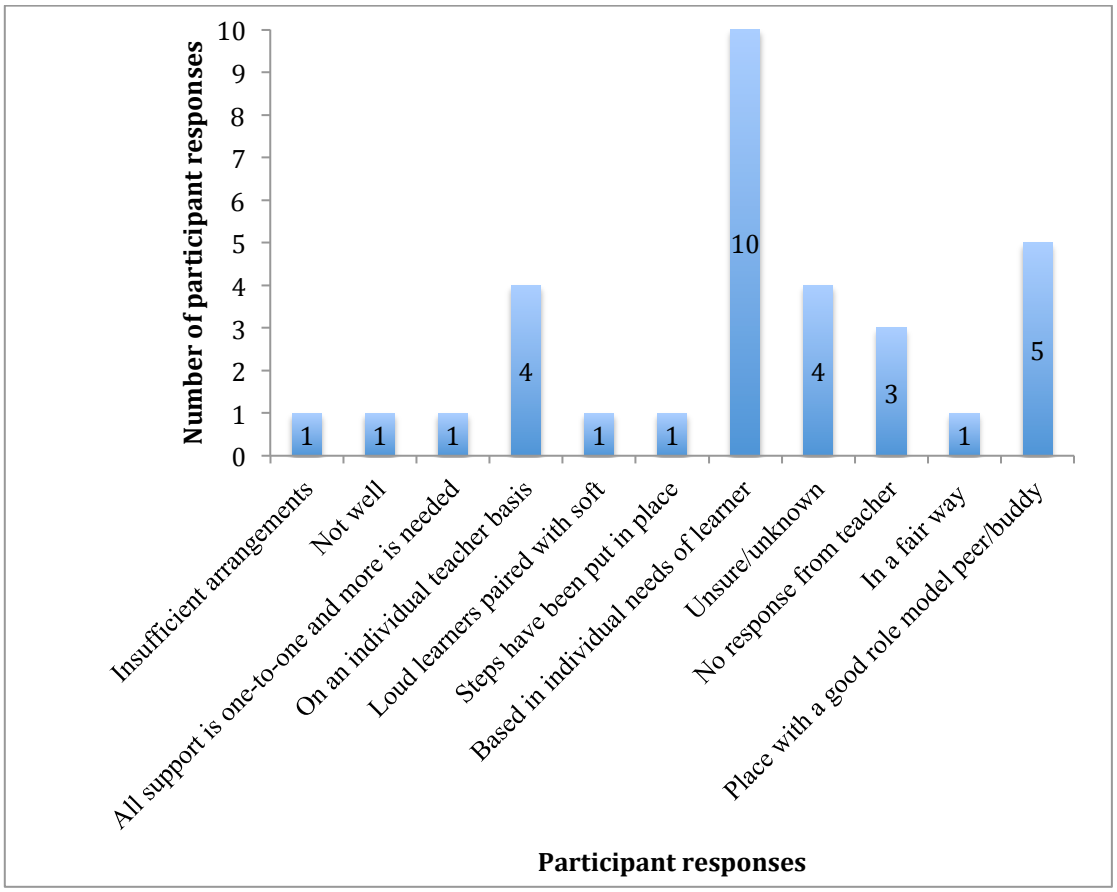



*Figure 23. The participants' view regarding group arrangements to assist hearing-impaired learners*

19. *Do you feel that it is difficult to make adaptations within the classroom to assist the hearing-impaired learner? What adaptation have you implemented?*

The teachers who participated in the study reported that they work closely with the learning support department and implement the strategies suggested by them in their classrooms. These strategies can include sitting closer to the teacher, repetition of instructions and quiet areas for the hearing-impaired learner to work in, visual cues, charts/posters and coming down to the child's eye level have also been suggested.

It was also reported that the extent of the learners' hearing impairment and the teachers' experience, would also influence which strategies the teacher will implement into

her lessons. Assistive technology can also be incorporated when required to assist the learner. It was reported by one participant that the floors in her classroom are only partially carpeted due to hygienic reasons, and that the doors and windows are not sealed in order to prevent unwanted noises. These changes would need to be made in order to assist the hearing-impaired learner, however, it was stated that these adaptations would need to fit within the schools' budget in order to be implemented.

P15 from school 1 reported the following:

*I changed behaviour management from clapping to soft phonic usage to calm and attract attention. Adaptations can be easily done if at no cost and knowledge was there.*

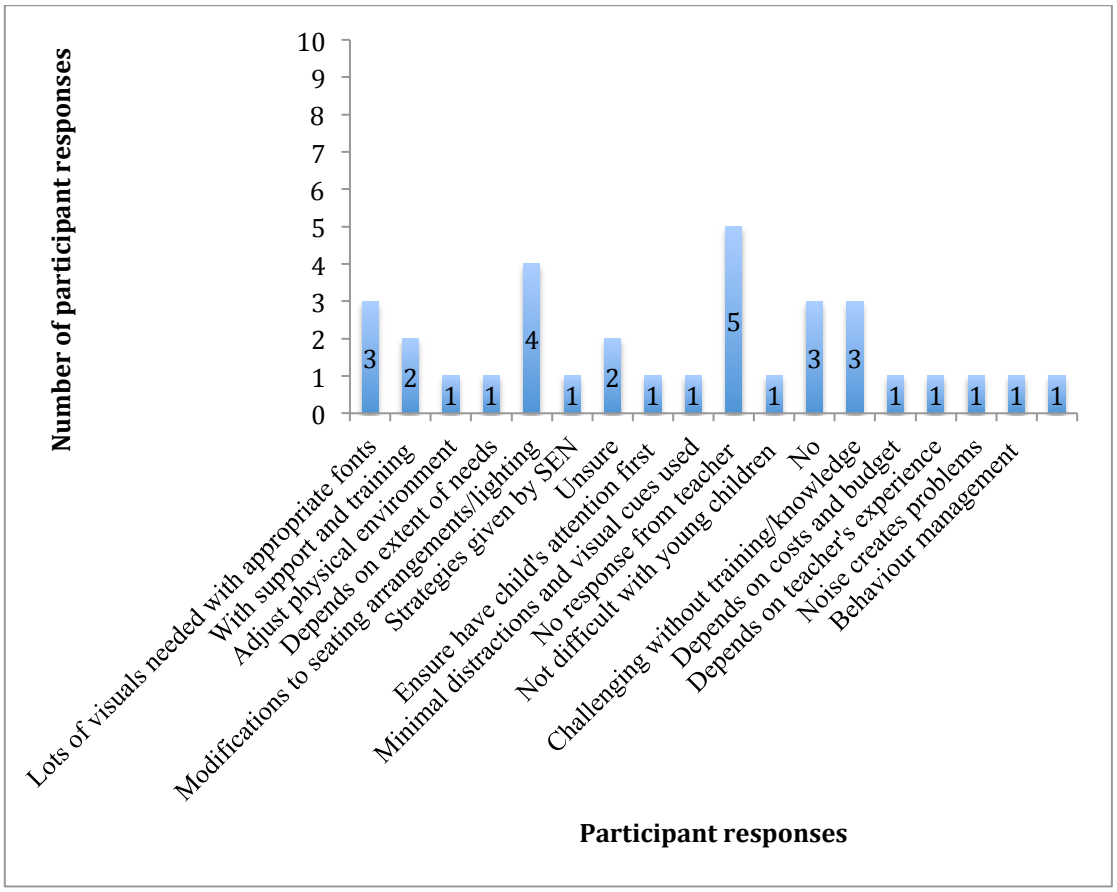



*Figure 24. The participants' view regarding adaptations needed to assist hearing-impaired learners*

20. *Do you feel that you are fully prepared to assist the hearing-impaired learner?*

Although some participants reported that they are well prepared and resourced, this was a minority. The majority of participants reported that they are not equipped to assist hearing-impaired learners. Not only do they have no additional resources, but they do not know which resources they would require. It was stated that with the correct training, discussions and financial support, the teacher would be able to fully assist any learner within her classroom.

*"I believe that it is not difficult but it requires a school board that is willing to pay for those adaptations",* P29.

Teachers have also reported that enough knowledge regarding the hearing-impaired learners' specific needs would be required so that the learning support department can assist the teacher within the classroom.

*"No. I had a go. Was lucky to get on well with the SLT and her brain as I could in person and when reading communication diary to parents and repeat recommendations",* P15.

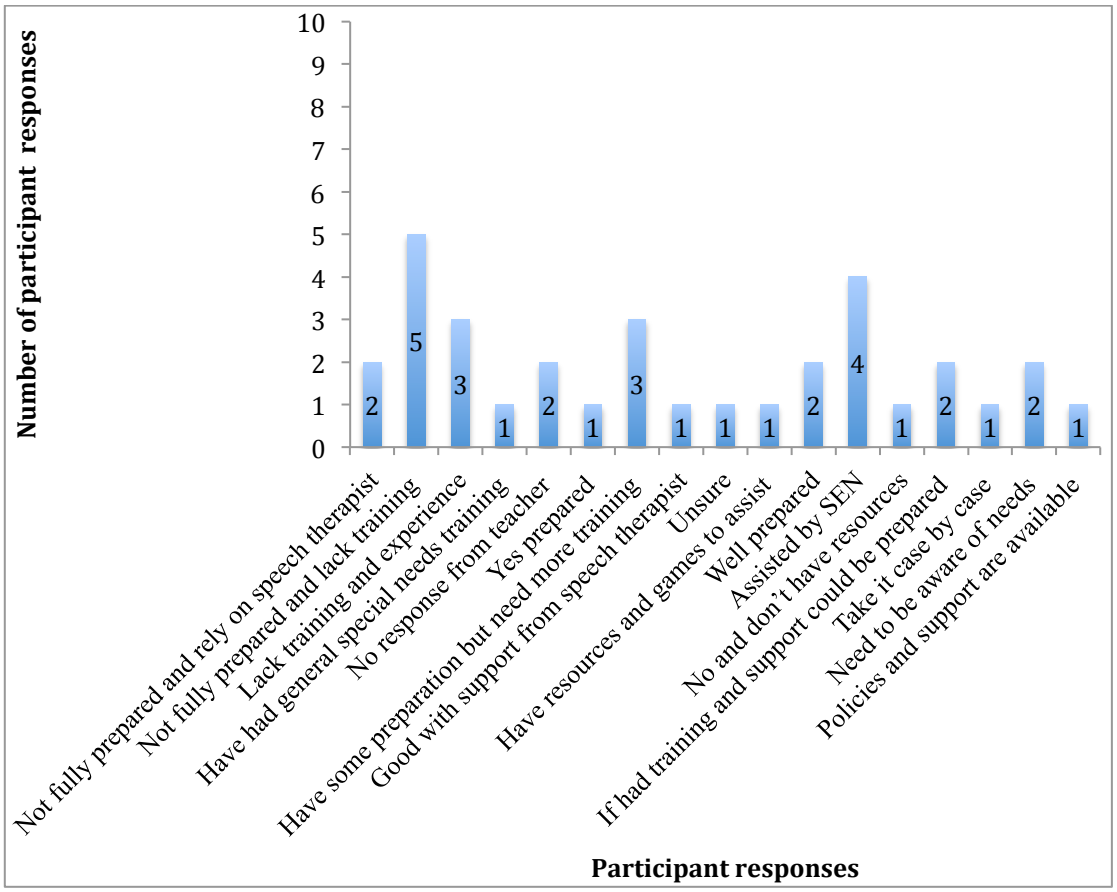



*Figure 25. The participants' perspective regarding if prepared to assist hearing-impaired learners and requirements needed.*

### 4.3.2. Focus group discussion findings

From the email invitations sent out to the participant teachers inviting them to the focus group discussion, no participant teacher declined the invitation, and all six teachers who were invited to the focus group discussion responded to the researcher that they would like to attend the discussion. However, on the day of the discussion, seven teachers attended the focus group discussion with the researcher, which was held at school 1, with the permission of the school principal and head of learning support team. One participant teacher had requested to join the focus group, as she wanted to further discuss the questionnaires and subsequent outcomes. The participant discussion findings in the focus group are stated in Table 4 (Appendix H).

It was discussed in the focus group that in other countries, like the United Kingdom (UK), specialists would come to the schools and offer information and training sessions for the teachers in areas of special needs. It was stated, by T1,

"*The hearing specialist would come to the school and form part of the LEA team, offer support, discuss hearing aids and do training for the teachers".* She added that "*this type of opportunity has not been given in Dubai".*

The teachers participating in the focus group also reported that often they are unable to find the correct information required in order to assist a hearing-impaired learner, and that at times schools have contacted each other in order to find information, but have been unsuccessful.

*"So, it may be like it's a Dubai wide, can't support issue and not just our nik of the wood, so it may be something that everyone is struggling with, that there's no information, there's actually no way for people to go who are struggling. There is a shortage in town",* T3.

So even though teachers and/or schools are reaching out amongst themselves, in order to establish and implement inclusive education, they are unable to retrieve information to correctly do this. The teachers expressed that it is a Dubai wide issue that there is no support for teachers regarding hearing impairment and that no information is readily available. Thus, the schools would need to look at outsourcing or contracting a hearing professional, either on a temporary basis or contract basis, in order to assist the teachers in providing information and training regarding all aspects of hearing impairment.

*"It is something that we should probably look at and consider is actually out-sourcing or consulting or having someone to actually be here on a temporary basis or on a contract basis",* T2

This is often an extra cost to either the school and/or the parents, as the medical professionals who are able to assist will charge a fee for this, and often, these fees are not

stipulated in the school budget. The school or teachers, are thus "between a rock and a hard place" as they have been instructed to implement inclusive education, however they are not able to correctly do so without additional support and thus funding.

Teacher 4 responded:

*"That's why you have got children with hearing impairment in special needs schools rather than mainstream schools. Because I was in a special needs school and I told the parents that she needs to be in a mainstream school, you just need somebody to sign for her or you know how we have a shadow and, but there is no support".*

The belief is, therefore, that learners with hearing-impairment should be in special needs schools, and not in regular schools as they are fully equipped and trained to adequately assist the learners' needs. She also reported that she had previously, before moving to Dubai, worked in a special needs school, and only when the learners were socially and academically ready, did they transition to mainstream and finally regular schooling. However, in Dubai, this is not the case.

*"That's why you have got children with hearing impairment in special needs schools rather than mainstream schools"*, T4

The children are accepted to regular private schools without previous input or support. It was also reported that at times, the children are accepted to the school with no previous assessment and/or diagnosis, and it is up to the teachers to guide the parents and assist the hearing-impaired learner. The teachers are thus unaware of the type and severity of the hearing impairment and find it even more challenging to assist these learners.

*"Some children arrive with no diagnosis or anything, but obviously with some issues, so we have to go through a certain process first, before we can actually really do anything. So it depends if they arrive already, is that the word, diagnosed? Already assessed, already established. We know what to do, and parents are already on board, then things are all ready*

*to go, then that's a completely different path to you know, filling all the ROCS and going through a different process entirely",* T6.

Although the KHDA and MOE are instructing schools to implement a "School for All" policy, they are not providing the schools with adequate facilities and support so that the teachers are fully equipped to assist learners with hearing-impairments. It was stated by all the teachers in the focus group that although they had heard of "School for All", they had not received copies of the policy to read, nor had they received any training on the policy.

Teacher 6 stated, *"We haven't received actual training".*

The teachers reported that they are fully aware of the inclusion agenda and that Dubai schools are moving forward toward inclusive education. Teacher 7 stated, *"It might be coming soon"* when reporting on reading the "School for All" policy. However, the policy was formed in 2006 which is nine years prior to the discussion of this research study. Although the policy is formed and the MOE and KHDA are expecting the schools to implement the policy, they have not provided the teachers with full information regarding the policy requirements, nor have they provided the teachers with training regarding the expectations of the policy. The teachers do therefore not feel that they are prepared at all for any child with special needs, just as much as a hearing-impaired leaner.

*"To be inclusive, you need to think about who is coming, you don't always know who is arriving, so sometimes its case by case"* and *"you need to have a bag of tricks"*, T6.

Their hope is that when a hearing-impaired learner is accepted to the school, training would be provided for the teachers with an experienced trainer or professional. The teachers expressed that although therapists do come to the schools to assist learners, either occupational therapists or speech therapists, that they would need more to assist the teachers at the schools. The therapists who do attend sessions at the schools are often contracted by

the parents, and thus work with specific learners and are therefore unable to assist all teachers and all cases at the schools, unless a fee is paid to the outside entity.

Positive thoughts regarding the KHDA and implementation of the "School for All" policy which arose during the discussions were that a well-defined framework is being established, and that modifications are being implemented within the schools. The example provided by the teachers was that the KHDA are increasing the expectations they have on the teachers regarding the progress of learners with hearing-impairment, and that all schools are required to have an established SEN department. The KHDA is also more focused on the SEN departments during their annual inspections, and the teachers reported that they feel positively that the standard of expectations of hearing-impaired learners has increased.

*"I think the support has come through the refined frame-work and the fact they actually now put in the modifications etc., it is an expectation for all teachers to do",* T6.

Thus, teachers of hearing-impaired learners are required to assist the learners in reaching goals set and showing progress in their academic skills. Although the KHDA have impaired these expectations they are not however, providing the teachers with the support required to assist the hearing-impaired learners in reaching these set goals. It was also stated by teacher 1, that she does not feel that the schools and teachers are able or confident in contacting the KHDA for assistance with regards to hearing-impaired learners for two reasons: 1). A "Victorian response" (which can be explained as being the "expected" way or answering under the "Victorian Etiquette" according to the Routledge's Manual of Etiquette (1960) will be given, and depending on the day and who the teacher speaks to, different answers will be given, and 2). The school and teacher will be labelled as not knowing what he/she is doing and thus unable to do their job.

If the KHDA are expecting the teachers to assist hearing-impaired learners, and their expectations of both the learners and teachers have been increased. They should be providing

the assistance that the teachers require including information, training and trained professionals in the areas of need.

It was reported that as hearing impairment is often a medical condition, as the tests and management of the condition is conducted by medical professionals, often at hospitals outside of Dubai. The teachers are not offered the opportunity to contact the medical professional and receive both clarity and advice regarding the diagnosed condition. Parents are given a medical report, which is handed to the school. This report is also not fully understood by the parents. The teachers often need to rely on the parents to fully disclose all information regarding the hearing impairment and trust that this information is correct, as the teachers do not often talk to the people who conducted the assessments. Again, should the school attempt to contact the professionals for clarity, they are either unable to gather the correct information of who to contact, are unsure of who to contact or are required to pay a fee for the consultation. This does not benefit the hearing-impaired learner, as the teachers are unable to correctly cater for their specific needs. Ideally, it was felt by the teachers, that there should be a "help-line" of specialists established by the KHDA or MOE, which the teachers are able to contact in order to gather the information that they require, and to request training when needed. This was felt especially for hearing-impairment, as a majority of the teachers reported that hearing-impairment is the area where they have the least support in.

Building on from a "help-line" to assist the teachers, a linkage amongst the teachers at each school was discussed. It was expressed that although the teachers were informed amongst each grade team who had expertise in different areas, the teachers were not informed about the expertise and/or training teachers of other grades had. Thus, an internal "help-line" or linkage system would also benefit the teachers in supporting hearing-impaired learners, as the teachers would be able to discuss amongst themselves prior to out-sourcing. This linkage system could then be added to the external school systems so that other schools and/or

teachers can reach out for advice and information. Teacher 7 reported the following would assist her in accommodating the hearing-impaired learner in the class:

*"What sort of strategies, what sort of accommodations need to be done in the classroom, what sort of extra human resources is needed, what sort of materials are needed"*

Although the teachers agreed that the above may assist them, it was brought to light regarding who would bear the costs of the training, and that of the KHDA are implementing inclusive education, that they should outsource the specialists who can provide adequate effective training to the teachers where needed and/or requested.

The focus group discussed the point of teachers reporting that they were not comfortable participating in the study and thus did not complete the teacher questionnaires, as they were concerned about the negative connotations that their participation may have. Two schools of thought arose during this discussion. The first was that the teachers were using this as an "excuse" as they did not want to participate, as the majority of the teachers in the focus group expressed that the schools were open and honest, and encouraged teachers to express their concerns, especially when the teachers required assistance with learners in their classrooms. It was reported that each school has a clear structure of points of contact and processes to follow when requiring assistance and that as the schools grow, there is more support provided for the teachers. It was also stated by teacher 6, that there is a difference between teachers "having a moan" and somebody discussing issues constructively. The schools strive to have positive communication between the teachers and management, and school management is willing to assist where possible. It was also discussed how the school management encourages the teachers, and gives them the freedom to adapt their classrooms and the curriculum accordingly to suit each child. An example, of this was given, that if the child is more of a tactile learner rather than an auditory learner, as a hearing-impaired child would be, then the teacher will adjust their learning processes to use more of a tactile base.

The learners are required to reach certain objectives within each grade, and the teachers are able to assist them and adjust the teaching style to suit each learner in reaching these objects. However, the foundation phase curriculum is mainly based on verbal communication and the expression of opinions, thus, a hearing-impaired learner who would struggle with this would not be able to reach the objectives unless the teacher was trained to elicit this communication in other forms. Again, the teachers require training in this area in order to assist the learners to reach their full potential.

The second school of thought was that often teachers may have had bad experiences at previous schools, especially in Dubai. The teacher may have experienced a different approach form such school, thus leaving the teacher feeling reluctant to express their opinions and concerned regarding their position at the school should they express that they require assistance or changes. It would thus need to be taken on a personal case to case basis, and no final conclusion was drawn from this.

Finally, the focus group completed a brief brainstorm on the way forward to assist both teachers and hearing-impaired learners. A training workshop was discussed where the teachers reported a specific workshop aimed for teachers and conducted by a trained professional, providing information relevant for inclusion of hearing-impaired learners including:

- Strategies to assist the hearing-impaired learner.
- Identification of possible hearing impairment and where to refer parents.
- Accommodations required within the classroom.
- Extra resources and materials needed.
- Basic sign language.
- Hands on experience with hearing aids.

Teacher 1 shared an experience she had in a previous school, where the hearing professional came to the school and allowed the teachers to listen to what sounds sound like while wearing a hearing aid. She reported that this enabled the teachers to realise how poor a child's hearing can be, thus providing the teachers with an understanding of what the child experienced.

The focus group discussion ended once all questions and themes from the participant questionnaire were discussed, and the participants expressed that they had no further points of discussion or questions.

When empathy towards learners is created, a better understanding is established and a greater desire to assist these learners' results.

**4.4. Chapter summary**

In this chapter a summary of the researchers' observations was presented, along with a presentation of the data collected from the teacher questionnaires and focus group discussion. A comparison between the researchers' observations and teacher questionnaires was made, as well as themes which arose from the focus group discussion and teacher questionnaires regarding the teachers' perspective of hearing-impaired learners within regular private schools. These findings assisted with the evaluation of literature review information and assisted the researcher in attempting to create meaning of the data collected, thus answering the hypothesized research questions.

The following chapter will compare and discuss the results obtained by the data the researcher collected and the literature review.

# Chapter 5: Discussion

## 5.1. Introduction

This study was aimed at investigating teachers' perspective of the implementation of provisions and regulations introduced through the "School for All" policy in the context of three private regular schools in Dubai; with specific focus on the inclusion of hearing-impaired learners within the schools. The "School for All" policy is a representation of the Federal Law 29, which was implemented by the MOE in 2006, and focuses on the rights of learners with special needs to equal access to education, similar to their peers with no special and/or additional needs. This current research was explored in an attempt to gain a better understanding of teachers' perspective through an ethnographic approach, regarding the nature of inclusive education of hearing-impaired learners in the three private inclusive Dubai schools, following the implementation of the "School for All" policy.

In this chapter the findings of this research are presented and discussed in such a way as to provide answers to the research questions stated above. Firstly, the themes from the teacher questionnaire and focus group discussion are discussed, with regards to the daily implementation of the "School for All" policy focusing on the hearing-impaired learners. This aimed at addressing the primary research question regarding the teachers' perspective of inclusion of the hearing-impaired learner under the "School for All" policy implementation and guidelines, as well as the secondary research questions regarding possible concerns the teachers may have had regarding inclusion of hearing-impaired learners.

The next section addresses the research questions regarding the policies set in place by the schools chosen for the research, and the adaptations made in order to assist the hearing-impaired learner within the regular classroom in order to promote effective inclusive education within regular Dubai schools.

The final section discusses the perspective of the teachers, including their attitudes

and interpretation of the "School for All" policy, regarding further training and/or workshops which may be required, as well as specific requirements which they may request in order to further assist the hearing-impaired learners and thus promote successful integration in the inclusive classrooms. The further training which was discussed was based on the current practices the teachers and school are currently implementing.

### 5.2. Teachers' perspective and implementation of the "School for All" policy within private regular Dubai schools

The results obtained from this research study provided the researcher with better insight into the perspectives of teachers regarding the implementation of the "School for All" policy, which is currently guiding the schools in Dubai on their journey towards inclusive education of all learners. The "School for All" policy is categorised in five main areas. These areas are further discussed below, taking into account the teachers' perspective based on their answers from the teacher questionnaires, and the focus group discussion. This assisted the researcher's endeavour to further address the primary research question regarding the details of the implementation of inclusive education of hearing-impaired learners within private regular Dubai schools, and the teachers' perspective on inclusive education for the hearing-impaired learner.

### 5.3. Teacher training and professional development skills

The MOE has recognised the importance of the teachers' role in achieving inclusive education within all schools in Dubai, and noted this role in the "School for All" policy onset. Thus, the MOE have stipulated that teacher training and development of their skills and knowledge, play a vital role in the correct implementation of the "School for All" policy, which coincides with the studies conducted by Ainscow (2002). Ainscow (2002) and the "School for All" policy both identified that the teacher provides a pivotal role in breaking down the barriers of inclusive education and promoting the successful development of

inclusive education schools.

The teachers who participated in the study confirmed that personal development training (PDs) had occurred in the schools and that all teachers were required to attend. However, the focus of these training sessions has not included hearing-impairment and that Autism has been the main focus at the time that the research was conducted. Further investigation conducted by the researcher regarding training sessions provided to teachers revealed that the following areas were a main focus of the MOE: Portfolio training and the National Cadres programme for specialised skills training; specifically targeting the special education teachers in developing their skills in speech therapy, sensory impairment support, autism and Down syndrome support (Anati, 2012). As can be noted from the before mentioned, hearing impairment has not been a focus of the training sessions offered thus far. The "School for All" policy clearly states 'all' learners are to be included in regular schools, and that teachers are required to assist these learners in their academic and social development. If the MOE have focused on a specified set of difficulties and/or disorders, the teachers are thus not fully trained in hearing impairment and how best to assist these learners. When this is the case, the teachers are thus either left to research on their own in order to assist the learners, or they would require assistance from outside entities. The hearing-impaired learners are therefore not fully assisted in their regular classroom, and inclusive education has not been fully achieved. Studies conducted by Anati (2012) support the above findings that although training sessions for teachers are conducted, the training lacks transferrable skills and fail to consider the needs of the teachers. As part of the ethnological framework, practices and attitudes of the participants are focused on. Thus if teachers agree that the training currently provided is not adequate for their needs, their attitude towards the hearing-impaired learners needs would be hindered. The practices put in to effect would lack the skill needed for the hearing-impaired learner, which would hinder effective inclusion of

the hearing-impaired learner.

Participants from all three schools suggested that further training and information regarding hearing impairment, focusing on how to assist the learner in the inclusive classroom, would further prepare them in helping the hearing-impaired learner reach their full potential within an inclusive paradigm. This has reinforced literature findings, in which it was reported that teachers' training strategies that incorporate practical hands-on aspects and are contextually related are the most effective in instilling the required knowledge and skills for effective inclusion of hearing-impaired learners (Booth & Ainscow, 2011). Thus, the initial theme of the data arose as further training and development of knowledge regarding hearing-impaired learners would benefit both teachers and hearing-impaired learners. Gaad (2011) and Anati (2012) have both stated that although teachers have expressed some positive aspects of the training provided about inclusive education in general, new knowledge was acquired, but skill development was lacking. Thus the majority of the responsibilities remained with the SEN department.

**5.4. School structures**

When discussing school structures, the secondary theme of the data, two aspects of thought arose, namely: the placement of the learners with respect to enrolment, progress monitoring and end of year assessment. Modifications and accommodations in the school architecture, class environment, curriculum, teaching strategies and testing necessary to provide the least restrictive environment for inclusive education are needed.

*Learners' placement*: According to the "School for All" policy (MOE, 2010, p.15), schools are required to utilise a continuum from least restrictive to more restrictive learning environment. In all three schools chosen for this research, it was noted by the researcher that the hearing-impaired learners were enrolled according to age-appropriate grades, followed a suitable IEP and were supported by the special education teachers or therapists, on pull-out

system and taken to a different room in order to access the extra support required. It was observed that in the majority of cases, the hearing-impaired learners would receive support from both the SEN department as well as external therapists, thus increasing the period of time that they were out of the regular classroom. Although none of the schools had dedicated "special needs classes" as would be the case in a mainstreaming, and the hearing-impaired learners were placed in inclusive classes as with an inclusive education paradigm, the hearing-impaired learners were being taken out of their class in order to receive the extra support required, which does not fall into the definition and requirements of inclusive education (Bergsma, 2000). Thus, the interpretation and practices set in place have not been fully understood under the definition of inclusion and inclusive practices.

Although the MOE has stipulated that schools should not exclude any learners from their regular classes, unless absolutely necessary, and to minimize the amount of time spent out of the class, teachers in all three schools reported that learners with special needs are supported by the SEN department and external therapists on a pull-out system. In such a case, full inclusive education within the schools stated by the "School for All" policy is not being achieved. Further investigation and adjustments would be required in order to fully achieve the goal of the policy implementing inclusive education within Dubai schools.

It was also noted through the researchers' observations, that the type and severity of the learners' needs played a vital role in how much time the learner spent out of the class at extra support, and even more so, on the background and attitude of the teachers. This view is supported by Meijer (2003), who has reported that a lack of interest from subject teachers in teaching learners with special needs ultimately leads to the shifting of responsibility for these learners to the special education teacher and/or therapists, resulting in segregation within an inclusive system.

The majority of the teachers from all three schools expressed that they felt that

temporary exclusion from the regular classroom, based on the pull-out system, was required in order to assist the hearing-impaired learners in their progress, and that these learners benefitted from the outside support from both the SEN teachers and external therapists. This was reported especially in the instances where lack of social skills or basic academic skills created barriers to participation and learning within the inclusive classroom, as was noted with the hearing-impaired learners. The general consensus was that periodical exclusion would aid in acquiring the basic skills through concentrated individual support. According to Bergsma's (2000) definition of inclusion, does not fully support inclusive education but rather leans towards the ideas of mainstreaming. Further research into the full understanding and implementation regarding inclusive education and the "School for All" policy would thus be required in order to fully understand how the two ideas are related and linked by definitions and implementation, as it would appear that at this time, there is a misconception and break-down between the definition of inclusive education, and how the "School for All" policy is being implemented.

The teachers in all three schools reported that the assessments and IEPs of the hearing-impaired learners were carried out by both the class teacher and the SEN department. The progress of these learners is then monitored by the class teacher, who is able to request the assistance of the SEN department when needed. It was also stated that external therapists are involved in the monitoring of the hearing-impaired learners' progress, and it was reported by a teacher from school one, that with the advice of the therapist, she was able to further assist and accommodate the hearing-impaired learner in her class. The goals and objectives of the IEPs are adapted according to the learners' progress.

*Accommodations and modifications*: From observations conducted by the researcher, as well as structural sketches, it has been noted that structural modifications have not been made in order to fully assist the hearing-impaired learners and fully achieve an inclusive

education setting. Schools have made adjustments in order to support learners with special needs including ramps, elevators and special toilets (Nasen, 2017). However for hearing-impaired learners, the modifications required to assist these learners have not as yet been implemented. As discussed within the literature review, hearing-impaired learner would benefit from FM systems (Mahshie et al., 2006) especially when fitted with hearing aids or cochlear implants. In order for inclusion to be effective and beneficial for the hearing-impaired learner, it would be essential for these assistive devices to be implanted and for teachers to have substantial training in these assistance devices (Mahshie et al., 2006).

This would not demonstrate the requirements of the "School for All" policy and the requirements needed for hearing-impaired learners. It was seen by the researcher, that school two's classrooms did not have doors but arch-ways, which does not assist with the appropriate acoustics required for optimal learning, as well as the fact that none of the three schools had carpeting but tiled floors, which is essential in assisting the with the correct signal to noise ratio (SNR) for optimal learning (Mahshie et al., 2006). In addition to none of the schools having FM systems in the classes or halls of the schools, or being fitted with sound absorption walling (Mahshie et al., 2006). Thus, the structure of the classrooms would not assist the hearing-impaired learner in their optimal hearing to achieve academic success. This would once again, not follow a fully inclusive paradigm which is stated in the "School for All" policy as the hearing-impaired learner is not fully benefitting from being in the inclusive classroom. An example of this observed by the researcher, was when children were playing in common play areas, or moving between classrooms, the noise increased in the classroom, and the hearing-impaired learners would thus not be able to fully hear what the teacher was saying. The learner would thus require external one-to-one assistance in learning the 'missed' information caused by the learning environment they are in.

However, teachers reported that they were implementing their own provisions within

the classrooms to assist the hearing-impaired learner, which included seating in the front row to facilitate peer tutoring and collaborative learning among learners and the use of visual aids to promote visual learning. The teachers also reported that they encouraged the hearing-impaired learners to participate in class discussions and it was suggested that a buddy system be put in place to assist the learners. These practices that the teachers are implementing based on their interpretations of inclusion and the "School for All" policy the researcher was able to support the ethnological framework chosen for this research.

In all observed classes, the researcher noted that the teachers used a combination of teaching strategies including questions and answers, multimedia presentations, group activities and one-on-one support. This is consistent with studies that promote the employment of teaching strategies that provide a combination of oral and visual stimuli to assist the hearing-impaired learners' academic and social progress (Meijer 2003). Although it is clear that the teachers are attempting to assist the hearing-impaired learner as much as possible with the use of varied teaching strategies, the difficulty lies in the material being delivered, as it was not differentiated to suit the varying levels of students with disabilities. The majority of the teachers reported that although they have the freedom to adapt the curriculum in order to assist the hearing-impaired learners, they lack the knowledge and training on how to appropriately make these adjustments. Therefore, if the "School for All" policy states that structural and classroom adaptations are required, as well as with how the teachers deliver the curriculum, training is required to fully support the idea of inclusive education; otherwise, a mainstreaming paradigm will continue to be used.

The "School for All" policy developed by the MOE has not provided a special curriculum for hearing-impaired learners and the hearing-impaired learners are required to use the same curriculum and teaching strategies as their peers. This is in accordance with inclusive education (Bergsman, 2000). However, a tailored IEP is designed for each hearing-

impaired learner to incorporate the objectives, and the support of outside therapeutic services, such as speech therapy, educational psychologist support and any assistive technology devices, which the hearing-impaired learner may need. The teachers reported that parents are encouraged to be involved in all the steps in order to assist the hearing-impaired learner in their progress, and that it is vital that the parents are actively involved in their child's learning process. Many teachers voiced their concerns about their involvement in curriculum modification, as they felt inadequately positioned to carry out these deletions and it had been hit and miss (Gaad, 2011). Teachers also suggested that further assistance and appropriate training would assist them in developing effective IEPs as well as making the relevant adaptations required independently. This would mean that teachers would be able to immediately make relevant adaptations within the classroom to assist the hearing-impaired learner, and thus the support required by the hearing-impaired learner would be given immediately and not be delayed as the teachers are currently waiting for either the SEN department or for therapists to assist them.

**5.5. Support services**

It was reported by teachers from all three schools, that although the SEN department assists them with in all areas with regards to the hearing-impaired learners, the number of staff within the SEN department is limited and unable to fully assist all teacher requirements. Thus, the teachers are often left to make decisions and adaptations themselves. These constraints are causing barriers for successful inclusion in many situations in all three schools. It was also stated that although therapists are at hand at the school, their hours are limited,. As the therapists are from an external centre, parents are required to pay for their services, and in many cases, the parents are unable to afford these costs. The limited availability of specialists would present as a major barrier to the successful implementation of inclusion for the hearing-impaired learner. These findings are supported by the findings conducted by

Nasen (2017) in which the research states that with the lack of availability of specialists, the learner's progress would thus be negatively affected. Thus, the progress of the hearing-impaired learner may be affected in many cases. In order for this barrier to be broken, the training implemented would need to be improved, and the employment of specialists to cover the increasing needs of students would need to be addressed (Nasen, 2017).

The theme of financial constraints and appropriate support systems thus arose as part of the data analysis. Although hearing-impaired learners are accepted to schools, the "School for All" policy has not taken into consideration that the additional financial costs for parents of hearing-impaired learners that could hinder their development, as parents may not be able to afford external therapies. Should the teachers be well-trained to assist the hearing-impaired learners, the need for external therapy assistance may be reduced, and thus the financial burden on parents could be alleviated.

According to Hewitt (1999) support services are not only imperative for the progress of students with special needs, they are also essential for developing inclusive practices. Thus, the MOE would need to further investigate ways in which the staff numbers could be increased and all hearing-impaired learners supported regardless of whether their parents are able to afford the additional costs. However, as financial constraints was not a main focus of this research study, and finances would not only include that of parents but of the school and school owners, this was not further investigated in this current research, and would be recommended as part of further research in the future.

**5.6. Assistive technology**

Assistive technology refers to all devices whether high tech (hearing aids, FM systems) or low tech (visual aids) that can be used to aid the learners' development and learning (Judge et al. 2008). They can be categorised according to their function as devices used for communication, movement and learning, or according to Abbott (2007), as devices

used for training and rehearsal, such as drill and practice software, devices used to assist learning by compensating for a physical need, and finally devices to enable learning, where it was not possible before.

At all three schools, the assistive technology, other than visual aids that are made by the teachers, were not found in the classrooms. However, should these devices be implemented within the classrooms, the teachers reported that they would not have the background or knowledge on how to correctly use them, and thus would require further training. The training would not only need to focus on the different technical aspects of the devices (e.g. hearing aids, FM systems), but also on how the teachers could integrate the assistive technology resources in the curriculum.

In summary, the challenges of assistive technology observed by the researcher in the different schools, included the following:

- The lack of resources in general.
- The lack of training to incorporate the available assistive technology in the curriculum.
- Teachers' attitude towards the acquired devices. There is a general feeling of fear of damage, which results from being accountable for the safety of the device, and uncertainty about maintenance contracts.
- Teachers are not given enough time to plan and create lessons that incorporate the resources.

According to Judge et al. (2008), the above challenges noted by the researcher are supported in literature as devices are still under-utilised in supporting learners' participation as they are poorly integrated in the objectives and goals of the IEPs, despite the benefits of using assistive technology being extensively reported.

Thus, in order for this stipulation within the "School for All" policy to be

implemented, the teachers would require further training and assistance with regarding the use of the devices required by the hearing-impaired learners.

**5.7. Awareness programmes**

According to the "School for All" policy developed by the MOE, the importance of the awareness of learners with special needs, and the inclusion to promote acceptance and ownership of the policy has been recognised, which is the final theme which arose from the data. According to the MOE (2011), the initial awareness programs concentrated on social justice and understanding of the rights of learners with special needs and making teachers and parents aware of both the Federal Law 29 and the "School for All" policy. However, according to the majority of the teachers who participated in the research study, although they are aware that the policy exists, they have not received any training in the requirements of the policy, nor have they received a full copy of the policy to read. It was also stated that teacher training programmes where the initial step in introducing the initiative. This comprised of a set of awareness workshops run by experts in inclusive education that targeted the educators' beliefs and understanding that education for learners with special needs is a right governed by the Federal Law 29, rather than an act of charity (MOE, 2011). However, although this was stated by the MOE, the teachers reported that they have not received training in the "School for All" policy. Booth and Ainscow (2011) confirmed the need for awareness programmes, where they maintained that they are an integral aspect of any successful school development plan. Thus, for the "School for All" policy to be successfully implemented, the teachers across the schools would require training and awareness not only in the policies they are required to implement, but in the specific requirements of a hearing-impaired learner.

Training programmes are able to provide, to a certain extent, a break in the fear barrier around inclusive education and hearing-impaired learner requirements, and to recruit a number of firm followers. However, there are still a large percentage of teachers who are

apprehensive and, in some instances, totally dismissive of the change. This may be either because of fear of inadequacy (resulting from the lack of hands-on training), or concern over their workload and the added responsibilities without compensation or incentive (Nasen, 2017). Beacham and Rouse (2011) have documented the fears and concerns, suggesting that such fears can only be alleviated through training, increased awareness and knowledge, as well as experience gained from the interaction with hearing-impaired learners. In this manner, successful implementation of the "School for All" policy and inclusive education of hearing-impaired learners may be achieved. The MOE offer both social justice awareness and right of students training programmes in the hope of dissipating the fears and recruit proponents (Nasen, 2017). However, if the teachers' attitudes and perspectives regarding inclusion of hearing-impaired learners are not altered to be positive, inclusion will not be effective for the hearing-impaired learner. Based on the results of the current research, training programmes would need to based on both theory and implementation skills, and thus the interpretation of inclusion and the practices set in place would be improved.

**5.8. Chapter Summary**

This chapter discussed the results of the research organised under the categories of the "School for All" policy and components of ethnological framework (i.e. attitudes, practices, perspectives and interpretations) in order to answer the research questions. The current research suggests that teachers' perspectives of the inclusion of hearing-impaired learners and the implantation of the "School for All" policy have both negative and positive attitudes and interpretations. Generally, the teachers are experiencing a range of challenges in inclusion of the hearing-impaired learner which are related to a range of impacting factors including lack of training, school infrastructure and knowledge. Although the teachers' general perspective towards inclusion is positive, the challenges they face are effecting how they assist the learning-impaired learner within the classroom. Until the challenges such as insufficient

training, inadequate support systems and ineffective assistive technology are addressed, the teachers will continue to experience barriers of fear and frustration. The analysis of both the teacher questionnaire and the focus group discussion, suggests although the implementation of aspects of the "School for All" policy are essential in private regulator Dubai schools, the barriers been expressed need to be thoroughly addressed prior to effective inclusion of hearing-impaired learners.

## Chapter 6: Conclusion

This research study explored a variety of factors that influence the integration of hearing-impaired learners within private schools in Dubai, in the strive for inclusive education and the "School for All" policy implemented by the MOE. The study described various factors which are essential for hearing-impaired learners to reach their optimum, both academically and socially, within a school environment, and compared these to the current programs and teaching methods within private English-speaking inclusive Dubai schools. Most importantly, the study focused on the teachers' perspective of inclusive education of hearing-impaired learners, and their views of both the pros and cons with inclusive education, as well as their required needs in order to successfully implement inclusive education of hearing-impaired learners. The themes which arose from the data analysis included teacher training and development, school structures, financial burdens, support systems and assistive devices. It has also given an insight of developing appropriate workshops, training and support centres and/or facilities that are focused on the specific needs and requirements of the teachers within private Dubai inclusive schools. Although the teachers agreed that the principle of inclusive education and the "School for All" policy is essential, and that school management is supportive of their needs, there are numerous factors that would need to be addressed prior to the success of inclusive education of hearing-impaired learners.

On the other hand, although only a minority of teachers, teachers expressed that they were uncomfortable teaching hearing-impaired learners in the current school setting, due to not having solid knowledge, training and expertise in the field of inclusive education of hearing-impaired learners. Furthermore, they reported that although the KHDA is currently wanting to implement inclusive education, and that schools are required to accommodate learners with hearing-impairment, the teachers felt that there was no support system provided by the KHDA when requiring advice. There was no referral system set in place for teachers

to access. Additionally, the teachers expressed that they would not feel comfortable contacting the KHDA as they felt that they would be stigmatized and labelled as not knowing how to do their job. Although the MOE implemented the "School for All" policy in 2006, and private Dubai schools are required to implement this policy by the KHDA, the teachers reported that they have not as yet received a copy of the policy. They have also not been trained in the concepts of the policy, even though it was implemented 10 years' prior to the research conducted for this study.

As reported by the majority of the teachers, Dubai is a new and evolving country, and changes within the education system will occur at a rapid rate, a lot of which is through trial and error. Inclusive education in general continues to be a focus of the country and the school governing bodies, and thus inclusion of hearing-impaired learners is at an experimental level where teachers are positive and enthusiastic in learning and implementing the required changes for inclusive education of these learners. As the concept of inclusive education is at the learning stages within the education system, further studies regarding the perspectives of hearing-impaired learners related to inclusion would be insightful, and combined with the teacher (male and female), hearing-impaired learners themselves and parent perspectives give a more informative in-depth conclusion of what the best way forward would be for these learners. These further studies would also assist in how to utilise peer learning within the classroom, which is an integral part of inclusive education and social development for learners with hearing impairment.

# CHAPTER 7: Limitations and recommendations for future research

## 7.1. Introduction

The main focus of this research was to investigate and establish the perspective of the teachers within private inclusive English-speaking Dubai schools regarding inclusion of hearing-impaired learners, and to establish how the teachers perceived how the "School for All" policy was implemented within the schools. The available literature, which was relevant to this study was discussed, data was collected, analysed and conclusions were drawn from this. A comparison between the findings based on the literature study and those based on the observations, teacher questionnaires and focus group discussion assisted the researcher in gaining valuable information on both the positive and negative views the teachers had regarding inclusive education of hearing-impaired learners, and if integration within private Dubai schools is beneficial to the hearing-impaired learners. The research has also assisted in possible future accommodations and modifications which may offer support to the teachers of hearing-impaired learners and thus promote inclusive education.

The main purpose of this chapter is to highlight the presenting limitations that arose in this research in order to assist with further research in the topic, as well as summarise future research required.

## 7.2. Recommendations for further study and limitations to the is research

Various areas of further research and expansion of this research have been raised after the completion of this research dissertation. One of the main areas of limitation that has arisen is gender differences and the different opinions male teachers may have with regard to inclusive education of hearing-impaired learners. As all teachers within the foundation phase of schooling in Dubai are female, further research could be conducted to include primary and secondary phases, where male teachers are permitted to teach in Dubai. According to Gaad (2004), male teachers are less accepting of learners with disabilities in regular private

schooling. This area should be further explored, and compared to the perspectives of foundation phase teachers, as well as female teachers within the same school phases as their male colleagues. However, the research of the foundation phase of learning within schools, forms the basis of the learners' future educational needs and progress, as well as assists the learners in later years if their basis of education is correctly formed to their needs (i.e. Early intervention).

Although the perspective of the teachers is vital with regards to inclusive education, a counter study could be conducted in order to explore and compare the perspective of the hearing-impaired learners themselves with regards to their own feelings around inclusive education. Research may be conducted to establish if the hearing-impaired learners feel that they are benefitting from inclusive education, and explore the pros and cons in their opinion. This aspect of research was not looked at or investigated in this study, and thus is a limitation to the overall perspective of inclusive education within private inclusive Dubai schools. In order for the perspective of hearing-impaired learners to be researched, it may be required that older children be the basis of the study, and thus the teachers' perspective of the higher learning years would need to be taken into consideration.

The data collected by this study was limited to three private English-speaking inclusive Dubai schools which is a small sample size compared to the number of schools within Dubai. The research also did not include government schools where perspectives may be different, as well as the access to resources and/or training. Government schools are also governed by the MOE and not the KHDA, who may be implementing different rules with regards to how the implementation of the "School for All" policy occurs, as well as following different regulations. A comparison between private and government school may elicit further or contradicting information.

There was also limited research previously conducted on hearing-impaired learners

within private inclusive school within Dubai, with majority of the research on special needs in general or on Autism, and thus the literature reviewed was based on international findings and then compared to what was reported by teachers and observed by the researcher. Thus, with continued research and of a broader area, more evidence can be gathered to assist hearing-impaired learners and their teachers in inclusive Dubai schools.

Finally, the data provided by this study could possibly assist schools and the KHDA, in developing training programs for teachers where required and/or requested. The possible establishment of a unit of professionals within the KHDA can assist teachers when needed providing relevant information regarding hearing-impaired learners not at a cost to the school or parents extra, unlike the current costs from outside entities currently support to the schools and learners.

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Appendix A: Letter of invitation to teachers to participate in study

**SPEECH PATHOLOGY AND AUDIOLOGY**
**SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT**
**FACULTY OF HUMANITIES**
**UNIVERSITY OF THE WITWATERSRAND**
Private Bag 3, WITS, 2050

Tel: (011) 717 4577 Fax: (011) 717 4572




Dear Teacher

**"School for All": Teachers' perspective of inclusive education for hearing-impaired learners in Dubai, UAE.**

My name is Andria Calicchio, and I am a student in the Department of Speech Therapy and Audiology, Masters in Audiology. My research interest is inclusive education for children with hearing impairment. My research study is based on a case study of schools that are adopting the "School for All" initiative which apply inclusive education practices. The aim of this study is to gain information regarding the teachers' perspectives regarding the inclusion of learner with hearing impairments within Dubai Schools under the "School for All" policy set by the Ministry of Education (MOE) in Dubai, and to obtain information regarding the adjustments made by the teachers within the classrooms to assist the hearing impaired learner, and if the teachers feel that they would require any further assistance when teaching a hearing impaired learner in this setting.

I hope you can approve my request to participate in the study by completing a questionnaire, and possibly attending a focus group discussion at a later stage, while assuring you of complete confidentiality of any information conveyed and anonymity of school and participants' names. The questionnaire should take no longer than 30 minutes to complete. Once the questionnaire is completed, I will collect it from you.

You have the right to withdraw from the research study at anytime without prejudice or negative consequences, and non-participation will not affect your rights to access the information once the research is completed. All records obtained will be destroyed and not used for the research should you choose to no longer participate.

Thank you for taking the time to read this information sheet.

Kind regards

***Andria Calicchio***

Ms. DhanashreePillay (supervisor) Dhanashree.Pillay@wits.ac.za

Victor de Andrade (supervisor) Victor.deAndrade@wits.ac.za

## Consent form

I agree to participate in the above mentioned research study. I am fully aware that I will receive no incentive for my participation in this study. Should I be chosen for the focus group, I agree to attend and further discuss the above topic should my schedule allow me to.

Date: _____ Initials only: _____

Appendix B: Letter of invitation to principal of school to participate in study

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INFORMATION DOCUMENT

**Study title: "School for All": Teachers' perspective of inclusive education for hearing-impaired learners in Dubai, UAE.**

Dear Principal

I, Andria Calicchio, am doing research on the teachers' perspective of inclusive education with hearing-impaired learners in schools in Dubai. In this study I would like to gain further evidence-based information regarding the perspectives of teachers with regards to the inclusion of hearing-impaired learners in Dubai schools and I would like to obtain further information regarding adaptations that teachers make within the classroom setting to assist the hearing-impaired learner.

I am inviting you to take part in a research study and asking for your permission to include the teachers of the school to participate in the study by completing a questionnaire, and possibly take part in a focus group discussion.

This study will involve the foundation phase teachers from three English speaking schools within Dubai to complete a questionnaire. The questionnaire should take no longer than 30 minutes to complete. The questionnaires are open-ended, and require the teachers to

provide information from their perspective. Once the questionnaire data has been collected, the teacher may be invited to be part of a focus group discussion, in order to discuss the results from the questionnaires, and to further discuss the topic at hand. Six teachers will be randomly invited to be part of the focus group. Should the school, or teachers wish to withdraw from the study at any point, there will be no negative consequence to this.

There are no risks with being involved in the study. All information provided will remain confidential. If at any time you wish to withdraw from the study, the information provided by yourself will be destroyed.

The benefits of being involved in this study, is that your perspective will be part of the implementation of the "School for All" policy, and should there be changes or adaptations required, your perspective will hold a vital part in making these policy adaptations.

The participants of the study will be given pertinent information on the study while involved in the project and after the results are available.

Participation is voluntary, refusal to participate will involve no penalty or loss of benefits to which the participant is otherwise entitled, and the subject may discontinue participation at any time without penalty loss of benefits to which the participant is otherwise entitled.

Every effort will be made to keep all school and teachers information confidential. The name of the schools and the teachers will not be written on the data collection forms, and each school will be allocated a number. Absolute confidentiality cannot be guaranteed and personal information may be disclosed if required by law.

For further information please do not hesitate to contact myself, Andria, or my supervisors on the contact details provided. .



*Appendix B*

Kind regards

Andria Calicchio

Dhanashree Pillay (supervisor) and Victor De Andrade (supervisor)

dhanashree.pillay@wits.ac.za victor.deandrade@wits.ac.za



*Appendix B*

Appendix C: Participant teacher questionnaire

## Teacher Questionnaire

School: 1 / 2 / 3

Grade: _____

Please write your perspective of the question in the space provided.

| | | |
|---|---|---|
| 1 | How do you feel learners react to the hearing-impaired learner in class? | |
| 2 | How do you feel that your colleagues implement and co-operate with the "School for all" Policy? | |
| 3 | As a teacher, how do you assist the hearing-impaired learner in their social development (i.e. | |

| | | |
|---|---|---|
| | making friends with children who do not have a hearing impairment)? | |
| 4 | Who are the role players in the hearing-impaired learner's life that assist him/her in the classroom? | |
| 5 | Describe the working relationship between the school management and teachers when assisting the hearing-impaired learner. | |
| 6 | How does the school encourage an understanding of the hearing-impaired learner's needs? | |



*Appendix C*

| | | |
|---|---|---|
| | | |
| 7 | How do you feel a link between what happens at school and at home to help the hearing-impaired learner is established and maintained? | |
| 8 | Do you feel that the school has shared inclusive values for hearing-impaired learners? | |
| 9 | How is the "School for all" policy is implemented within the school to assist the hearing-impaired learner? | |



*Appendix C*

| | | |
|---|---|---|
| 10 | In your perspective, is "School for all" policy is followed by your school and your colleagues, and how is this monitored? | |
| 11 | What expectations do you feel are too high for the hearing-impaired learners? | |
| 12 | Do you feel that as a teacher you are able to easily adapt curriculums set for the hearing-impaired learner, and how do you do this? | |



*Appendix C*

| | | |
|---|---|---|
| 13 | Do you feel that staff expertise is known and used appropriately? If not, please explain why. | |
| 14 | How are you as a teacher assisted when requested when needed for the hearing-impaired learner? | |
| 15 | How do you feel that teacher ideas are implemented to assist the hearing-impaired learner? | |



*Appendix C*

| | | |
|---|---|---|
| 16 | What further training do you feel is needed to correctly assist the hearing-impaired learner? If you do not feel that training is needed, please elaborate. | |
| 17 | How have the classrooms and grounds been developed to support the participation of the hearing-impaired learner? | |
| 18 | How do you feel the teaching and learning groups are arranged to assist the hearing-impaired learner? | |



*Appendix C*

| | | |
|---|---|---|
| 19 | Do you feel that it is difficult to make adaptations within the classroom to assist the hearing-impaired learner? What adaptation have you implemented? | |
| 20 | How do you feel that you are fully prepared to assist the hearing-impaired learner? | |

Comments: (please add any further information/comments/concerns)

_____

_____

_____

_____

_____

_____

_____



*Appendix C*

Appendix D: Focus group participation letter

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Dear Teacher

Thank you for completing the initial questionnaire of my research study. Through random selection, you have been chosen to participate in the focus group discussion, so that the teacher perspectives of inclusive education of the hearing impaired learner may be further discussed.

This discussion will take place on the _____ 2015 at _____. Refreshments and snacks will be provided.

The discussion will be recorded, however this is solely for the purpose of review of the discussion by the researcher, and her supervisors, and will not be shown to other parties. All information given will remain confidential throughout the study.

You have the right to withdraw from the research study at anytime without prejudice or negative consequences, and non-participation will not affect your rights to access the information once the research is completed. All records given will be destroyed and not used for the research should you choose to no longer participate.

I hope you participate in the focus group. You are assured of complete confidentiality of any information conveyed and anonymity of school and participants' names.

Please respond to my invitation via email by the _____ 2015. I look forward to your response.

Kind regards

***Andria Calicchio***

Ms. Dhanashree Pillay (supervisor)

Victor de Andrade (supervisor)

Dhanashree.Pillay@wits.ac.za Victor.deAndrade@wits.ac.za

Consent form: Participation in Focus Group

I agree to participate in the above mentioned research study focus group. I am fully aware that I will receive no incentive for my participation in this study.

Date: _____ Initials only: _____

Consent form: Participation in Focus Group Audio Recording

I agree that my participation in the focus group can be recorded. I am fully aware that I will receive no incentive for my participation in this study.

Date: _____ Initials only: _____



*Appendix D*

# Appendix E: Researcher's observation notes of classrooms and participant schools

**Classroom observations:**

School: 1

Date: November 2015

Time: 10:00

| Indicator | Adequate | Correct | Insufficient | Comments |
|---|---|---|---|---|
| Background noise levels are reduced and within adequate SNR | | | x | Noise from common area play heard throughout |
| Classroom is well-lit | X | | | Natural light present from outside due to glassed walls |
| Suitable seating position form teacher/medium of instruction | X | | | Teacher moves between activity areas |
| Resources accessible and correctly positioned<br>Screen<br>Board<br>Tools | | | x | Too many visual displays and can be distracting |
| Resources promote independent learning | X | | | IB curriculum |
| Resources promote group learning | X | | | IB curriculum |
| Adequate accommodations required for the hearing impaired child<br>Distance from teacher | | | x | No adaptations seen for hearing-impaired child. The echo in the classroom was loud especially when |

| | | | | |
|---|---|---|---|---|
| Seating arrangement<br>Background noise<br>Insulation of noise<br>Extra time given<br>Visual aids<br>FM system | | | | children were not on carpet |
| Teacher has prepared differentiated techniques for hearing impaired child | | | x | There was no extra/additional changes made for child |
| Teacher follows differentiated learning | | | x | Not seen (as above) |
| Teacher engages well with hearing impaired child | | X | | Very kind and caring towards child |
| Teacher encourages child to participate | X | | | This was seen throughout |
| Teacher shows interest in the child's learning and participation | X | | | As above |
| Extra adult in classroom to assist the child<br>Qualified<br>Experienced | | | x | Only the teaching assistant present |



*Appendix E*

School: 2

Date: November 2015

Time: 10:00

| Indicator | Adequate | Correct | Insufficient | Comments |
|---|---|---|---|---|
| Background noise levels are reduced and within adequate SNR | | | x | There is no door to close off the classroom from common corridor; added to noise level was the outside play area. |
| Classroom is well-lit | | X | | |
| Suitable seating position form teacher/medium of instruction | | | x | During carpet time good; however children moved away from teacher area when doing work and further from desk. There is also a bookcase between work areas and teacher desk |
| Resources accessible and correctly positioned<br>Screen<br>Board<br>Tools | | | x | Displays were hung all around classroom including from ceiling. May be difficult for child to locate what needed. The interactive board in front of class is however very good |



*Appendix E*

| | | | | |
|---|---|---|---|---|
| | | | | in terms of visuals |
| Resources promote independent learning | | X | | Teaching assisted guided children well |
| Resources promote group learning | | X | | All activities were completed in small groups |
| Adequate accommodations required for the hearing impaired child<br>Distance from teacher<br>Seating arrangement<br>Background noise<br>Insulation of noise<br>Extra time given<br>Visual aids<br>FM system | | | x | No adaptations seen for hearing-impaired child. The echo in the classroom was loud especially when children were not on carpet |
| Teacher has prepared differentiated techniques for hearing impaired child | | | x | There was no extra/additional changes made for child |
| Teacher follows differentiated learning | | | x | Not seen (as above) |
| Teacher engages well with hearing impaired child | | | x | Teacher would often not turn to look at child when talking and was facing board or at desk |
| Teacher encourages child to participate | | | x | Teaching assistant was helpful with area |
| Teacher shows interest in | | | x | As above |



*Appendix E*

| | | | | |
|---|---|---|---|---|
| the child's learning and participation | | | | |
| Extra adult in classroom to assist the child<br>Qualified<br>Experienced | | | x | Only the teaching assistant present. The teacher consulted with SEN department to assist |



*Appendix E*

School: 3

Date: November 2015

Time: 9:00

| Indicator | Adequate | Correct | Insufficient | Comments |
|---|---|---|---|---|
| Background noise levels are reduced and within adequate SNR | | | x | Noise from outside play area play heard when sliding door was open |
| Classroom is well-lit | X | | | Natural light present from outside due to glass sliding door, and classroom lights were on |
| Suitable seating position form teacher/medium of instruction | | | x | Areas for activity were close together but if teacher busy with one area was unable to attend to hearing-impaired learner who then seemed lost |
| Resources accessible and correctly positioned<br>Screen<br>Board<br>Tools | | | x | Classroom was very busy visually |
| Resources promote independent learning | | | x | Although activities were in groups, children were not |



*Appendix E*

| | | | | |
|---|---|---|---|---|
| | | | | encouraged to work together |
| Resources promote group learning | | | x | As per above |
| Adequate accommodations required for the hearing impaired child<br>Distance from teacher<br>Seating arrangement<br>Background noise<br>Insulation of noise<br>Extra time given<br>Visual aids<br>FM system | | | x | No adaptations seen for hearing-impaired child both visually and auditory. The carpet area was very small in relation to classroom and rest of room echoed. |
| Teacher has prepared differentiated techniques for hearing impaired child | | | x | There was no extra/additional changes made for child |
| Teacher follows differentiated learning | | | x | Not seen (as above) |
| Teacher engages well with hearing impaired child | | | x | Teacher appeared to find difficulty with this and ended up asking the researcher for guidance throughout her time in class |
| Teacher encourages child to participate | | | x | Was not seen with any of the children |
| Teacher shows interest in | | | x | Only asked direct |



*Appendix E*

| | | | | |
|---|---|---|---|---|
| the child's learning and participation | | | | closed ended questions to children and during activity time showed children what to do but didn't engage in finding their ideas |
| Extra adult in classroom to assist the child<br>Qualified<br>Experienced | | | x | The head of SEN was seen in the class on numerous occasions and she engaged well with child |



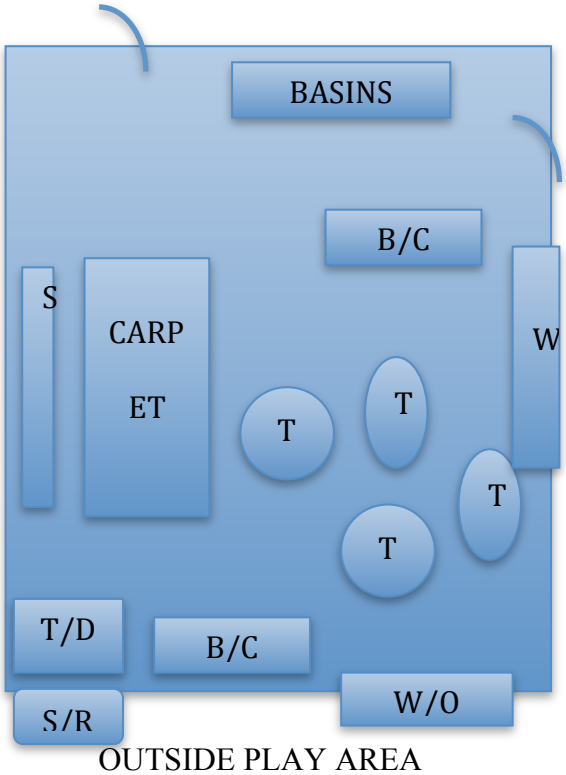
*Appendix E*

Appendix F: Classroom floor plans of participant schools

**Floor Plans**

School 1

JOINED BATHROOM AREA




JOINED PLAY AREA INSIDE

OUTSIDE PLAY AREA

**KEY:**

S – INTERACTIVE SCREEN

S/R – STORE ROOM

T – TABLES FOR CHILDREN

W – WINDOW

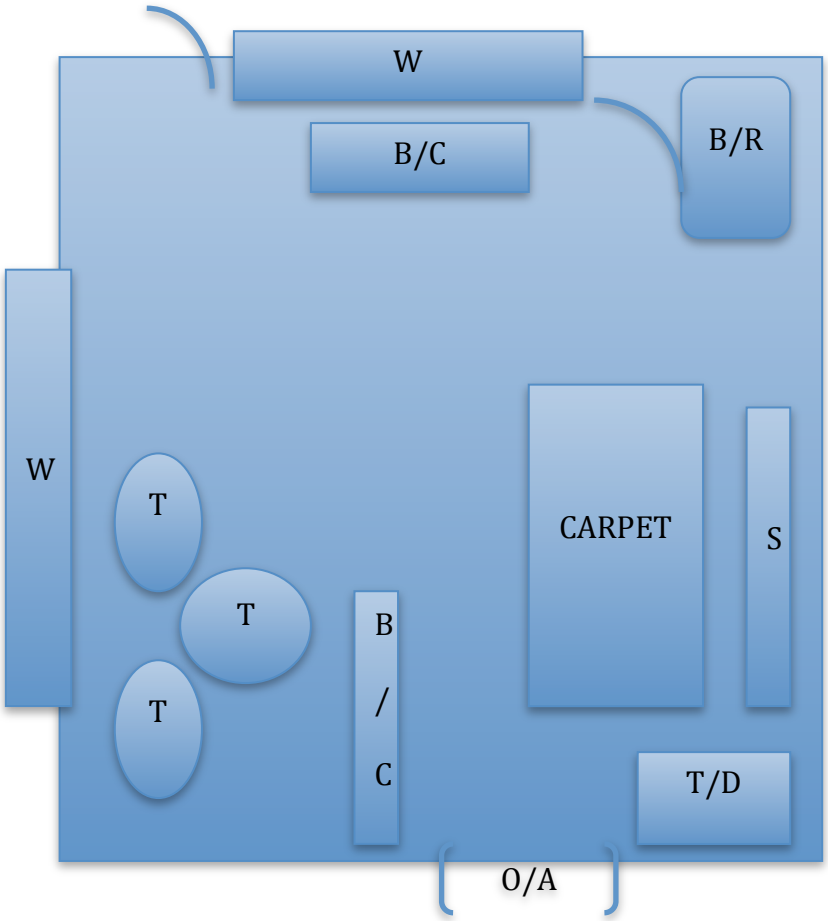
W/O – WINDOW TO OUTDOOR AREA

T/D – TEACHER DESK

B/C – BOOK CASE

School 2

OUTSIDE PLAY AREA




SCHOOL CORRIDOR

**KEY:**

S – INTERACTIVE SCREEN

T – TABLES FOR CHILDREN

W – WINDOW

T/D – TEACHER DESK

B/C – BOOK CASE

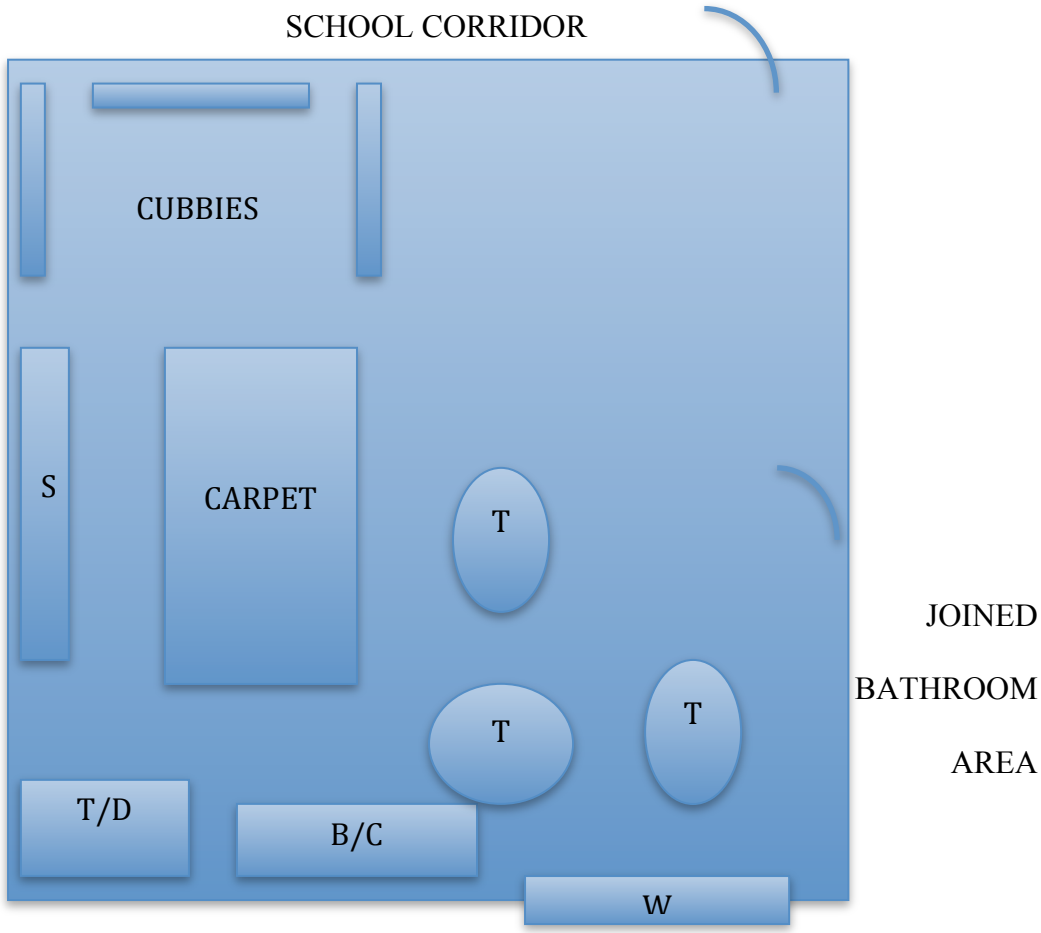
B/R – BATHROOM

O/R – OPEN ARCH (NO DOOR)



*Appendix F*

School 3




**KEY:**

S – INTERACTIVE SCREEN

T – TABLES FOR CHILDREN

W – WINDOW

T/D – TEACHER DESK

B/C – BOOK CASE

Appendix G: Index for inclusion

# QUESTIONNAIRE 1: INDICATORS

Please tick the boxes for the the groups below which describe your involvement with the school:

☐ teacher ☐ teaching assistant ☐ other member of staff ☐ parent/carer

☐ child or young person ☐ governor ☐ other (please specify) _____

| | | Please tick the box that best reflects your opinion ▸ | Agree | Agree and disagree | Disagree | Need more information |
|---|---|---|---|---|---|---|
| **Dimension A – Creating inclusive cultures** | | | | | | |
| A1: Building community | 1 | Everyone is welcomed. | | | | |
| | 2 | Staff co-operate. | | | | |
| | 3 | Children help each other. | | | | |
| | 4 | Staff and children respect one another. | | | | |
| | 5 | Staff and parents/carers collaborate. | | | | |
| | 6 | Staff and governors work well together. | | | | |
| | 7 | The school is a model of democratic citizenship. | | | | |
| | 8 | The school encourages an understanding of the interconnections between people around the world. | | | | |
| | 9 | Adults and children are responsive to a variety of ways of being a gender. | | | | |
| | 10 | The school and local communities develop each other. | | | | |
| | 11 | Staff link what happens in school to children's lives at home. | | | | |
| A2: Establishing inclusive values | 1 | The school develops shared inclusive values. | | | | |
| | 2 | The school encourages respect for all human rights. | | | | |
| | 3 | The school encourages respect for the integrity of planet earth. | | | | |
| | 4 | Inclusion is viewed as increasing participation for all. | | | | |
| | 5 | Expectations are high for all children. | | | | |
| | 6 | Children are valued equally. | | | | |
| | 7 | The school counters all forms of discrimination. | | | | |
| | 8 | The school promotes non-violent interactions and resolutions to disputes. | | | | |
| | 9 | The school encourages children and adults to feel good about themselves. | | | | |
| | 10 | The school contributes to the health of children and adults. | | | | |
| **Dimension B – Producing inclusive policies** | | | | | | |
| B1: Developing the school for all | 1 | The school has a participatory development process. | | | | |
| | 2 | The school has an inclusive approach to leadership. | | | | |
| | 3 | Appointments and promotions are fair. | | | | |
| | 4 | Staff expertise is known and used. | | | | |
| | 5 | All new staff are helped to settle into the school. | | | | |
| | 6 | The school seeks to admit all children from its locality. | | | | |
| | 7 | All new children are helped to settle into the school. | | | | |
| | 8 | Teaching and learning groups are arranged fairly to support all children's learning. | | | | |
| | 9 | Children are well prepared for moving on to other settings. | | | | |
| | 10 | The school makes its buildings physically accessible to all people. | | | | |
| | 11 | The buildings and grounds are developed to support participation of all. | | | | |
| | 12 | The school reduces its carbon footprint and use of water. | | | | |
| | 13 | The school contributes to the reduction of waste. | | | | |

Appendix H: Focus group discussion transcription notes in table form

**Focus Group Discussion**

| | | |
|---|---|---|
| Research Question | **How do you think that teachers who are expected to assist the hearing-impaired learner can be assisted when they feel they do not have enough training in hearing impairment?** | |
| Participant responses | 1 | In the UK, hearing specialist were part of the EAL team and they would train teachers and provide support. In Dubai we don't have that opportunity |
| Research Question | **Do you think that in terms of Dubai and the KDHA saying that these are inclusive schools, it is set up for a child who is hearing impaired, if they are insisting it is a "School for All" for example.** | |
| Participant responses | 1 | Yeh it is very fine I think. I was contacted by another school recently and asked to observe a child who is wearing two hearing aids, and I was concerned, and I've sent messages to a number of people to try and find more information and I cant find any. There is nobody I, as head of student support, can ring up, not one of our children, but can ring up and ask about this child which a concern, because that child, I wasn't sure if the |

| | | |
|---|---|---|
| | | hearing aids were doing what they should be doing. And I would like advise, but the parents were like its expensive we paid for them, and its not my school, so yeh. |
| | 2 | It might be a school for all but it's not going to fully support all if we don't have these facilities for auditory issues. So its something that we should probably look at and consider is actually out-sourcing or consulting or having someone to actually be here on a temporary basis or on a contract basis. |
| | 3 | So it may be like it's a Dubai wide, cant support issue and not just our nik of the wood, so it may be something that everyone is struggling with, that there's no information, there's actually no way for people to go who are struggling. There is a shortage in town. |
| | 4 | That's why you have got children with hearing impairment in special needs schools rather than mainstream schools. Because I was in a special needs school and I told the parents that she needs to be in a mainstream |

| | | |
|---|---|---|
| | | school, you just need somebody to sign for her or you know how we have a shadow and, but there is no support. |
| Researcher question | **If you were given a hearing impaired child by the school, do you think they have prepared you for it, and what would you expect the school to do for you?** | |
| Participant response | 5 | No, I don't think we are prepared at all. For any child with special needs just as much as with a hearing impaired. And I would hope, that again, if they had experience in that field that they would come in and train me, or then again out sourcing, so that you do have experience with a trainer. |
| Researcher question | **So the way that it is, if we take it in terms of a purely inclusive school, and how it is set-up in schools here, for where example, a therapist comes in like has been done for other children, is that working, or do you think that there would need to be more?** | |
| Participant response | 2 | More |
| | 6 | I think it depends on what is actually established as well. |
| | 4 | I think there needs to be more |
| | 6 | Some children arrive with no diagnosis or |

| | | |
|---|---|---|
| | | anything, but obviously with some issues, so we have to go through a certain process first, before we can actually really do anything. So it depends if they arrive already, is that the word, diagnosed? Already assessed, already established. We know what to do, and parents are already on board, then things are all ready to go, then that's a completely different path to you know, filling all the ROCS and going through a different process entirely. |
| | 5 | The difference in severity as well. |
| | 1 | I think the thing with the child discussed, was that he arrived, he was taken in, we got the therapist on board pretty quickly. We then asked the question to the parents about are these hearing aids correct, how often are they monitored and everything, and the parents…. Because what it is, because it's a medical condition, with medical specialists, they go hospital and they write you a short letter that they have this condition. They don't actually offer for you to actually ring up and get advise. The ideal thing would be |

| | | |
|---|---|---|
| | | to have some kind of centre where you can say, I've got this da dada and they have this diagnosis is there anything else I should be doing. And that is, that can be quite patchy, because you know, obviously, the situation I was talking about with the child in the other school, I cant go and be ringing up the doctor because its not under me, I've just been asked advise on that child. You know, and it is difficult, especially when like this particular child, they said oh yeah we had them fitted in Germany, so you know you cant get on the phone and say, you know, cause they probably wouldn't do it because of confidentiality. Because it a medical condition its harder, so often you rely on the parents to disclose everything they know. |
| | 6 | Yes with sharing and not sharing |
| | 1 | Yes because it's a medical condition and this is where it is trickier. Whereas, you know, if it was something different, you can obviously talk to the people who do the assessments, but because we don't talk to the people who do the medical assessments, and |

| | | |
|---|---|---|
| | | often we cant, you know as a consultant they are not going to talk. |
| | 5 | And sometimes the parents don't know either. They don't have the training themselves, so we cant even rely on the information from them. |
| | 6 | For them to comprehend what's just happened or what they have just read on a big report or what they have just been told. |
| Researcher question | **So as the teachers and the supporters of the children, for you to think that a school could be fully inclusive, especially for a hearing impaired child, what ideas do you have or do you have any ideas that you want to brainstorm about how it could be better, so that you feel like you are more independent, you can cope, learning support teachers are working closer together. What would you expect like ministry of education, or the KHDA to supply if they want this to be fully inclusive.** | |
| Participant responses | 6 | To be inclusive, you have to think about who is coming, you don't always know who is arriving, so sometimes it's a case by case, like an idea of a sort of a surprise in September, so you almost need a bag of tricks, for every kind of scenario. You |

| | | |
|---|---|---|
| | | almost need a path, a flow chart, you know, ok I think its this, ok I think it might be that, where do I go, what do I do. Besides from the internal processes, in terms of external support, you almost need an option for every kind of scenario, case or label or what you may call it. |
| | 1 | Ideally, there should be some kind of help line that you could talk to of specialists, especially for like visual impairment or hearing impairment, where we are getting more and more children with these conditions, but it's probably the area where we have the least support in, um where you know you have got hearing impairment because it is a medical condition. So somebody you can actually talk to, that could give you some advise, or who can prefer the parents to get some advise |
| | 6 | Whereas with autism, there is a big big focus on autism now in this town, and you know with the Sheik, and there is a big big centre, and you know, so there would be lots of phone numbers to call up where you can |

| | | |
|---|---|---|
| | | actually get advise for something like that, but its obviously um not so well balanced. |
| Researcher question | **In terms of knowing, discussing amongst yourselves, do you feel that you know what the other teachers and what their expertise are, and their extra training , or have you discussed that? Do you all know that, that you can go to each other knowing this teacher, that for example a specific teacher has worked with hearing impairment, or did you know before that, that a teacher has extra training in this and I can go speak to her. Do you have a linkage system or anything like that.** | |
| Participant responses | 5 | No. But I think in your teams you get kind of an idea. But there could be teachers in the grade school and we don't know. |
| | 1 | But generally people would come to me, and they will say da dada and if I don't know I will try and find out. I mean that is what happened with the child we discussed. And obviously I have experience before, and I taught children before with hearing impairment etc. etc, but every child is different, you know, it's like a different prescription. |
| | 6 | It varies case by case |

| | | |
|---|---|---|
| | 1 | But its various things like please don't teach by the window, please make sure your back isn't turned, wearing things like … where possible using a normal mouth where you don't do this and try talk to them as they will probably be trying lip reading as well. Those simple things . Checking the phonics is very well structured, and then knowing which sounds they not, they finding very to process as its all a frequency isn't it. Some children hear very well at certain levels and then aren't able at all to hear at others. No understanding there. |
| Researcher question | **So for example, like you were saying with different training, if there was like a training workshop developed specifically for teachers, for hearing impairment, what type of things would you want in that workshop.** | |
| Participant responses | 7 | What sort of strategies, what sort of accommodations need to be done in the classroom, what sort of extra human resources is needed, what sort of materials are needed. I think that that all these things. |
| | 4 | Basic sign language even, especially for the extreme cases. |

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| | 6 | How to identify it in the first place, if you are unsure, sometimes you like, ok is there an issue with your hearing or are you just selective. It's hard to tell in the beginning. |
| | 5 | To be provided like approved people to go and talk to, to recommend to parents because you do feel particularity, it can be quite tricky, um you know you send them to City Hospital because you know somebody would be there etc. But it would be nice to have a link of people, that are already established. Um, because the thing is often, what people often do, is that they do it in their home countries, and then of course we have very weak links with that, because they can often get it supported financially in their home countries and they cant here. Its very expensive. The hearing aids costs thousands of pounds. |
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| Researcher question | **And would you prefer a pure PD, where it is just information given, or more of a workshop, hands on, working with hearing aids, trying them.** | |
| | 5 | I think both |

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| | 1 | One of the things I did many years ago, was we had hearing impaired, and we had a lady come in and she got us to listen to the hearing aid, and you realise how poor it is, because it isn't like a pair of glasses that corrects eye sight, it never does, so to be able to hear to some degree what that child is hearing, gives it that massive understanding to the teachers then about trying to call for quiet, making sure the child has that quiet place when doing that direct teaching, because it's not like a, because it will magnify that traffic outside, and that can be much louder than even our voices and things. So that's important that they know. Now I'm saying too much, let someone else go. |
| | 2 | That's interesting |
| Researcher question | **So more of a hands on, with strategies and even things like in terms of your classroom, do you feel that you are free to accommodate the child, change it up if that was one of the strategies of things to do, or do you think that there are quite a few barriers in terms of management and what you are allowed to do and freedom you have to** | |

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| | **do what is suitable for the children.** | |
| Participant responses | 6 | I think they quite um, I think we have enough freedom to move our environment, adjust accordingly depending on who we have in the room, and I think that they are quite supportive of that as well, in fact they would encourage that, um yeh the transformation. It's just a matter of actually knowing what to do to the place, to the space. |
| Researcher question | **In terms of curriculum, do you think it is easy to adapt it for children with special needs, or is it the teacher sitting and trying to come up with her own new programme to help.** | |
| Participant responses | 6 | You mean for hearing impaired?<br><br>Researcher response: yes |
| | 1 | I think it depends on that individual child and their stage of learning, where they are, how much speech they got. You where they are. Whether it's a catch up case or whether it's a, you know, if you have a child, you know, that's hearing impaired and has no language, that's going to be a whole |

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| | | different ball game to a child that can communicate. |
| Researcher question | **In terms of curriculum, do you think that the expectations then are too high and they don't let you take into consideration when you have to score them, or how does it work.** | |
| Participant responses | 5 | Well then that's where the IEP will come in handy |
| | 7 | It would but then I think IEB and PYP is very oral and it requires you to communicate, and a lot of it is quite strict with questions like tell me what you think, so I guess it would, um, it wouldn't be as easy for a child that is solely hearing impaired that is affecting their speech as well. That would be more difficult for them. |
| | 1 | But what we do is we, would say they don't, we have other children that actually cant, and its not an issue, we can just leave, you know we don't have to report on everything, so we not gonna push them through hoops they cant jump through. At the same time, we do have high expectations so we do expect them to make progress. But we can |

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| | | modify a curriculum to fit the needs of a student. It's very easy to do that with IB |
| | 6 | We do have a continuum so, we were talking about it just the other day with our team. Every grade has objectives. We do have our own objectives. But if they are say tactile child we would push this way and obviously if they are struggling we are allowed to push back. They in that same grade but they would be moved down. You can bounce around like that, you are not stuck within one set of objectives. So it just, and that is even without any struggling issue like hearing impaired or what have you. Even a regular child who might be great here and not so great here, you move them around. So you are officially given that okay to do that even before you have any medical issues or SEN issues. |
| Researcher question | **And then the last thing that did come up as part of the questionnaire and is across the schools, a lot of the teachers even though their name is not on the questionnaire at all, they were reluctant to fill out the form because they said that they don't want it coming** | |

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| | **back on them. Why do you think that they felt like that?** | |
| Participant responses | 6 | In this school too. (sounded surprised) |
| | 1 | But how is it going to come back, it is totally confidential. It is also your research. You are not going to go to the head of the school, and say such and such said this. So I think it was just an excuse for people not to take part |
| Researcher question | **Do you think there is a thing where the teachers feel that they don't want to express their opinions because they either not heard or it is something that is held against them, or they try to say the same thing over and over and their needs aren't being met. Do you think that is happening?** | |
| Participant responses | 7 | No I don't think so. You go case by case, when you get a child in your class with something, anything, that you have never experienced before, your first point of call is the special needs department, and I think it is a really well established line that you move down within the school, and I don't think you going I don't want to get into trouble by asking and I its very open and I wouldn't say at all its you will get into trouble for anything at all or I don't want to get called |

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| | | up on that if you say you don't know about or how to handle a certain child. I think everyone is very open and honest, and say help I don't know how to handle a certain child, and I don't know how to handle this new boy in the class who has x y and z. And I think there is a very clear structure within schools that is very open. |
| | 4 | It is actually encouraged. They tell us |
| | 6 | Yeh the process itself is really really well defined yeh what to actually do |
| | 7 | And with the amount of staff that we have within the department is increasing so there is more and more support as we grow so I don't feel like that. |
| | 6 | There is a difference between somebody having a moan and somebody discussing something constructively, you know there is that, so I'm not sure who you have been talking to |
| | 1 | You know we always strive to be positive within our communication, but you know there are certain things that I would say to teachers that I don't know the answers yet |

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| | | and let me go and find out. You can't know everything about everything |
| | 7 | But I think that also being in Dubai, and how people sometimes have experience and sometimes don't have experience, you go to different schools and everybody has a different approach so maybe these people have gone through something where they haven't had the support, so that's where they are coming from, and why they probably feel that way but we have a different approach. We help each other so that makes things easier for us. Maybe them, they had a different experience, that's why they feel that way. |
| Researcher question | **And that's from school management, and the KHDA. Do you think they support you as you need it to be.** | |
| Participant responses | 1 | I think the support has come through the refined frame-work and the fact that they actually now put in, for me, the modifications etc, it is an expectation for all teachers to do, where some schools don't have a SEN department, they don't have nobody, yes they have an outside agency, |

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| | | but nobody is co-ordinating that. So I think that the fact that they have put more focus on it during inspections, although I would rather prefer that they not be every year, I think that that is a positive thing that they expect to see high standards for students with special needs just as you would expect for them to be making progress as their peers. They might not have the same attainment but they should be making progress. So that's a very positive thing. As in if there is somebody you can ring up and ask advise, I think that is very poor. That doesn't happen. I think in that situation if you rang up and asked advise, you would probably get the label of oh they don't know what they doing there, because people, you know I would never reach out to the KHDA to ask advise about a student to be fair. I've never done it. Its different if it's a behaviour thing as those do go towards the KHDA, but for a medical condition, it wouldn't be where I would go. I would go more towards the places like Lighthouse where you can seek advise and |

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| | | things, and you know we do have more centres coming up but, its not as established as it is in the UK. You are quite likely if you rang up up day would get one answer and a different day you would get a different answer. |
| | 6 | It's a new country as well, its developing still |
| | 7 | I suppose they have done a lot in forty years, but if you had to make that phone call its almost like you would get some Victorian response, a very quick judgement on the phone so I don't want that |
| Researcher question | **Have you been trained in the "School for All Policy"** | |
| Participant responses | 5 | In the what sorry |
| | 7 | The policy, the KHDA one |
| | 6 | We haven't had actual training. We just have had child protection training |
| | 1 | Things are starting. Things are starting moving forward, and obviously we know the inclusion agenda |
| Researcher question | **Have the teachers been given the policy to read?** | |
| Participant responses | 6 | No, we get given the big hand book but not that specific part of it no. But I think that |

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| | | sort of thing is starting |
| | 7 | It might be coming soon. But I think what we are already doing is internally motivated. I mean there are certain things we have to actually do for KHDA but I think a lot of what is happening is us. There is a lot of initiative happening |

Appendix I: Focus group discussion transcription notes

**Researcher:** So you have all filled out the questionnaire, and for us to discuss a lot of the points that came up were that the teachers don't feel that they have been trained to cater for children with hearing aids, or any type of hearing impairment.. So, from you, especially since most of you have been teaching for a long time, or are heads of grades, how do you think that can be rectified to help the teachers who don't feel that they have had enough training, and then are given a child, and they must just be expected to know what to do with the child.

**Teacher 1:** Well previously when I worked in the UK, we would have a hearing specialist as part of the LEA, they would come and do training and give information to support us. So if you had a child with a hearing impairment whether it was thought they were completely deaf or whether it was a small impairment, someone would come in, they would offer support, they would discuss the hearing aids and talk about it. We have not really had that opportunity in Dubai.

**Researcher:** So do you think that in terms of Dubai and the KDHA saying that these are inclusive schools, it is set up for a child who is hearing impaired, if they are insisting it is a "School for All" for example.

**Teacher 2:** It might be a school for all but it's not going to fully support all if we don't have these facilities for auditory issues. So its something that we should probably look at and consider is actually out-sourcing or consulting or having someone to actually be here on a temporary basis or on a contract basis.

**Teacher 1:**Yeh it is very fine I think. I was contacted by another school recently and asked to observe a child who is wearing two hearing aids, and I was concerned, and I've sent messages to a number of people to try and find more information, and I can't find any. There is nobody I, as head of student support, can ring up, not one of our children, but can ring up and ask about this child which a concern, because that child, I wasn't sure if the hearing aids were doing what they should be doing. And I would like advise, but the parents were like its expensive we paid for them, and it's not my school so yeh.

**Teacher 3:** So it may be like it's a Dubai wide, can't support issue and not just our nik of the wood, so it may be something that everyone is struggling with, that there's no information, there's actually no way for people to go who are struggling. There is a shortage in town.

**Teacher 4:** That's why you have got children with hearing impairment in special needs schools rather than mainstream schools. Because I was in a special needs school and I told the parents that she needs to be in a mainstream school, you just need somebody to sign for her or you know how we have a shadow and, but there is no support.

**Researcher:** So in terms of, like Teacher 5 for example, if you were given a hearing impaired child by the school, do you think they have prepared you for it, and what would you expect the school to do for you?

**Teacher 5:** No, I don't think we are prepared at all. For any child with special needs just as much as with a hearing impaired. And I would hope, that again, if they had experience in that field that they would come in and train me, or then again out sourcing, so that you do have experience with a trainer.

**Researcher:** So the way that it is, if we take it in terms of a purely inclusive school, and how it is set-up in schools here, for where example, a therapist comes in like has been done for other children, is that working, or do you think that there would need to be more?

**Teacher 2:** More

**Teacher 6:** I think it depends on what is actually established as well.

**Teacher 4:** I think there needs to be more

**Teacher 6:** Some children arrive with no diagnosis or anything, but obviously with some issues, so we have to go through a certain process first, before we can actually really do anything. So it depends if they arrive already, is that the word, diagnosed? Already assessed, already established. We know what to do, and parents are already on board, then things are all ready to go, then that's a completely different path to you know, filling all the ROCS and going through a different process entirely.

**Teacher 5:** The difference in severity as well.

**Teacher 1:** I think the thing with the child discussed, was that he arrived, he was taken in, we got the therapist on board pretty quickly. We then asked the question to the parents about are these hearing aids correct, how often are they monitored and everything, and the parents…. Because what it is, because it's a medical condition, with medical specialists, they go hospital and they write you a short letter that they have this condition. They don't actually offer for

you to actually ring up and get advise. The ideal thing would be to have some kind of centre where you can say, I've got this da dada and they have this diagnosis is there anything else I should be doing. And that is, that can be quite patchy, because you know, obviously, the situation I was talking about with the child in the other school, I can't go and be ringing up the doctor because its not under me, I've just been asked advise on that child. You know, and it is difficult, especially when like this particular child, they said oh yeah we had them fitted in Germany, so you know you can't get on the phone and say, you know, cause they probably wouldn't do it because of confidentiality. Because it a medical condition its harder, so often you rely on the parents to disclose everything they know.

**Teacher 6:** Yes with sharing and not sharing

**Teacher 1:** Yes, because it's a medical condition and this is where it is trickier. Whereas, you know, if it was something different, you can obviously talk to the people who do the assessments, but because we don't talk to the people who do the medical assessments, and often we can't, you know as a consultant they are not going to talk.

**Teacher 5:** And sometimes the parents don't know either. They don't have the training themselves, so we can't even rely on the information from them.

**Teacher 6:** For them to comprehend what's just happened or what they have just read on a big report or what they have just been told.

**Researcher:** So as the teachers and the supporters of the children, for you to think that a school could be fully inclusive, especially for a hearing impaired child, what ideas do you

have or do you have any ideas that you want to brainstorm about how it could be better, so that you feel like you are more independent, you can cope, learning support teachers are working closer together. What would you expect like ministry of education, or the KHDA to supply if they want this to be fully inclusive?

**Teacher 6:** To be inclusive, you have to think about who is coming, you don't always know who is arriving, so sometimes it's a case by case, like an idea of a sort of a surprise in September, so you almost need a bag of tricks, for every kind of scenario. You almost need a path, a flow chart, you know, ok I think it's this, ok I think it might be that, where do I go, what do I do. Besides from the internal processes, in terms of external support, you almost need an option for every kind of scenario, case or label or what you may call it.

**Teacher 1:** Ideally, there should be some kind of help line that you could talk to of specialists, especially for like visual impairment or hearing impairment, where we are getting more and more children with these conditions, but it's probably the area where we have the least support in, um where you know you have got hearing impairment because it is a medical condition. So, somebody you can actually talk to, that could give you some advice, or who can prefer the parents to get some advice

**Teacher 6:** Whereas with autism, there is a big, big, focus on autism now in this town, and you know with the Sheik, and there is a big, big, centre, and you know, so there would be lots of phone numbers to call up where you can actually get advice for something like that, but it's obviously um not so well balanced.

**Researcher:** In terms of knowing, discussing amongst yourselves, do you feel that you know what the other teachers and what their expertise are, and their extra training, or have you discussed that? Do you all know that, that you can go to each other knowing this teacher, that for example a specific teacher has worked with hearing impairment, or did you know before that, that a teacher has extra training in this and I can go speak to her. Do you have a linkage system or anything like that?

**Teacher 5:** No. But I think in your teams you get kind of an idea. But there could be teachers in the grade school and we don't know.

**Teacher 1:** But generally, people would come to me, and they will say da dada and if I don't know I will try and find out. I mean that is what happened with the child we discussed. And obviously I have experience before, and I taught children before with hearing impairment etc etc, but every child is different, you know, it's like a different prescription.

**Teacher 6:** It varies case by case

**Teacher 1:** But its various things like please don't teacher by the window, please make sure your back, wearing things like … where possible using a normal mouth where you don't do this and try talk to them as they will probably be trying lip reading as well. Those simple things. Checking the phonics is very well structured, and then knowing which sounds they not, they finding very to process as it's all a frequency isn't it. Some children hear very well at certain levels and then aren't able at all to hear at others. No understanding there.

**Researcher:** So, for example, like you were saying with different training, if there was like a training workshop developed specifically for teachers, for hearing impairment, what type of things would you want in that workshop.

**Teacher 7:** What sort of strategies, what sort of accommodations need to be done in the classroom, what sort of extra human resources is needed, what sort of materials are needed. I think that that all these things.

**Teacher 5:** Basic sign language even, especially for the extreme cases.

**Teacher 6:** How to identify it in the first place, if you are unsure, sometimes you like, ok is there an issue with your hearing or are you just selective. Its hard to tell in the beginning.

**Teacher 1:** To be provided like approved people to go and talk to, to recommend to parents because you do feel particularity, it can be quite tricky, um you know you send them to City Hospital because you know somebody would be there etc. But it would be nice to have a link of people, that are already established. Um, because the thing is often, what people often do, is that they do it in their home countries, and then of course we have very weak links with that, because they can often get it supported financially in their home countries and they can't here. It's very expensive. The hearing aids costs thousands of pounds.

**Researcher:** And would you prefer a pure PD, where it is just information given, or more of a workshop, hands on, working with hearing aids, trying them.

**Teacher 5:** I think both

**Teacher 1:** One of the things I did many years ago, was we had hearing impaired, and we had a lady come in and she got us to listen to the hearing aid, and you realise how poor it is, because it isn't like a pair of glasses that corrects eye sight, it never does, so to be able to hear to some degree what that child is hearing, gives it that massive understanding to the teachers then about trying to call for quiet, making sure the child has that quiet place when doing that direct teaching, because it's not like a, because it will magnify that traffic outside, and that can be much louder than even our voices and things. So that's important that they know. Now I'm saying too much, let someone else go.

**Teacher 2:** That's interesting

**Researcher:** So more of a hands on, with strategies and even things like in terms of your classroom, do you feel that you are free to accommodate the child, change it up if that was one of the strategies of things to do, or do you think that there are quite a few barriers in terms of management and what you are allowed to do and freedom you have to do what is suitable for the children.

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**Researcher:** And in terms of curriculum, do you think it is easy to adapt it for children with special needs, or is it the teacher sitting and trying to come up with her own new programme to help.

**Teacher 6:** You mean for hearing impaired?

**Researcher:** Yes

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**Teacher 5:** Well then that's where the IEP will come in handy

**Teacher 7:** It would but then I think IEB and PYP is very oral and it requires you to communicate, and a lot of it is quite strict with questions like tell me what you think, so I guess it would, um, it wouldn't be as easy for a child that is solely hearing impaired that is affecting their speech as well. That would be more difficult for them.

**Teacher 1:** But what we do is we, would say they don't, we have other children that actually can't, and it's not an issue, we can just leave, you know we don't have to report on everything, so we not going to push them through hoops they can't jump through. At the same time, we do have high expectations so we do expect them to make progress. But we can modify a curriculum to fit the needs of a student. It's very easy to do that with IB

**Teacher 6:** We do have a continuum so, we were talking about it just the other day with our team. Every grade has objectives. We do have our own objectives. But if they are say tactile child we would push this way and obviously if they are struggling we are allowed to push back. They in that same grade but they would be moved down. You can bounce around like that, you are not stuck within one set of objectives. So, it just, and that is even without any struggling issue like hearing impaired or what have you. Even a regular child who might be great here and not so great here, you move them around. So, you are officially given that okay to do that even before you have any medical issues or SEN issues.

**Researcher:** And then the last thing that did come up as part of the questionnaire and is across the schools, a lot of the teachers even though their name is not on the questionnaire at all, they were reluctant to fill out the form because they said that they don't want it coming back on them. Why do you think that they felt like that?

**Teacher 6:** In this school too.

**Researcher:** In all schools. Across the schools. Teachers were reluctant to actually complete the forms, going saying I don't want to say in case it comes back to me.

**Teacher 1:** But how is it going to come back, it is totally confidential. It is also your research. You are not going to go to the head of the school, and say such and such said this. So I think it was just an excuse for people not to take part

**Researcher:** Do you think there is a thing where the teachers feel that they don't want to express their opinions because they either not heard or it is something that is held against them, or they try to say the same thing over and over and their needs aren't being met. Do you think that is happening?

**Teacher 7:** No, I don't think so. You go case by case, when you get a child in your class with something, anything, that you have never experienced before, your first point of call is the special needs department, and I think it is a really well established line that you move down within the school, and I don't think you going I don't want to get into trouble by asking and I it's very open and I wouldn't say at all its you will get into trouble for anything at all or I don't want to get called up on that if you say you don't know about or how to handle a certain child. I think everyone is very open and honest, and say help I don't know how to handle a certain child, and I don't know how to handle this new boy in the class who has x y and z. And I think there is a very clear structure within schools that is very open.

**Teacher 4:** It is actually encouraged. They tell us

**Teacher 6:** Yeh the process itself is really, really, well defined yeh what to actually do

**Teacher 7:** And with the amount of staff that we have within the department is increasing so there is more and more support as we grow so I don't feel like that.

**Teacher 6:** There is a difference between somebody having a moan and somebody discussing something constructively, you know there is that, so I'm not sure who you have been talking to

**Teacher 1:** You know we always strive to be positive within our communication, but you know there are certain things that I would say to teachers that I don't know the answers yet and let me go and find out. You can't know everything about everything

**Teacher 7:** But I think that also being in Dubai, and how people sometimes have experience and sometimes don't have experience, you go to different schools and everybody has a different approach so maybe these people have gone through something where they haven't had the support, so that's where they are coming from, and why they probably feel that way but we have a different approach. We help each other so that makes things easier for us. Maybe them, they had a different experience, that's why they feel that way.

**Researcher:** And that's from school management, and the KHDA. Do you think they support you as you need it to be?

**Teacher 1:** I think the support has come through the refined frame-work and the fact that they actually now put in, for me, the modifications etc, it is an expectation for all teachers to do, where some schools don't have a SEN department, they don't have nobody, yes, they have an outside agency, but nobody is co-ordinating that. So, I think that the fact that they have put more focus on it during inspections, although I would rather prefer that they not be every year, I think that that is a positive thing that they expect to see high standards for students with special needs just as you would expect for them to be making progress as their

peers. They might not have the same attainment but they should be making progress. So that's a very positive thing. As in if there is somebody you can ring up and ask advice, I think that is very poor. That doesn't happen. I think in that situation if you rang up and asked advise, you would probably get the label of oh they don't know what they doing there, because people, you know I would never reach out to the KHDA to ask advise about a student to be fair. I've never done it. Its different if it's a behaviour thing as those do go towards the KHDA, but for a medical condition, it wouldn't be where I would go. I would go more towards the places like Lighthouse where you can seek advice and things, and you know we do have more centres coming up but, it's not as established as it is in the UK. You are quite likely if you rang up day would get one answer and a different day you would get a different answer.

**Teacher 6:** It's a new country as well, it's developing still

**Teacher 7:** I suppose they have done a lot in forty years, but if you had to make that phone call it's almost like you would get some Victorian response, a very quick judgement on the phone so I don't want that

**Teacher 1:** I mean are there any schools that actually specialise in hearing impairment.

**Researcher:** No

**Teacher 1:** You see. And it's the same with blind as well. I was trying to find a place for a student who was blind as well. Only Emirati schools, but its only for Emiratis

**Teacher 4:** A blind school for blind

**Teacher 1:** Only one school for Emiratis but no other

**Researcher:** Its Al Noor or Rashid and then mainstream. Finally, in terms of the teachers, well you here, how many of you have been trained in the School for All policy

**Teacher 5:** In the what sorry

**Researcher:** The school for all policy

**Teacher 7:** The policy, the KHDA one

**Researcher:** The actual policy, School for All

**Teacher 6:** We haven't had actual training. We just have had child protection training

**Teacher 1:** Things are starting. Things are starting moving forward, and obviously we know the inclusion agenda

**Researcher:** Have you as teachers been given it, and gone through it

**Teacher 6:** No, we get given the big hand book but not that specific part of it, no. But I think that sort of thing is starting

**Teacher 7:** It might be coming soon. But I think what we are already doing is internally motivated. I mean there are certain things we have to actually do for KHDA but I think a lot of what is happening is us. There is a lot of initiative happening

**Researcher:** Thank you so much ladies.

Appendix J: Ethical clearance certificate obtained for research

R14/49 Ms Andria Calicchio

**HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)**

**CLEARANCE CERTIFICATE NO. M150872**

| | |
|---|---|
| **NAME: (Principal Investigator)** | Ms Andria Calicchio |
| **DEPARTMENT:** | Speech Phathology and Audiology<br>Gems Royal Dubai School, Uptown Primary School, Mirdif, Gems Metropol School, Motor City |
| **PROJECT TITLE:** | "School for all": Teacher's Perpectives of Inclusive Education with Hearing-Impaired Learners in Dubai, UAE. |
| **DATE CONSIDERED:** | 28/08/2015 |
| **DECISION:** | Approved unconditionally |
| **CONDITIONS:** | |
| **SUPERVISOR:** | Dhanashree Pillay and Victor de Andrade |
| **APPROVED BY:** | Professor P Cleaton-Jones, Chairperson, HREC (Medical) |
| **DATE OF APPROVAL:** | 23/09/2015 |

**This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.**

**DECLARATION OF INVESTIGATORS**

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.
I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

Principal Investigator Signature Date

**PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES**