

Saudi Educators' Attitudes towards Deaf and Hard of Hearing Inclusive Education in Jeddah, Saudi Arabia

Submitted by

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List of Abbreviations

HI= Hearing Impairment
DHH= Deaf and Hard of Hearing
HH= Hard of Hearing
Deaf= Profoundly Deaf person
deaf= partially deaf person
HL= Hearing Loss
BTE= Behind the Ear hearing aid
ITE= In the Ear hearing aid
HA= Hearing aids
SEN= Special Educational Needs
IEP= Individualized educational Plan
BSL= British Sign Language
ASL= Arabia Sign Language
CPD= Continuing Professional Development
LEA= Local Educational Authority
DGSE= Directorate General of Special Education
MoE= Ministry of Education in Saudi Arabia
UNESCO= United Nations Educational, Social and Cultural Organization
dB= Decibel
WHO= World Health Organization
ICIDH-2= International Classification of Impairments, Disabilities and Handicaps
SCC= Self-Contained Classroom
TCA= Total Communication Approach
QUAN= Quantitative Data
QUAL= Qualitative Data
Bi-Bi= Bi-lingual Bi-cultural Approach
MMPI= Minnesota Multiphasic Personality Inventory
FI= Full Inclusion
PI= Partial Inclusion

ABSTRACT

This study explores Saudi educators' (teachers' and administrators') perceptions of and attitudes to Deaf and hard of hearing (DHH) inclusion in Jeddah, Saudi Arabia in two phases. Data were collected in sequential quantitative and qualitative phases. A questionnaire was first administered to 120 teachers and administrators in direct contact with DHH students, giving a broad picture of the themes under investigation in phase 1. Attitudes were examined in terms of three components: their beliefs, emotions and behaviour. This phase investigated the influence on educators' beliefs and attitudes of these factors: type of D/deafness, length of experience, teachers' qualifications, stage/grade of education, type of school and in-service training. In phase 2, understanding of educators' attitudes was deepened by conducting semi-structured interviews with a purposeful sample of five teachers and six administrators of diverse experience, covering five themes: the DHH concept, the inclusion concept, the inclusion process and requirements, barriers to DHH inclusion and changes needed to promote it.

The first phase revealed positive attitudes towards hard of hearing inclusion but not with regard to Deaf students, a distinction confirmed by the qualitative findings. The Al-Amal Institute for the Deaf was considered the best educational alternative for Deaf students. Relatively negative attitudes towards Deaf inclusion were related to various factors, especially lack of professional training and expertise in cued sign language, inadequate resources in mainstream schools and poor preparation for receiving DHH students. Participants considered integration to be a matter of equal (part-time) access to the nearest possible local school, but not inclusion as an issue of school restructuring, full participation and active social and academic engagement. Regarding barriers and change, participants were more concerned about the lack of professional training, overreliance on individual donations rather than the local authority to fund and support teaching aids, the absence of strict procedures regarding student referral and teacher transfer from general to DHH education. It was felt that there should be more rigorous diagnosis and differentiation of the national curriculum in order for mainstream schools to be more DHH-friendly. I have discussed the contributions, implications, strengths and limitations of the study. It was concluded that the progressive perspective of inclusion in terms of school restructuring, respect, welcoming, participation and belonging is a far-reaching objective in the Saudi context.

CHAPTER ONE

Introduction

1 Introduction

Over the last two decades, there has been a great deal of worldwide interest in researching the integration/inclusion of Deaf and Hard of Hearing (DHH) students and other groups with special educational needs (SEN). It is important to shed some light on the difference between ‘Deaf’ and ‘deaf’ which appears in some literature. ‘Deaf’ when capitalised means those who are severely or profoundly deaf and use sign language as their main means of communication, while ‘deaf’ with a small ‘d’ refers to those with mild or moderate hearing loss, who can communicate via a total communication or oral approach (Ladd, 2003). According to Watson (2009), the difference is that the former concept represents a Deaf community which has shared values, views and history, and whose first language is sign language. In Saudi Arabia (SA), students are classified as Deaf or hard of hearing, based on the severity of their hearing loss. The current study explores educators’ attitudes towards DHH students in mainstream schools in the SA context. The distinction between D/deaf and DHH is elaborated in further detail in the second chapter. The importance of exploring D/deafness and its complex relationship with disability has led to the development of different definitions and models of the D/deaf as a medical or a socio-cultural minority. The interpretative journey to explore all these themes with its subsequent subthemes should be understood as a discovery that has developed over time (Elshabrawy, 2010).

Inclusion is a relatively new construct, internationally and in the Middle Eastern and Arab world, and seems to be problematic. This philosophy aims to engage SEN students and other vulnerable groups (e.g. Ainscow, 2005) holistically within mainstream education, giving them equal opportunity to gain access to the mainstream classroom and removing restrictions in favour of all students through respect, values and active participation in all school activities (Dyson, 2001). There has sometimes been an overlap in meaning between the terms ‘inclusion’ and ‘integration’ (Avramidis, 2001), which some people use interchangeably and without distinction (Elshabrawy, 2010). I shall discuss the use of the two terms in the next chapter and more fully in the literature review.

There has been very limited educational research in the Saudi context on D/deafness and its relationship with SEN, attitudes, integration/inclusion, identity and socio-cultural issues. The process of including DHH students in Saudi mainstream school settings is complex and multidimensional. The education authorities claim that there is provision of inclusive education, but practice shows that in reality it merely provides access to mainstream school settings in the form of special or self-contained classrooms for some DHH students, a pattern of provision which would be better described as ‘partial locational integration’. It is seen as an issue of gaining equal access, not a sense of belonging and full participation (Vitello and Mithaug, 2013).

This means that the approach to inclusion in the Saudi educational system is partial. In addition, as in other parts of the world, there have been significant changes in the way in which pupils with SEN receive their education in SA. Since a new mainstreaming policy was put into practice in 1997, there has been a major transition from the traditional mode of teaching DHH students within a long-established framework of special schools run by the Al-Amal Institute for the Deaf, of which there are three in Jeddah. This has involved an emphasis on acknowledging DHH students’ various needs to be effectively engaged and respected in schools that are well prepared to provide for them. Therefore, it is central to this investigation to explore Saudi educators’ attitudes towards D/deaf inclusion. However, this aim could not be addressed without highlighting the complexity of D/deafness seen by the medical model as a deficit/disability or interpreted within the social model as a cultural/linguistic minority, as will be discussed in chapter 3. The tensions between these two perspectives will also be discussed in chapter 2, which outlines issues arising in the Saudi context.

1.1 The Nature of the Problem

“[T]he use of labels or categories of disability, such as ‘physically disabled’, ‘Down’s syndrome’ or ‘autistic’, raises the issue that the respondent in a population may have multiple interpretations for the same label; that occurs when teachers attribute different characteristics to a label based on their experiences, or lack of it, which could be positive or negative and be largely unpredictable across a population of teachers” (Avramidis & Norwich, 2002, p. 143).

I aim to review briefly some of the recent literature relevant to conceptualizing D/deafness, disability, integration/inclusion and Arabic sign language. These concepts have been seen as remarkably problematic and complex in the Middle Eastern context (Elshabrawy, 2010). In this chapter, I will discuss this problem and how it leads to the purpose of the study, key research questions and the main terminology related to D/deafness and inclusive education. There are different ways in which one could procedurally define D/deafness, Deaf culture, integration and inclusion: from a socio-cultural perspective, from that of educational/academic performance, or from a medical/pathological, psychological/psychometric or political/legal viewpoint. Each of these different perspectives has its own distinctive way of conceptualising D/deafness and disability, and tensions may arise between its various connotations (Devlieger, 2005).

While some Saudi educators are in favour of integration/inclusion policies, others are against them and what they imply. Those educators who accept the principle of inclusion believe that it can reduce stigma and marginalization (Al-Musa, 2007). In contrast, some are strongly against moving from a primary stage of integration to more progressive and inclusive practices without taking into consideration all prerequisites, including the preparation of schools and classrooms, the training of administrators and teachers, particularly in sign language proficiency, and the modification of pedagogical practice. They firmly believe that the current status of the school environment and Saudi educators' level of training would not allow this movement to be reasonably successful. They argue that inclusion, seen as a relatively new educational and social phenomenon, is not easily achievable. In addition, they assert that special schools as they function today are the only well-prepared and practical educational environment which could accommodate all the needs of Deaf students for the foreseeable future.

It is therefore important to understand why some educators constantly reject the premises of inclusive education. This requires an exploration of their views of what is wrong in our school practice and how integration/inclusion could be altered and constructively improved. By contrast, other educators believe that there is no longer any need for special schools in Saudi Arabia for these pupils. What is clear is that there has not been enough educational research into the impact of inclusive practices upon DHH pupils' identities,

communication skills (i.e. oral versus sign language) and social integration in SA (Al-Zahrani, 2005).

1.2 Rationale and Significance of the Study

The current study is focused on understanding educators' attitudes towards DHH and integration/inclusion in terms of philosophy, practice, requirements, barriers, how to change and challenges for the Saudi context. In early 1997, the Saudi Directorate General of Special Education (DGSE) launched its new integrative policy towards SEN pupils by opening a considerable number of special/self-contained classrooms across all the thirteen LEAs in SA (Al-Zahrani, 2005). From that time, there have been significant changes in the way in which SEN pupils receive their education (Al-Musa, 2005). The issue of this newly implemented practice is that there are many Saudi educators who have problematized the process of transferring DHH students from the Al-Amal special schools into mainstream ones without the school environment being fully prepared or the school staff trained for such a large-scale change.

Mainstream schools must have minimum standards, ethos, regulations, criteria and commitment to inclusive education in order to host DHH students. Educators who have opposed the Ministry of Education policies have argued that they have not provided adequate high quality specialized training to mainstream educators for them to communicate effectively in Arabic Sign Language (ASL), particularly cued signs, rather than through an oral approach. Additionally, they have questioned the usefulness of moving all DHH students into mainstream schools without adequate preparation. For example, statistics for the 2009-2010 academic year show that all but 122 of the Jeddah LEA's DHH students had been moved into ten mainstream schools in the last four years, the exceptions being 62 students aged 6 to 12 years at the Al-Amal Primary Institute for the Deaf and 60 aged 12 to 18 at the Intermediate and Secondary/tertiary levels (DGSE, 2011).

Many issues concerning the DHH integration initiative derive from its beginnings a decade and a half ago. To shed light on this matter, the literature was searched for evidence of any potential negative or positive impact of integration/inclusion of DHH students and what kinds of factors influence educators' attitudes towards inclusion. In

contrast to all previous Saudi studies, my exploration of these topics has benefited from the use of mixed methodology research to strengthen the findings and interpretations.

A debate is currently going on in SA between educators and policymakers about whether to expand DHH mainstream programmes, reducing the numbers of Deaf pupils enrolling in Al-Amal schools and limiting special schools to helping pupils with profound and multiple special needs. Meanwhile, some other educators are calling for the whole nature of special schools to be changed to serving as language and speech therapy units, centres for conducting intelligence and adaptive behaviour tests, facilities for taking ear moulds and distributing hearing aids, and resource centres for pupils who are marginalised because they are borderline or have learning difficulties, multiple disabilities or autistic difficulties. Conversely, some experienced teachers and administrators who have served in these special schools for a long time have expressed concerns about such radical structural changes or fear the possibility of their closure. This study is an attempt to address DHH students' educational provision and placement and to examine their educators' attitudes towards these issues.

In terms of the significance of the study, there are some aspects which are important in relation to the Saudi educational context. Firstly, it is not enough to accept general education teachers into D/deaf education without scrutiny of what enables them to teach such pupils. The findings provide an indication of the importance of teacher training, particularly for newly transferred teachers. For DHH students, failure in establishing effective communication seems to create an obstacle to their successful inclusion. Secondly, this study provides an informed perspective on the beliefs of educators about inclusion as related to DHH education. Thirdly, it offers a new way of conducting social constructivist mixed methodology educational research into other educational phenomena within the Saudi context.

1.3 Aims of the Study

The current study aims to explore Saudi educators' conceptualization of DHH and inclusion, and their attitudes to DHH inclusion, the inclusion process, its requirements and barriers to it. It focuses on what needs to be changed within the Jeddah LEA as representative of the Saudi context, taking into consideration that it is the second biggest

city in the Kingdom. The process of including DHH students in mainstream schools has been implemented for the last decade and a half. It has gained a resurgence of interest from teachers and administrators from various disciplines such as psychology, education and sociology; some argue for it and others are firmly against it. Therefore, the aims of this study are as follows:

1. To examine Saudi educators' attitudes in terms of beliefs, emotions and behaviour towards the inclusion of DHH students in Jeddah.
2. To explore how the background factors of type of D/deafness, years of experience, level of qualification, educational stage/grade, type of school and in-service training are related to educators' beliefs and attitudes towards DHH inclusion.
3. To explore in depth the understanding of Saudi educators in Jeddah in terms of the following themes: D/deafness, integration/inclusion, the inclusion process and requirements, barriers and the change needed for successful DHH inclusion.

As with all other socio-cultural/educational phenomena, the Saudi social context regarding DHH education and sign language is quite different from the British one, especially in terms of identity and approaches to inclusivity (An account of relevant aspects of Saudi culture is presented in the final chapter). The overall endeavour in this work is to improve understanding of DHH inclusive schooling in the Jeddah LEA and to identify the kinds of challenges it faces.

1.4 Research Questions

As mentioned previously, this study follows a mixed methodology research design in which both quantitative and qualitative data were collected. In the first phase, a systematic quantitative questionnaire survey was distributed to all 159 educators (teachers and administrators) in the Jeddah LEA area having direct contact with Deaf and hard of hearing students. The questionnaire, adapted and modified from the attitude scale of Elshabrawy (2010), thus addressed the first and second study aims, to understand respondents' beliefs (personal knowledge), emotions (feelings), attitudes and behaviours regarding DHH inclusion and related factors. These objectives correspond to two broad research questions as follows:

RQ1. What are Saudi educators' attitudes (beliefs, emotions and behaviour) towards current practices of DHH inclusion?

RQ2. How are Saudi educators' beliefs and attitudes towards DHH integration/inclusion related to these six background factors: type of D/deafness, years of experience, level of qualification, educational stage/grade, school type and in-service training?

The second phase was designed as an exploratory study using semi-structured interviews with five teachers and six administrators to explore qualitatively their understanding and interpretations of D/deafness, the concept of integration/inclusion, the integration/inclusion process and requirements, barriers to it and changes needed to bring about successful DHH inclusion practices.

Hence, the second phase addressed the five following specific research questions:

RQ3. What are Saudi educators' perceptions of D/deafness as a concept?

RQ4. What are Saudi educators' perceptions of and attitudes towards DHH inclusion?

RQ5. What are Saudi educators' beliefs about the inclusion process and its requirements?

RQ6. What are Saudi educators' beliefs about the main barriers to attaining successful DHH inclusion?

RQ7. What are Saudi educators' beliefs about the major changes that need to be implemented in order to improve DHH inclusion practices?

1.5 Methodological Approach

The subject of peoples' beliefs on sensitive issues such as disability, D/deafness, ASL and inclusion are exceptionally problematic and complex, calling for sophisticated research approaches. This is one reason why a sequential mixed methodology was used in this study; it enabled rigor of the analysis of data from separate phases to examine beliefs and attitudes that might be idealised and confused. As far as I am aware, all educational research that has been carried out in Saudi in the DHH area has been in the single tradition of scientific or 'positivistic' research, whereas the present study is an attempt to cover these vital educational issues from a social constructivist perspective. Within this framework, greater weight is given to the second phase, as its exploratory nature and qualitative method allow it to provide a thick, direct and detailed description of the issues raised. Thus, the study is integrated in a pragmatic manner.

The quantitative survey conducted during the first phase sought to build on the knowledge provided by previous surveys by eliciting detailed information on educators' beliefs and attitudes regarding DHH inclusion and the factors influencing these. These quantitative data were collected and analysed first, so that the results would inform the subsequent qualitative phase. The educators targeted for this phase were a total population sample of 159 teachers and administrators with direct contact with DHH at Jeddah. The aim of collecting qualitative data in the second phase of the study by conducting semi-structured interviews was to deepen the understanding of the DHH integration project of the Jeddah LEA in terms of its current status, of challenges to it and of how educators perceived the barriers to accomplishing the transition to a more inclusive schooling. The interviewees were a purposeful/judgmental sample (Marshall, 1996; Babbie, 2010) of five teachers and six administrators, selected from the primary sample. Chapter four provides more details of the methods employed.

1.6 Overview of the Thesis

This thesis is organized into seven chapters. Following this introduction, chapter two introduces some background information on Saudi Arabia's educational system in general, relevant terminology and special school settings in SA, a history of SEN in SA and the mainstreaming movement, D/deafness and integration in SA and SEN students in general, the current status of DHH students in the Jeddah LEA area, the need for teachers to transfer from general work to SEN in SA, the dominant conventions governing educational research and barriers to change. Chapter three presents a review of the literature, divided into several sections. It begins with definitions and understandings of D/deafness, studies of integration and inclusion, the impact of D/deafness on language, social, emotional and cognitive development and academic attainment. Next, there is a review of literature on attitudes to SEN and DHH inclusion in general and in the Middle East, factors influencing teachers' attitudes, the limitations of the reviewed literature, reflections on this literature and a summary of the research aims. Chapter four sets out the methodological assumptions and explains the two-phase design of the study, the first phase being a systematic questionnaire survey to collect quantitative data and the second an exploratory qualitative study using semi-structured interviews. As well as detailing the methods of data collection, this chapter also explains the data analysis and addresses the

ethical standards that were adhered to at all stages. Chapter five offers a detailed account of the quantitative findings of the first phase, then chapter six does the same for the second qualitative phase. Chapter seven presents an integrative discussion of both sets of findings to reach systematic conclusions. The thesis closes with an account of the contribution to knowledge and understanding made by the study, discusses its implications, evaluates its strengths and limitations, offers recommendations and considers the ethical issues raised in the course of the study.

CHAPTER TWO

Background Information and Overview of the Saudi Context

2 Background Information and Overview of the Saudi Context

2.1 Introduction

This chapter provides some essential background information on terminology related to the education of DHH students in general and offers an overview of the Saudi context in order to give a clear insight into this particular society, its culture and educational system. There is no doubt that this insight is very important, because there is little knowledge of the Saudi educational system and ethos, particularly in terms of the special educational system and its recent trend towards a more integrative approach, sometimes called the mainstreaming movement within the Saudi literature. The chapter also offers a brief historical overview of the special and mainstream school settings and how they function, before considering key aspects of the recent increase in DHH mainstreaming programmes across the country. The penultimate section addresses barriers to inclusion and the chapter ends with a summary.

2.2 Terminology

Many specialised terms used in the current study will need to be clarified as this thesis proceeds. Some of the key terms are explained here to set the scene for later discussion; these are ‘integration’, ‘inclusion’, ‘SEN’ (medical vs. social model), ‘DHH’ and ‘D/deaf’. However, there will be further discussion of these terms and related themes when the relevant literature is reviewed in chapter three.

2.2.1 Definitions of Integration and Inclusion

The terms ‘integration’ and ‘inclusion’ have been defined and used in several ways in recent years. This section gives a brief account of various definitions of integration, including functional integration, then various definitions of inclusion will be considered, followed by some discussion of the relationship between integration and inclusion. As this is only an introduction, there will be more discussion of these concepts in the literature review.

In order to explain my own understanding of these two related constructs, I shall begin by discussing a number of definitions of the term 'integration' as it was used before inclusion was proposed as an alternative. I shall next present some critiques of this usage, such as the argument that integration was concerned only with placement and assimilation. Finally, I shall introduce the concept of inclusion, offering several definitions and considering the extent to which they overlap, such as inclusion and functional integration, which involves the restructuring of the school and is a matter of accommodation, not assimilation.

Fish (1985b) looked at integration (called 'mainstreaming' in the USA) as an issue of placement of students with SEN in mainstream schools. This followed the line of argument found in the Warnock Report (DES, 1978). Locational integration was another way of talking about placement and implied moving special needs students from special to mainstream schools. Another aspect of integration was social integration, which is about social mixing and can occur both inside the classroom and outside it, such as in extra-curricular activities. Thirdly, functional integration meant that special needs students were integrated in the teaching and learning context in class lessons. Thus, integration could be seen as more than an issue of placement, also being about the rights to equal access and equal opportunity in learning with others. In the same vein, Norwich (1999) approached the definitional issue as a matter of accommodation rather than assimilation, arguing that functional integration meant that the school and teaching approaches had to change to make all this possible, which required the whole school to change to accommodate differences. In the same way, Booth and Ainscow (2002) identify an overlap between this aspect of integration and the more recent concept of inclusion. Indeed, the terms are sometimes used as synonyms (Thomas, Walker & Webb, 1998; Elshabrawy, 2010), but inclusion has more recently replaced integration as the term that refers to human rights as regards the education of students with difficulties and disabilities. This is the key turning point in the use of the term 'inclusion' as launched by UNESCO (1994) with the Salamanca Declaration. Some have argued that integration is more about making minimal arrangements for SEN students at mainstream schools (Ainscow, 1997, 2005; Frederickson and Cline, 2002; Lindsay, 1997; Elshabrawy, 2010), which also could be considered a topic of legal or equal access discourse.

Inclusion somehow entails a holistic model for understanding inclusive educational practice. However, this assumption should be treated carefully, as this definition also entails all students participating and belonging to a school community, which represents only one aspect of inclusion. Barton (1987) presented integration as a concept related to the medical model of understanding of special education and disability, which implies the right to access to the nearest mainstream school.

According to Sebba (1996), inclusion “describes the process by which a school attempts to respond to all students as individuals by reconsidering its curricular organisation and provision”. This seems like a good core way of describing the meaning of inclusion, or at least some aspects of it, because it defines inclusion as an ongoing process, not a state. It also indicates that all students should be included, not merely some individuals. The final aspect of this definition is that it specifies the responsibility of mainstream local education in reconsidering its curricular organisation and provision in order to assimilate special needs students, which could be viewed as an issue of placement.

Another aspect of inclusion is that all students are actively engaged in learning (Warnock, 2005; Norwich, 2010), not merely by attending a mainstream school, but more importantly learning together (O’Brien, 2001). This means being valued and welcomed, participating fully in order to achieve more, which in turn depends on restructuring mainstream schools to promote effective practices that benefit all students (Ainscow, 2005). Avramidis (2001) reviews many different definitions of inclusion and integration, concluding that the language used to define and distinguish them is slippery, puzzling, problematic (Dyson and Millward, 2000) divergent, incompatible (Norwich, 2000) and sometimes confused. It is thus unsurprising that the two terms are often used interchangeably (Avramidis & Norwich, 2002) in various contexts, partially because of the difficulty in distinguishing between them. This is particularly true in Arab countries, including Egypt, where the single Arabic term “دمج- damg” (‘mixing’) is used to translate them both; this is also the case in Saudi Arabia (Elshabrawy, 2010).

From this brief review, it could be said that there is no clear difference between integration and inclusion. While this thesis refers to inclusion, I am aware of its varied and potentially different meanings.

2.2.2 Medical and Social Models of Special Educational Needs

‘Special educational needs’ is a broad term referring to large numbers of children with various kinds of learning difficulties and disabilities. Special education is a branch of education that deals with teaching all groups and kinds of special needs students, although this thesis is concerned in particular with those whose special needs arise from their deafness. A variety of conceptual representations has been suggested to understand and elucidate disability, expressed in the contrasting medical and social models. On one hand, the medical model views disability from a pathological viewpoint as a problem of the person, caused by disease or some other aspect of health, which requires medical care, provided in the form of individual treatment by professionals. Thus, the disability is managed in order to obtain a ‘cure’ for the problem or an adjustment or behavioural change on the part of the individual. Medical care is viewed as the main issue (ICIDH-2 final draft, 2001, cited in WHO, 2001).

On the other hand, the social model of disability sees it as mainly a socially created problem resolved by integrating individuals into local communities. Disability is not an attribute of the individual as such, but rather a complex collection of conditions which are created mainly by aspects of the cultural and social context. Hence, the management of the problem requires social action. It is the collective responsibility of society at large to make the social and environmental modifications necessary for active participation of people with disabilities in all areas of school and other social life. The issue is an attitudinal one, requiring social change, which becomes a human rights or political issue (*ibid*). The social model pinpoints legislative barriers, undesirable attitudes and social exclusion, rather than the disabled person per se, as the main obstacles to inclusion. It perceives society as disabling in its failure to adapt to the needs of all of its members. Thus, barriers exist in the way in which societies perceive disability and the willingness of their members to abolish any restraints imposed by the physical construction of schools, etc., and the attitudes of people and institutions (Johnstone et al., 2002).

Attitudes are relevant to teachers and administrators, as they are the ones who deal with special educational needs students at school. Thus, the success of inclusion depends largely on teachers’ and administrators’ attitudes. This study considers teachers’ views from two different perspectives, i.e. through attitudes, which is in the measurement

tradition from educational psychology, and in terms of their perspectives and perceptions, from a more interpretivist position.

2.2.3 Definitions of ‘Deaf’ and ‘Hard of Hearing’

This section considers the contrasting uses of the terms ‘Deaf’ and ‘deaf/hard of hearing’ (HH). The combined form ‘deaf and hard of hearing’ (DHH) is a generic term covering all those with hearing difficulties, whether or not they have some understanding of speech, including with aids. This generic term is widely used in Saudi Arabia and is therefore used in this thesis from now on.

The difference between capital ‘D’ and lower case ‘d’ will be discussed in more depth in chapter three. Meanwhile, as noted in chapter one, the distinction between ‘deaf’ and ‘Deaf’ is sometimes used to reflect the level of hearing loss, but more usefully concerns deafness (small d) as an individual disability versus the Deaf as a linguistic minority community. It is important to clarify that the use of the capital D in the United Kingdom indicates the community of deaf people who use British Sign Language (BSL) as their language and identify with other deaf people who share their language, culture and history. The reality of the situation as it is lived by Deaf children and their families is complicated and diverse. It is not static and is subject to variation in accordance with deaf children’s changing communication needs (at home, school and the wider community) and preferences (Watson, 2009).

As described earlier, there is a great deal of confusion in the use of terminology and it seems that reaching a general consensus about it is problematic (Moores, 2001). However, Frisina (1974, p. 3) indicates that for educational purposes, ‘Deaf’ is commonly used to refer to a disability or an individual problem: “A deaf person is one whose hearing is disabled to an extent that precludes the understanding of speech through the ear alone, with or without the use of hearing aids”. As to HH, the American Speech-Language Hearing Association (ASHA) and Council on Education of Deaf (CED) formed a joint committee to redefine DHH for educational objectives and states: “A hard-of-hearing person is one whose hearing is disabled to an extent that makes difficult, but does not preclude, the understanding of speech through the ear alone, with or without a hearing aid” (Frisina, 1974, p. 3). These two definitions were adopted by the Conference of

Educational Administration Serving the Deaf and remain in use in the USA (Moores, 2001).

Generally speaking, communicating effectively with hearing people is a major difficulty for DHH people, particularly those students with pre-lingual hearing loss (HL), such as profound HL, where they do not have enough structure of language, phonetics and syntax to make use of oral methods of communication. They consistently prefer to communicate through sign language rather than by verbal means. Successful communication skills are very important for DHH people's social and emotional development. The most common feature of DHH people is that they are unable to hear human spoken dialogue (clearly) without hearing aids.

There are two main definitions to characterise D/deafness, as a medical or a social/cultural concept. According to Ladd (2003), deafness is seen as the partial or complete absence of the ability of hearing. From a medical perspective, there are three ways of categorizing D/deafness, first as pre- and post-lingual, according to whether it occurs before or after language is acquired; secondly in terms of where in the ear the problem lies, as conductive (in the outer or the middle ear), sensory-neural (in the inner ear) or mixed (hearing loss combining conductive and sensory-neural difficulties). The third categorisation is made according to the level of hearing loss (HL severity) as follows:

- 1- Mild: from 25 to 39 decibel (dB) HL and cannot hear whispers.
- 2- Moderate: from 40 to 69 dB HL and cannot hear conversation.
- 3- Severe: from 70 to 94 dB HL and cannot hear shouting.
- 4- Profound: above 94 dB HL and cannot hear very loud sounds (Moores, 2001).

This model of perceiving deafness is mainly dependent on the notion of a helpless disabled person:

“with no intrinsic relationship with any other Deaf person, past or present, no group allegiances or history... these individuals can be ‘restored to society’ by the use of technology in conjunction with Oralism, especially if they are denied access to Deaf adults and, sign languages and, where possible, other Deaf children” (Ladd, 2003; p. 163).

The second perspective on Deafness is in terms of the socio-cultural/linguistic model, which is discussed in more detail in the literature review (Chapter 3, sections 3.2; 3.3). I now turn to discussing different communication modes.

2.3 Understanding DHH Communication Modes

There are various types of DHH communication modes which relate to the context of D/deaf people. To understand communication modes it is useful to set out their varied backgrounds. There are minorities composed of Deaf students who have Deaf parents, HH or deaf students with Deaf parents and HH students with hearing parents, but the majority are Deaf students with hearing parents. This last group accounts for 90% of all Deaf people (Moores, 1996; Rawlings and King, 1986; Ladd, 2003). Four modes of DHH communication are usually identified, namely the oral method, the sign language or manual method, the total communication approach and the bilingual-bicultural approach (Moores, 2001).

The first mode of communication within the Deaf community is the classical oral method, which depends heavily on utilizing all residual hearing the student may have (Moores, 2001). It tries to develop an educational plan that includes auditory training, speech or lip reading, making use of hearing aids in order to allow the child to communicate verbally by speech. It was the dominant method of instruction globally for the first half of the twentieth century (Ladd, 2003). The proponents of this conventional method argue that the use of the second mode, i.e. finger spelling or/and sign language, may restrict the natural development of speech and language skills (Moores, 2001).

As to the second mode of communication, in finger spelling, hands and fingers are shaped in front of the chest to convey the letters of the written alphabet. The speed and rate of using such alphabetical finger spelling differs considerably according to each individual's experience and proficiency. Sign language, such as BSL and Arabic Sign Language (ASL), makes use of both hands to convey words and/or ideas via a set of alphabetical and cued signs that all Deaf people in a given community have agreed upon a long time ago. From my experience as a teacher, they usually improve their knowledge base in sign language while studying at school, since most Deaf students are born to hearing parents. They even invent very creatively some signs for the newer concepts or technologies they

experience during adulthood, which indicates that sign language, like all other languages, is dynamic and living. Figure 2.1 shows all 28 alphabetical signs in ASL.



Figure 2.1: The Arabic alphabetical signs as taught in Al-Amal Institutes

According to Moores (2001), each sign in any sign language system has to include three main features. Firstly, there is the exact positioning of one or both hands. Secondly, there is the shape of the hands and what the fingers look like. Thirdly, there is the movement of the hands and fingers in various directions and the user's facial expression. In Saudi Arabia, educators usually use finger spelling when teaching profoundly Deaf students at an early age and for names or new terminology, but during lessons, teachers always instruct their students via cued signs. The 28 alphabetical signs in ASL, some of which are shown in Figure 2.2, correspond to the 28 letters of written Arabic, while the cued signs refer to complete ideas or words and constitute the easiest and most popular mode of interaction among the Deaf.



Figure 2.2: Some signs in Arabic Sign Language

The third mode of communication, namely the Total Communication (TC) approach, is more prevalent because it encompasses different channels (reading, writing, oral and sign) to convey the message to the other party. There has always been a tension or conflict between advocates of oral and manual methods in the UK as well as in SA. Proponents of each school of thought have offered justifications for following one rather than the other. TC is basically a variable method where oral, signing, auditory training, reading and writing are welcomed as modes of communication, according to the need of each circumstance (Solit, Taylor and Bednarczyk, 1992). It has been widespread since the

1970s (Ladd, 2003) and has been characterised as “...the bridge that allowed a crossover from oral-only philosophy to a philosophy that embraced sign language” (Hawkins, and Brawner, 1997, p. 1).

Therefore, parents, teachers and administrators have accepted this approach more than the others, because it has various tools for communicating with DHH people. Literacy lessons, auditory training, oral methods and individual language plans will take place for the benefit of a hard of hearing or deaf person who potentially has some residual hearing. On the other hand, profoundly Deaf students may benefit more from manual methods such as cued and alphabetical signs, lip/speech reading and progressive improvement of reading and writing skills. TC, as a relatively adaptable method of instruction that is pragmatic in its implementation of whatever type of communication offers successful and effective teaching, is widely used with profoundly Deaf students in Saudi schools (Al-Mousa, 2005).

The fourth mode of communication is the bilingual-bicultural approach, which has been described as “an approach to the education of deaf children which uses both the sign language of the deaf community [as the language of instruction] and the written/spoken language of the hearing community” (Gregory, 1998, p.1). It is the most recent approach to instructing D/deaf students, having originated in the early 1990s (Singleton & Morgan, 2006). Kuntz (1992) points out that it amounts to the parallel operation of two systems, with sign language as the dominant one. While using conventional English to build good proficiency in reading and writing, it makes use of American or British sign language as the first medium of communication for what he calls “through-the-air” communication (Kuntz, 1992, p. 15; Miller, 2001; Moores, 2001). This approach has not been used in Saudi Arabia, as there was no provision of teacher training in the bilingual approach. There, the oral method is mainly used to teach HH students, in order to improve their spoken language, while TC is used for Deaf students, as it employs different channels of teaching.

Watson (2009) gives a detailed account of three major modes of communication: oral, TC and sign bilingual. She distinguishes among the oral approaches to deaf communication used in the UK according to their emphasis on four criteria: audition, vision, the extent to which they follow a structured language programme, and their views

of deaf provision. The first oral method is ‘Natural Auralism’, the most widely used oral approach supported by aided hearing. Its proponents encourage deaf children to make use of all new hearing aid technologies and not to rely on lip-reading, thus affording them the opportunity to access the curriculum in a similar way to hearing children and to communicate with them. Educators speak to the deaf child within the range of the hearing aids and do not use visual or tactile signs. This method relies on the maximum use of audition, on hearing aids or cochlear implants, maintained to the highest standards, and on following the same pattern of language development as for hearing children. However, its opponents claim that by imitating hearing students, deaf children may be at risk of delay in their social and emotional development and their ability to access the curriculum when they start school.

The second oral method is auditory verbal therapy (AVT), an approach that aims to empower deaf children to use technologically-assisted hearing to listen to verbal language and to speak. It has five core aspects: 1) Children with hearing loss need to receive highly enhanced language input. 2) Parents are trained by a qualified auditory verbal therapist to participate in the programme and integrate its practices, pursuing short-term language goals. 3) Each session of therapy is diagnostic and leads to highly specific individualised goals. 4) There is recognition of the need for specialized auditory provision and maintenance of the best possible hearing-aid technology. 5) Understanding comes through listening, not signs or lip-reading. AVT thus differs from Natural Auralism in the use of auditory verbal therapy and hand cues and in the setting of specific goals. A further major difference is in educational placement: AVT emphasises placement in mainstream education, while Natural Auralism can be conducted in mainstream or special schools.

As noted above, TC involves the use of gesture, sign, speech, speech reading, finger-spelling, reading and writing to convey messages to Deaf people (Denton, 1976). When people refer to TC to mean spoken language accompanied by simultaneous use of sign, they usually mean Sign Supported English (SSE), where “staff sign every word and feature of English, using invented signs or finger-spelling to represent grammatical features of English” (Watson, 2009, p. 477). It is relatively easy to learn the signs for keywords. It does not necessitate learning BSL as a language with its own grammar and structure, just a list of everyday vocabulary. Parents prefer TC as the easiest way to

communicate with toddlers, because it gives more flexibility in choosing what is better for each situation. The first criticism of this approach is that deaf children exposed to SSE do not receive a full language input, so they may produce spoken language that does not follow the standard grammatical structure of English; instead of using the normal subject–verb–object structure of English, for example, they may substitute the subject–comment structure associated with BSL. A second criticism of the use of TC is that it presents deaf children with the auditory and visual signals all together. Thus, deaf children are likely to concentrate more on the signs, which are easier for them to access, and not attend to the auditory signal. However, evidence suggests that there is a shift for children who receive cochlear implants, and it remains to be seen whether the new generation of digital hearing aids also offer an auditory signal that is so salient that deaf children come to rely more on their hearing than their vision.

Sign bilingualism, or bilingual-bicultural education, originated in the early 1990s (Singleton & Morgan, 2006). Sign bilingual children could be defined as using “two or more languages in their daily life, at least one of which is a sign language” (Swanwick and Gregory, 2007, p. 9). This bilingual method offers a classroom environment in which deaf children are taught using a natural signed language, with spoken language as a second language. In SA, as in the USA, most mainstream settings do not offer an ASL or a bilingual approach to deaf students in public schools (Singleton and Morgan, 2006). Sign bilingualism refers to the use of the sign language of the indigenous Deaf community (ASL in SA and BSL in the UK) and the spoken and/or written language of the hearing community. There are several factors that have contributed to the growth of bilingualism, including: the under-achievement of Deaf students who had been educated mainly in oral programmes; criticism of the use of TC in terms of spoken language plus SSE; the relative academic success of deaf children from signing deaf families; the recognition of sign languages as full languages in their own right; and a changed definition of bilingualism away from its traditional meaning of native speaker competence in two languages towards that of native competence in one language and the ability to use another.

A key aim of sign bilingualism is for deaf children to acquire proper language levels in BSL in the first three to four critical years of language acquisition. Whilst this is perfectly possible for the deaf children of Deaf parents with native sign language competence, it is

much more difficult to achieve for deaf children in hearing families because of parents' lack of BSL. Proponents of this approach refer to sign language as the 'natural' language of deaf people, as it fits with a visual orientation to language. A sign bilingual approach adopts a positive view of deafness, which is seen in terms of a difference, rather than a disability, while Deaf people are seen as a linguistic minority group with their own language, history and culture. Deaf children themselves may for the first time have a genuine choice. Research carried out with teenage users of cochlear implants showed that they use any communication method the occasion demands (Wheeler, Archbold, Gregory and Skipp, 2007).

2.4 Special Education and Mainstream School Settings in Saudi Arabia

Special education schooling began in Saudi Arabia in 1953, with the individual initiatives of three Saudis, Alhusain, Almufda and Alswaid, who learned the Arabic Braille alphabet in order to teach their blind fellow citizens how to read and write (Al-Mousa, 2005). In 1957, some schools and community colleges started to offer three to four hours of afterschool 'blind classroom' teaching in the evenings. After successful and promising results, the Saudi Ministry of Education (MoE) launched the first official afterschool classes at Jabraah primary school in 1958 (Al-Turki, 2005). These classes expanded rapidly not only for the benefit of the blind, but to include the whole spectrum of people with special educational needs. In 1962, the Special Education Division was established. Attached to the MoE, it is responsible for educational and vocational provision for all special needs students, although it was originally intended to serve mainly three groups: Blind, Deaf and Learning Disabled (cognitive delay) students.

This service was expanded in 1970 when educational law made it clear that all SEN people had the right to be taught and served to the utmost of their abilities (Al-Turki, 2005). In 1997, the Joint Centre for Research in Prosthetics, Orthotics and Rehabilitation Programmes conducted the first national survey of disability prevalence. It found that there were 493,605 people with disabilities, which was about 4% of the population. In this survey, D/deafness was the disability with the fourth highest incidence, representing 10.7% of the sample (Al-Turki, 2005).

In the UK, Avramidis (2006) reports that the Green Paper published in the same year (DfEE, 1997) and its subsequent programme 'Meeting Special Educational Needs' (DfEE, 1998) strongly contended that SEN students should be educated in mainstream schools, demonstrating the government's commitment to place inclusive education at the heart of a school and social policy. He also states that in 2001 the UK government issued guidance to local authorities on removing barriers to learning and participation for SEN students (DfES, 2001a). This key guidance was reinforced by three pieces of legislation: the new Special Educational Needs Code of Practice (DfES, 2001b), the Special Educational Needs and Disability Act (DfES, 2001) and the Disability Discrimination Act (2005). These and other legal developments improved the UK policy towards inclusion (Farrell, 2000; Evans and Lunt, 2002; Lindsay, 2003).

The establishment of official education in Saudi Arabia began in 1925, when the government formed the General Directorate of Education. Its scope was quite modest to begin with, covering only four elementary schools; then, in 1932, King Abdulaziz expanded the responsibility of the Directorate to include all Saudi provinces. Taking advantage of the growing wealth that came with the exploitation of oilfields in the Western Province in the late 1930s and 1940s, the government founded the Ministry of Education in 1953. The state education system which it created made public education compulsory for all, with separate school settings for males and females (Ministry of Education, 1978, cited in Al-Mousa, 2005). The present educational ladder system consists of three major compulsory stages, the first of which is the primary stage, accepting students from the age of 6/7 years and lasting for six years. The intermediate stage then lasts three years and is followed by the secondary/tertiary stage, which accepts students from the age of 15/16 and also lasts for three years, during which the student follows a major in science, literature or a vocational subject. Table 2.2 outlines the current system.

Table 2.1 The Saudi education system

Saudi universities, community colleges, vocational institutes etc.			
Grades 10 to 12	Vocational secondary schools (age range from 16 to 18)	General secondary schools (age range from 16 to 18)	Tertiary/Secondary stage
Grades 7 to 9	Intermediate stage (age range from 13 to 15)		Basic education
Grades 1 to 6	Primary stage (age range from 7 to 12)		
(Two grades)	Kindergarten/nursery stage (age range from 4 to 6)		

Source: adapted from Elshabrawy (2010)

The earliest attempt by the MoE to serve special needs students came seven years after its establishment, when in 1960 it opened the first official special school for blind students, the Al-Noor Institute for Training and Education of the Blind, in Riyadh (Al-Mousa, 2004). An Iraqi expert in Arabic Braille trained the Saudi educators working within this special school. Two years later, the Ministry created the Administration for Special Needs Education (ASNE) (Al-Mousa, 2007), which sought to provide an official specialized education for Blind, Deaf and Learning Disabled (i.e. 55 to 75 IQ on the Wechsler scale, then called ‘mentally retarded’ or ‘cognitive delay’) students. In 1964, the Al-Amal Institute (amal means ‘hope’) was opened in Riyadh as the first special school with residential facilities for Deaf students, who were taught various lessons through the medium of ASL. Similar developments followed in other cities (Al-Mousa, 2004).

In 1971, the MoE upgraded the ASNE to a fully representative governmental body, the Directorate General of Special Education (DGSE), having separate divisions for each of three categories: Blind, Deaf and Learning Disabled. Its main tasks were training educators, launching new programmes, inspection, providing teaching equipment and materials, developing and modifying curriculums, educational supervision and improvement (Al-Mousa, 2004). The DGSE has undergone significant development over the last three decades and now has divisions covering developmental disabilities (including Autistic and Asperger’s students), learning difficulties and physical and multiple disabilities.

A total of five governmental bodies serve Saudi people with special needs: the DGSE provides educational services for all thirteen LEAs in the Kingdom through its specialized divisions; the General Presidency of Youth Welfare provides sports equipment and arranges competitions through the Saudi Union of Special Needs; the Ministry of Health offers physical and psychological rehabilitation programmes for SEN people; the Prince Sultan Centre for Artificial Limbs and Compensatory Equipment provides prostheses and special equipment for people with motor or physical disabilities; and the Ministry of Labour and Social Affairs runs a number of centres offering vocational training and rehabilitation to people with severe or/and profound special needs (Ministry of Education, 1978, cited in Al-Mousa, 2007).

The great majority of those with SEN in the UK have been educated in mainstream schools, so that while 20% are considered to have special needs, at its highest, in 1981, only 2% were in special schools (Norwich, 1999). The pattern has been different in SA, where SEN people were originally taught in mainstream schools, then provision was transferred largely to segregated schools (Al-Mousa, 2007) and it was not until 1996 that mainstreaming resumed and gained ground across the country. The next section gives an account of mainstreaming for SEN in the Kingdom.

2.5 Special Educational Needs and Mainstreaming in Saudi Arabia

2.5.1 Saudi SEN Policy

The existence for nearly fifty years of public special schools has marked a tendency to isolate SEN students in Saudi Arabia. However, there has recently been a significant change in terms of school settings and alternative support units, including resource rooms and speech therapy units, which is quite promising (Al-Mousa, 2007). According to DGSE documents, the strategic goal of its new policy is to provide all SEN students with specialized educational programmes wherever they live, so that they can fulfil their potential and be productive members of society. In 2000, the Ministries of Education, Health and Social affairs endorsed a regulation which ensured that no child would be left without appropriate care and education (Al-Mousa, 2007).

Al-Mousa (1999) describes the procedures by which the DGSE intended to achieve these strategic goals. First, he explains that in order for SEN students to be relocated to the

nearest mainstream schools, it is vital to identify them accurately. He also stresses the importance of fulfilling the potential of these students through the provision of all relevant educational aids (software, hearing aids, wheelchairs, teaching materials/equipment etc.). He then highlights the critical need for resource rooms in which quality services should provide medical, psychological, social and individualized educational plans in an SEN-friendly environment. Al-Mousa next addresses the crucial role of engaging SEN students in family assemblies to make the whole school community and parents aware of different kinds of disabilities and to prepare SEN students for real-life experiences. He also suggests a role for the DGSE as moderator of SEN research groups, conferences, seminars, workshops and events such as D/deaf Awareness Week and White Stick Day. This final role is quite important, because Saudi Arabia is a rich developing country that has significant potential and needs to apply more effort in promoting SEN and disability-related issues (Al-Mousa, 1999).

The DGSE expanded in 1994 to match the rapid increase in mainstream programmes launched within general education settings (Al-Mousa, 1999), from only two types of educational setting to five and from five administrations to ten. In this way, the DGSE diversified its role to include virtually all SEN and disabled students. It now has ten specialized divisions, covering Blindness, Deafness, Learning Disabled, Learning Difficulties, Autism and multiple disabilities, gifted and talented, development and educational studies, financial and administrative affairs, residential, and Braille Press and Audio Library (Al-Mousa, 1999). Currently, more than 90% of male and approximately 65% of female students with SEN in SA are integrated (although not inclusively) into various programmes within the framework of mainstream schools, mainly in the form of self-contained classrooms (Al-Mousa, 2005). Indeed, Saudi Arabia has played a prime role in the Arab world in promoting the significance of the integration of students with SEN into mainstream schools.

As noted in the previous section, the ASNE and its successor, the DGSE, began in the early 1960s to establish special residential schools (Al-Zahrani, 2005). In the mid-1990s, there was a major shift in the mode of perceiving special needs students and the ways in which they should receive their education. In 1996 there were only 67 programmes seeking to educate 9,424 students (Al-Mousa, 2005). By 2000, Saudi Arabia had 13,914

students dispersed into 226 programmes in a variety of settings, on a continuum from special schools with residential facilities or operating as day schools to mainstream schools with supporting provisions such as resource rooms, clinical psychologists and speech therapists (Al-Mousa, 2007). By 2001, the number had increased rapidly to 901 programmes and various types of schools had actively engaged in the mainstream movement (Al-Mousa, 2005).

The reasons for this swift rise were multiple. The media played a major role in this new trend through raising public awareness of diversity, inclusion and the right of SEN students to be mainstreamed. Moreover, there were increasing number of enthusiastic Saudi graduates of Saudi, American and British universities who believed strongly in inclusion. There was also a growing demand from parents to extend the role of special units from serving special needs students as originally defined to supporting and educating those with double or multiple disabilities, emotional and behavioural difficulties, autism, Asperger's syndrome, or combined motor and physical disabilities. Meanwhile, the number of mainstream programmes continued to grow sharply, reaching 2577 in late 2006 (Al-Mousa, 2010).

Apart from residential institutes and day schools, these mainstream programmes improved the quality of provision in three respects (Al-Mousa, 2010). The first was the launching of new educational services such as resource rooms, clinical psychology and speech therapy, consultants and itinerant teachers. Secondly, these newly implemented educational services sought to include more SEN students who were not served before 1996, such as those from remote, rural, suburban and coastal areas. Thirdly, the range of SEN students who were to receive educational services was widened to include such categories as autistic, motor, physical and multiple disabled, hard of hearing, gifted & talented, partially sighted, and behaviourally or emotionally disturbed students. In the case of D/deaf students, there has been a wide interest in the last two decades in transferring them from special to mainstream schools.

Hence, Saudi LEAs are attempting to expand their mainstreaming policy to reach all SEN students in every local authority area. The DGSE has a firm commitment to promoting the move towards more inclusive education, which makes SA one of the leading countries in the Arab world in this respect (Al-Mousa, 2007). There has been a shift away from the

traditional mode of teaching special needs students in special schools, towards their gradual integration into the mainstream school system with additional support units. Despite the relatively high percentage (88%) of mainstreamed students, however, there appears to have been no investigation of DHH students' attitudes to the current way of integrating them within mainstream schools or of their feelings concerning this major move into mainstream schools.

From 1996, as noted above, there was a substantial change in services and quality of special educational policy and practices in terms of adding further supporting units, a variety of integrated educational settings and procedures of educational supervision (Al-Mousa, 2005). One reason for this may have been the perceived need for change and improvement in teaching approaches from the oral method or finger spelling towards something more comprehensive such as the total communication and bilingual-bicultural approaches. Another may have been the consistent call from educators for better quality in-service training and professional development in order to improve their individual teaching skills: instead of attending a short basic training course in sign language, for example, they would have preferred to acquire a diploma in D/deaf education. A third possible reason would be the existence of a generation of newly graduated academics and professionals, qualified in SEN and inclusive education, who succeeded in putting some new pro-integration policies into practice when they were appointed to higher academic and educational positions within the MoE. A fourth reason for the Saudi transition to inclusive education is that students living in rural areas were in favour of this change because they would not need to leave their hometowns; instead, the specialized itinerant teacher would come to them to teach in their local environment (Al-Mousa, 2005).

DHH programmes employ special curricula suitable for each education grade. However, from 2005, the MoE started to teach DHH students in primary schools the same national curriculum as their hearing peers in mainstream settings, but with some additional visual illustrations (Al-Mousa, 2007). The DGSE (2008) reports a continued rapid growth in SEN provision in the 2007 academic year, when the number of institutes remained unchanged at 12, while the number of mainstream programmes increased to 267, the number of auditory training and speech therapy centres increased to 18 and the number of DHH students benefiting from these programmes increased to 4511, educated within

834 diverse classrooms (Al-Mousa, 2010). Figure 2.3 illustrates the hierarchy of academic integration alternatives offered to DHH students.

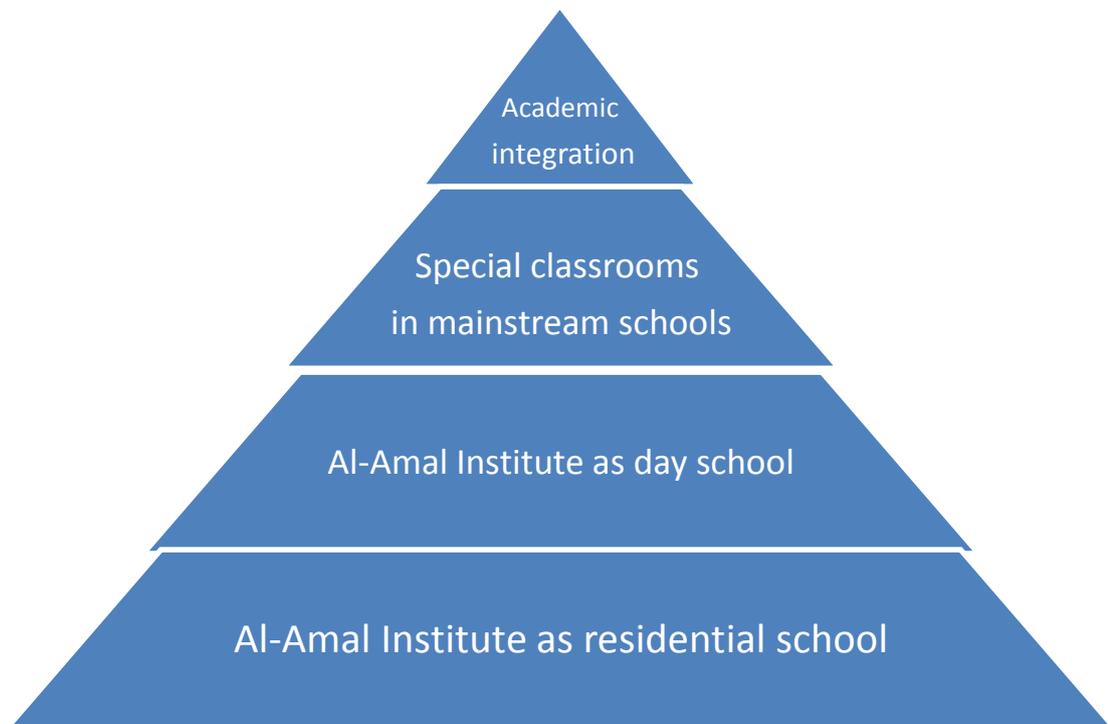


Figure 2.3 Hierarchy of academic integration alternatives for Saudi DHH students (Ahmed, 1990)

2.5.2 Current Provision for DHH Students in Saudi Arabia and Jeddah

This section describes the current situation of DHH education in Saudi Arabia and under the Jeddah LEA in particular, both in special schools (Al-Amal Institutes for the Deaf) and in mainstream and self-contained classrooms. It also reviews the literature concerning DHH students' school settings and the inclusion movement, ending with a summary of the current status of specialized training for educators of the D/deaf in SA.

Jeddah has three Al-Amal Institutes. The first of these special schools is for the severely (>70 dB loss) and profoundly (>95 dB loss) Deaf in the kindergarten and primary grades, the second for intermediate students and the third for secondary and vocational high school students. Beyond this level, it is highly unusual for Deaf school graduates to gain a place at any Saudi university. University administrations have blamed the pedagogy of Al-Amal Deaf institutes for having a limited vocational nature and not offering advanced scientific syllabuses which is relevant to the barriers to successful DHH inclusion.

According to the DGSE (2011) statistics for the Jeddah LEA, in 2008 there were 23 classrooms in the three Al-Amal Institutes 'special schools' (coded APSD1/Amal, APSD2/Amal, APSD3/Amal), serving 124 Deaf students. There are two major auditory training and SEN therapeutic centres serving 135 SEN students in Jeddah and afternoon classrooms for teaching three Deaf adults (older than 21 years) who are not allowed to study in the day school system (DGSE, 2005, cited in Al-Mousa, 2007). Jeddah also had seven DHH mainstreaming programmes with various self-contained classrooms (SCC) facilities and resource rooms within mainstream schools, comprising three programmes for Deaf inclusion with 15 individual classrooms serving 101 Deaf students and four programmes for HH inclusion with 22 SCCs serving 176 HH students who have partial hearing (25 dB to 70 dB hearing loss) and are taught mainly through oral methods (Table 2.2) (DGSE, 2011).

Nevertheless, the term 'inclusion' is not clearly defined in SA and there is a shortage of institutional legislation which addresses the benefits of social and academic inclusion. Therefore, it seems that Saudis have much to gain from researching and evaluating their policies and practices in order to make significant individual and system-level changes (Dyson, 1990). It is equally important to be critically aware of any unseen cultural or/and social differences when studying such a complex socially constructed phenomenon as inclusion. However, with respect to all the major changes in SEN provision discussed above, there are few signs of practical inclusive education, where D/deaf and hearing students regularly study in the same classroom at the same time.

Table 2.2 Distribution of DHH/deaf Self-Contained Classrooms in Jeddah LEA area

Programme's code	D/deafness type	Established	Number of Students	Number of Classes
APSD1/Amal	Deaf (profound)	1981	61	11
AISD2/Amal	Deaf (profound)	1991	29	6
ASSD3/Amal	Deaf (profound)	1994	34	6
SSC4/AMPS	deaf (mildly HH)	1997	53	6
SCC5/SAPS	Deaf (profound)	1999	44	6
SCC6/AAAPS	deaf (mildly HH)	2002	61	7
SSC7/AIS	Deaf (profound)	2000	14	4
SCC8/ASS	deaf (mildly HH)	2003	39	5
SCC9/IHSS	Deaf (profound)	2004	43	5
SCC10/RSS	deaf (mildly HH)	2006	23	4
		Total	401	60

Source: DGSE website (2010)

2.6 Transferring Teachers from General to Special Education

Until 2006, there were only two departments of SEN in Saudi Arabia responsible for training educators, so there was a great demand for certified teachers. The DGSE (2011) recently established ten criteria which any qualified general education teacher must meet in order to be transferred to teach DHH students, whether in special or mainstream school settings at any of the three educational stages:

- The teacher should have a bachelor degree in Maths, Arabic Language, Science or Kindergarten in addition to a higher diploma in SEN/DHH education to work at the primary stage;
- Teachers who wish to work at the intermediate or secondary stages should be specialized in Islamic Education, English Language and Computer Science in addition to the four majors;
- Teachers must study for at least a year and a half to obtain a higher diploma either in SEN or in Deaf education, with not less than 32 credits;
- Overseas qualifications have to be accredited and officially registered at the Ministry of Higher Education before the transfer process can commence;
- The LEA must agree upon the transfer from the beginning;
- Transfer from ordinary to special education should be restricted to highly demanded majors such as Maths and Science;
- Teachers have to pass written exams;
- Teachers have to pass a personal interview;
- Teachers must have a clear record and no convictions of any kind in the last three years;

- The first year will be a trial period in which the teacher's eligibility should be examined, and then a decision will be made either to carry on at SEN or go back to the original major.

For the purpose of the current study, six of these regulations are particularly relevant. First, teachers who want to transfer to primary stage special education must have a bachelor degree in one of four specialties: maths, science, Arabic language or kindergarten. Those wishing to be transferred to intermediate or secondary special education must, in addition to these four specialties, have a degree covering Islamic education, English language and computer science. Furthermore, candidates for transfer must have a special education diploma with at least 32 credits, which took them not less than a year of study. The next significant criterion is that there should be a demand in literacy, numeracy or other taught subjects to allow the teacher to be transferred. Candidates must also pass an SEN competence exam and a face-to-face personal interview. Finally, newly transferred teachers will be under assessment for the first year and the administrative committee will give a final decision on each case.

As to the conditions of employment, all SEN teachers at all thirteen LEAs receive a 30 percent bonus in addition to their main salary, which is a major theme that is discussed in detail during the second phase of the study. The policymakers at the MoE introduced this incentive to ensure that there would be enough experienced, motivated and highly qualified teachers to fulfil the SEN needs of all mainstream schools in the Kingdom.

2.7 Barriers to Change

There are many obstacles that would to some extent delay the successful implementation of DHH inclusion in Saudi schools. There are some headteachers who have worked in special schools for two or three decades and would not appreciate any major changes in the way these schools usually function. In addition, a comprehensive doctoral thesis by Avramidis (2001) identifies five major obstacles to the successful development of inclusive schooling. First, a mainstream school's location (which may be restricted to major towns) may make access difficult for remotely located SEN students. A shortage of material resources such as IT or hearing aids, a lack of differentiated teaching packages, a failure to provide individualized educational plans and the absence of interactive internet-based DHH material and software constitute another barrier. Next, the author notes that large class sizes may lead to insufficient tracking of each individual's

cognitive development. A fourth factor is inadequate or absent provision of additional professional human support and training, such as speech therapy specialists, clinical psychologists and assistant teachers. Finally, he reports a lack of the knowledge and skills necessary for successfully putting inclusive education into practice. In Saudi Arabia, there is thus a composite lack of DHH-skilled teachers, of training and of resources.

However, Avramidis (2001) urges caution when comparing different countries' experiences of integration/inclusion, noting that there are significant variations within and between countries in terms of their beliefs, philosophies, political/cultural systems, and educational policies and practices. He gives the example of some qualitative differences between the eastern and western states of the USA and argues that this type of qualitative difference is even more important when comparing countries on different continents. Educators' understanding may be influenced by various factors, such as personal beliefs, political ideologies, social background, economic status, educational merit, relevant teaching experience, cultural preferences and personality. It is not easy to ascertain the relative importance of these factors. There are some educators, particularly in the Arab world, who tend to be antagonistic towards inclusion and this may affect their decision to be involved in any inclusive education practice. From one point of view, they may justify their pessimistic stance by their weak training, which did not prepare them adequately to deal with students with SEN. For all of these reasons, change may not be easily accomplished. As Lunt and Norwich (1999, p. 77) point out, "Developing more 'inclusive' schools is not an easy task and the process might be more complex than theorizing and research in the field had originally assumed".

On the other hand, the issue of DHH inclusion can be seen as a problem of technology. If D/deafness is not seen as a deficit/disorder (which suggests a technological change) but rather as a cultural issue that is mostly related to the idea of a 'linguistic minority', then change is not solely an issue of technology. If this is the case, then what is to be changed? This underlines the importance of investigating various problematic concepts such as attitudes in relation to DHH inclusion, which is the central focus of this thesis.

2.8 Chapter Summary

This chapter has examined key aspects of the context in which the present study was carried out, including an overview of the Saudi education system, terminology related to D/deafness, disability and integration, DHH communication modes, special school settings, a history of special education in Saudi Arabia, SEN and the mainstreaming movement in SA, SEN children in general, the current provision for DHH students by the Jeddah LEA, the criteria for teachers to transfer from general to special education in SA, barriers to the successful inclusion of DHH education.

CHAPTER THREE

Literature Review

3 Literature Review

3.1 Introduction

The literature review for this study of DHH inclusion is based on a search of all relevant papers on attitudes to SEN and DHH inclusion from online electronic journals and databases such as EBSCO EJS, Education Research Complete, the American Annals of the Deaf and ERIC Plus Text. A large number of studies have researched educators' attitudes towards integration/inclusion, while others have explored factors that influence educators' beliefs and attitudes towards inclusion. This chapter reviews these studies and examines some issues regarding definitions of D/deafness and its impact on various aspects of development, such as language, social and behavioural factors, emotional and cognitive development, and academic attainment. Having considered definitions and understandings of D/deafness, it covers international studies of integration and inclusion in general, followed by those conducted in the Middle East. There is then an account of some factors influencing educators' attitudes and the success of DHH inclusion, reflections on some of these studies, consideration of the limitations of the reviewed literature, a summary of this literature review and finally a statement of the research aims.

3.2 Definitions and Understandings of D/deafness

There is a binary medical classification of D/deafness into pre-lingual, which occurs before the acquisition of a mother tongue, including D/deafness acquired between birth and three years of age, and post-lingual, which occurs after language acquisition. It is also important here to draw a second binary distinction, between Deaf and deaf/hard-of-hearing students. The former term is associated with the social interpretation of Deaf people as a linguistic cultural minority who consider sign language their first means of communication. This minority demands that other people accept them as a separate community with a different language. In contrast, the latter term is associated with a medical model in which communication is through spoken language, benefiting from residual hearing as the dominant means of academic and social integration (Skelton and Valentine, 2003). It is sometimes defined by reference to those who have lost their ability

to hear at a later stage in life (Senghas and Monaghan, 2002). There are some educators who make a clear-cut distinction between Deafness and hearing impairment, while other educators usually use these terms interchangeably to include both Deaf and partially deaf people. Thus, there is an overlap between the implications of these terminologies, which demonstrates how complex and multidimensional the underlying concepts are (ibid). However, the degree of hearing loss is a very important feature in the selection of communication mode and educational placement. Those with profound hearing loss for whom signing is the option are related to the linguistic-cultural minority model (Marschark et al., 2007).

The current study focuses on two major terms, 'D/deafness' and 'inclusion', with the associated terms 'DHH', 'mainstreaming' and 'integration'. It is widely accepted in D/deaf education that the capitalized term 'Deaf' refers to those whose first method of communication is a sign language (e.g. British or Arabic Sign Language). It is well known that BSL has its own syntax and grammatical system, which is entirely different in structure from the written or spoken forms of English (Sutton-Spence and Woll, 1999). BSL therefore has unique and independent characteristics which make it as distinctive, rich and complex as any other language in the world (Brien, 1992). Members of the Deaf community, therefore, would like to be seen as 'normal' people and not as 'disabled'. They believe strongly that they fit into a minority language community, according to the cultural model. They conceptualize Deafness as being different in its choice of communication preference, which in any case varies in the modern world: some people are more visually oriented, while others prefer audio stimulus; some are sensory and others may be tactile. The Deaf are those born with Deafness or who acquired it at an early stage and prefer to use a signing system as a cultural and linguistic means of communication. They have independent communities, clubs, societies, friends and websites to create a unique culture apart from the hearing world. Deaf signing students with higher levels of BSL or ASL skills have been found to have better literacy skills than those with lower levels of BSL or ASL skills (Padden and Ramsey, 2000; Strong and Prinz, 1997), including those who have cochlear implants (CI) (Spencer, Gantz and Knutson, 2004).

Ladd (2003: xviii) characterises the above distinctions in these terms:

“The lowercase ‘deaf’ refers to those for whom deafness is primarily an audio-logical experience. It is mainly used to describe those who lost some or all of their hearing in early or later life, and who do not usually wish to have contact with signing Deaf communities, preferring to try and retain their membership of the majority society in which they were socialised. ‘Deaf’ refers to those both born Deaf or deafened in early (sometimes late) childhood, for whom the sign languages, communications and cultures of the Deaf collective represents their primary experience and allegiance, many of whom perceive their experience as essentially akin to other language minorities.”

Thornton and Ramphela alternatively characterize the Deaf community as a heterogeneous one comprising proponents of sign language use by Deaf people and others (the hard of hearing) who make use of the oral approach. They have one objective, however: to be recognized and respected as a positive group who hold responsibilities towards one another (Thornton and Ramphela, 1988). There are other contributors to the debate who are not convinced by the cultural argument of the social model and believe that hearing impairment is a type of deficit which needs early intervention by means of technologies such as hearing aids and cochlear implants:

To use a cultural definition is not only to assert a new frame of reference, but to consciously reject an older one... But the cultural definition continues to perplex many. If Deaf people are indeed a cultural group, why then don't they seem more like the Pennan of the island of Borneo, or the Huichol of Mexico? (Padden, 1996: 89).

From another perspective, the American National Centre for Law and Deafness (1996, cited by Al-Zahrani, 2005: 7), conceptualizes Deafness as “a severe hearing loss that limits the child's ability to process linguistic information through hearing, with or without amplification, and that adversely affects educational performance”. This could be considered a ‘medical model’ of perceiving D/deafness which proposes that ‘hearing impairment’ can only be measured against normal or standard hearing levels (Davis, 1997a; b; Lane, 1995; Parr and Butler, 1999; Shakespeare, 1993; Skelton and Valentine, 2003). The medical perspective of D/deafness sees it as crucial to sustain many different types of educational provision for DHH students by means of additional support services. This model of understanding D/deafness could be justified as beneficial for educational psychologists, speech and language therapists, resource rooms, consultant teachers, assistant teachers, itinerant teachers, phonological or speech therapy specialists, special

education teachers and psychometric assessment specialists for the purpose of assessing hearing threshold and then deciding which educational setting is the most appropriate for each type of DHH individual. The philosophical positioning of Saudi educational policymakers would appear to fall within the medical framework of D/deafness interpretation.

In contrast, the social representation of D/deafness rationalises its argument by pointing out that the problem is not internal to the person as such but rather external, in the hearing world's exclusion of the D/deaf, lack of awareness, and negative attitudes (Lane, 1995). The proponents of this discourse do not see D/deafness as a deficit at all, rejecting the medical interpretation of Deafness as a disability requiring a cure. Instead, it calls for acceptance, empowerment and respect (Corbett and Norwich, 1997).

Skelton and Valentine (2003) conducted a qualitative research study using interviews to elicit the views of twenty D/deaf people to social inclusion in different situations. The researchers asked participants about their views of disability, identity and D/deaf culture and found that clarifying their views about their identity was a central issue for them. Those who saw themselves as Deaf people consistently preferred to be seen as members of a language minority and to communicate solely through sign language (socio-cultural/educational model). These participants usually had Deaf parents and/or had lost their hearing completely before acquiring spoken language. They perceived themselves as different but not disabled, based on the principle of individual differences. In contrast, those who saw themselves as deaf considered themselves to be hard of hearing (medical model), perceiving their deafness as a deficit in their hearing ability which caused a disability, i.e. an inability to hear spoken language normally. They generally wished to be able to hear (either with the help of hearing aids or cochlear implants), to speak to, live with and be understood straightforwardly by the wider hearing community. Even when they could sign perfectly well, they tended to use spoken language as their first mode of communication and instruction. They had usually been brought up in an oral/hearing family and/or had lost part of their hearing ability after acquiring language, usually after the age of three years.

In an earlier analysis of DHH/deaf children's different models of identity and education, Charrow and Wilbur (1975) presented the two traditional categories: the medical model,

associated with hearing aids and cochlear implants, and the social model, associated with a linguistic minority using sign language. However, more recent analyses have questioned the two-model assumption. Devlieger (2005) conducted an analysis and concluded that there were more than two models, the medical and the social, for constructing and envisaging disability as a social ontology or 'disability dialectic'. The cultural model of disability differs from both the medical and social models, in that it is based on a cultural and religious purpose of knowledge, views and practices in a society. Devlieger argues that a moral/religious model should also be considered alongside the social model in the disability debate, as it is underpinned by cultural relativity rather than objective, scientifically-laden knowledge. Distinct from the other two models, the cultural/religious one emphasises the interlinking of different modes of thought on disability based on specific contexts, situations, relationships and circumstances. For Devlieger (2005), vital issues related to disability such as stigmatization, lack of access, new communication technologies, human rights, politically correct language, symbolic reflection and globalized worldview all interact to produce people's understanding of disability as it shifts from one model to another. He adds that these multiple layers of disability perceived as an identity work successively through the individual, social, community and cultural levels. This tolerance of wide-ranging understandings of disability carries inherent challenges. Devlieger (2005) argues that being tolerant should not mean being uncritical. He suggests that it speaks to inclusive modes of thought that endorse the complexity of disability as an existential, technical and social phenomenon, defined and reflected by culture.

It is worth noting that DHH/deaf students have diverse characteristics and that their families have different preferred means of communication. The diversity of people who are D/deaf has been discussed by Marschark (2007), who asserts that there are more differences in learning styles among D/deaf students than hearing ones. He relates these differences to initial childhood developmental experience in terms of language acquisition and of social, emotional and cognitive growth. Profoundly Deaf students who lost their hearing pre-lingually and were brought up by Deaf parents, in an environment where sign language was dominant, will tend to rely solely on signing for communication, whereas deaf or hard-of-hearing students, even though they have Deaf parents from whom they have learned to sign at home, might gradually develop some form of spoken language

at school. A third group of Deaf students who were born to hearing parents and raised in a home where spoken language was dominant might find that these conflicting sets of language systems cause some confusion. They may be faced with a serious dilemma when taught by oral methods at home and by signs at special school, in mainstream classrooms or at a Deaf club (Mitchell and Karchmer, 2004, cited in Marschark, 2007). However, there is evidence that the group of Deaf students born to Deaf parents have a tendency to achieve academically less well than their hearing peers in mainstream school settings (Powers, 2003; Zweibel and Allen, 1988, cited in Marschark, 2007). Therefore, Marschark believes that Deaf special schools should remain as one option among other educational school settings, which could boost attainment and close this gap.

It seems odd, however, that two children with identical hearing losses might be differentially identified as “deaf” and “hard of hearing” solely because of the emphasis their parents have placed on sign language or spoken language, respectively. Similarly, two people may have comparable hearing losses, but one may have excellent lipreading skills while the other does not. The former may thus appear to be hard of hearing, but the difference between the two is unrelated to hearing per se (Marschark, 2007: 35).

3.3 Studies and Definitions of Integration and Inclusion

The most convincing rationale for inclusive education is based on the fundamental human right to educational provision for all. The human rights movement resulted in the imperative to value and treat everyone equally (National Council for Special Education [NCSE], 2010). Education is a fundamental human right as prescribed in the Universal Declaration of Human Rights (United Nations, 1948) and SEN children have a right to equal opportunities in mainstream education under the United Nations Convention on the Rights of the Child (United Nations, 1989, cited in Winter and O’Raw, 2010). One central point of inclusion is the principle that students with special needs belong in mainstream education. The fundamental principle of an inclusive school is that all students should learn together, regardless of any difficulties. The basic meaning of ‘inclusive school’ is one that accommodates the needs of all students and appreciates diversity as a way to develop their learning (Winter and O’Raw, 2010).

This section first examines mainstreaming and then the inclusion movement and its literature. As with any other recently implemented educational initiative, inclusion has its proponents and opponents. I will examine these policies below after discussing further some wider concepts related to inclusion. Since 1960, various terms have been used to describe inclusion as an educational concept, such as ‘normalization’, ‘least restrictive environment’, ‘mainstreaming’, ‘inclusive education’, ‘integration’ and more recently, ‘full inclusion’. In order to illustrate the complexity of these concepts, various definitions of integration are shown in Table 3.1, after which the distinction between integration and inclusion is considered.

Table 3.1 Definitions of integration

Authors	Date	Definition
Sarason and Doris	1979	Integration means equal access to education for disabled as well as non-disabled students.
Fish	1985	A process which requires continued and planned interaction with contemporaries and freedom to associate in different groups.
Rispens	1994	Every aspect of integration—definition, motives, aims and levels—shows a large diversity in practice. This diversity makes it difficult to draw overall conclusions and build up a comprehensive understanding of integration.

Source: Adapted from Avramidis (2001)

Foreman (2001) and Ashman and Elkins (2002) describe integration as referring to a student’s attendance at a less segregated setting than a special school, such as either a mainstream class or a special education class in a mainstream school. This refers to the broad understanding and interpretation of integration first presented in the Warnock report (1978), as there were three types of integration: a) locational integration, where SEN students are educated at the same schools as all other students but in separate special units or classrooms; b) social integration, where regular social interaction takes place during breaks, extracurricular activities, playtime, family assembly and after-school clubs, but SEN students are educated separately; and c) functional integration, where SEN students participate in mainstream classes and follow the same national curriculum (Garner, 2009).

However, Fish (1985) voices an early emerging concern that integration must be conceptualized as a dynamic process, rather than as a simple static matter of school placement or equal right of access to general education. In terms of Warnock’s categorizations, locational proximity is a necessary but insufficient starting point, because

the placement of students together for some time in the same classroom, dining area or playground is not in itself enough to promote social or functional integration. Similarly, SEN students who are educated in a separate special classroom in a mainstream school may have limited opportunities. Another criticism of Warnock's hierarchical view of integration is that it has become apparent that social and functional integration must be seen as interrelated. That is, if SEN students are to develop active and constant relationships with their peers, this is likely to require their engagement together in planned collaborative learning activities (Beveridge, 1999).

This thesis uses 'mainstream' to refer to schools and classes which are not 'special' or 'SEN', i.e. which are not intended to cater specifically for students with special needs. As a verb, 'mainstreaming' refers to being enrolled in and participating in a mainstream school. Mainstreamed students may or may not be 'included'. Inclusion is often described as the outcome of a process whereby schools attempt to enhance a sense of social and academic participation (Cooper and Jacobs, 2011), achievement and belonging (Norwich: NALDIC Conference, 2011), and to provide for the personal, social and learning needs of all their students (Ainscow, 2005). In the context of education in England, Powers (1996: 37) declares that "inclusion is an attitude not a place", that students can be "integrated" without being "included" and that inclusion should "extend the scope" of the mainstream school.

Integration implies, at the level of physical or locational proximity at least, the concept of accessibility to mainstream schooling in the least restrictive environment, but not necessarily full academic and social participation and engagement of DHH students all day long in the same classrooms as their hearing peers. Integration partially can be seen as implying that the pupil has to be prepared to be an active member of a mainstream school. In contrast, inclusion entails the diversification of the school's ecology and resources (Avramidis, 2001), to enable participate in the culture, curricula and communities of local schools (Inclusion Index, Booth et al., 2000), and thereby to accommodate students with various special needs. DHH students need to be fully included to participate in all academic, social and school activity, rather than simply moved from one school called 'special' into another called 'mainstream' (Barton, 1992).

The medical perspective of D/deafness sees it as crucial to sustain many different types of educational provision for DHH students and additional support services (e.g. educational psychologists, resource rooms, consultant teachers, assistant teachers, itinerant teachers, phonological or speech therapy specialists and special education teachers). However, it could be argued that providing schools with all the necessary additional support does not mean putting barriers in the way of expanding and generalizing mainstreaming policy or practice, nor does it mean that all additional support services must be provided together in each mainstream school. Instead, it could be proposed that certified teachers in sign language be provided for Deaf students who communicate via sign language with textbooks illustrated by alphabetic and cued signs.

Inclusion necessitates special training for mainstream teachers, which should not be solely information-based but should emphasize the importance of values and attitudes, and should provide opportunities for all trainees to work directly with special needs students (Ellis and Tod, 2006). Thus, in order to include hard-of-hearing students, mainstream schools need to employ hearing teachers who are highly qualified in sign language and DHH education and willing to utilize their students' residual hearing by various means such as individual training in speech and language, vocabulary expansion, making use of hearing aids and/or cochlear implants, and individual education plans (IEPs). This would allow for fostering active social engagement through effective communication between hard of hearing students and their peers. This suggestion is supported by Moore's (1999) argument about the potential new roles of special schools in the inclusion movement. He argues that greater inclusion calls for a radical change in the role of the special school, making them part of a wider service structure, offering core activities for a much smaller group of students. He then considers the English example of Kent County Council, a local education authority whose strategy envisages that this will happen through 'service co-ordination', whereby the head of a special school, a special service or a mainstream school will be paid by the local authority to integrate services actively at the local level, working with mainstream schools so that the schools determine the nature of support for the whole group or cluster. Consequently, special schools will need to realise that they cannot simply import their methods, however tried and tested, into a mainstream setting. Their role will be one of supporting and enabling mainstream teachers to find solutions to problems that are context specific. This implies that the role

of special schools should be continued as a parallel system, flexibly extended, improved and diversified in order to remain active.

In an alternative conceptualization, Bricker (1978) identifies three levels of integration, the first being the ethical/social model, which emphasises the equal human right of all special needs students to be educated at mainstream schools. Secondly, the political/legislative model of integration recognises the importance of policy/legislative change to ensure that access to mainstream education is guaranteed for special needs students. This way of understanding integration was represented in the American Right of Education for All Handicapped Children Act (Public Law 94-142, 1975) and its equivalents in the UK, the Warnock Report (1978) and the Code of Practice for Individuals and the Assessment of Children with SEN (DFEE, 1994). Finally, the psycho-educational model of integration recognises the developmental need of children to learn in integrative settings with their counterparts of the same chronological age in order to accomplish the same academic objectives. In other words, it is a model driven by academic achievement (Avramidis, 2001). All of this suggests that integration is complicated, as some have argued that it means fitting students with special needs into mainstream schools or classrooms, with or without prior planning. Some others argue that integration means different things in different contexts for different practitioners. Avramidis (2001) states that lack of agreement, vagueness and impreciseness are evident in Public Law 94-142, which lacks precision as to what mainstreaming implies at a procedural level and as to the functional definition of the least restrictive environment. He concludes that this imprecision has two negative effects: uncertainty at the practical level and a failure to recognise what students with special needs really need. Thus, "...it sometimes seems that our desire to appear to be pursuing integration is impelled more by a desire to appear ideologically sound than to provide what the children really need" (ibid: 26).

Full or "progressive" inclusion refers to the evolution of services to those with various special educational needs (Reynolds, 1989). It is more advanced in that it enables all D/deaf students to access the national curriculum in their local schools where possible. It engages them equally and thoroughly in a whole-school approach which includes full participation in all activities, such as outdoor trips, school clubs and family assemblies. It

gives them value and respect with a common sense of belonging. Inclusion spreads the ethical values of belonging and mutual respect between students with and without special needs in mainstream schools. If we perceive DHH students as a linguistic minority, then inclusion becomes an issue of acceptance. This means that acceptance of diversity plays an important role in the ethos of mainstream schools, promoting the virtue of embracing individual differences and recognising that we all differ in one way or another. However, inclusion cannot be achieved simply by locating D/deaf students within the same chronological age group while subjecting them to rigid teaching strategies or special curricula (SENCo Forum, 2004). Instead, it can be achieved through the encouragement of awareness and acceptance of students' diversity and the application of more inclusive practices.

In order to understand the multifaceted and complex nature of inclusion, Table 3.2 lists various definitions of the term, which can be seen to have both common features and differences. The common features of inclusion, albeit with different wordings, are: 1) accommodating diversity, 2) being welcomed, 3) being accepted and valued, 4) academic participation, 5) social belonging, 6) meaningful curriculum with necessary support, 7) effective strategies for all, and 8) access to local schools for all. These eight features are embedded among these definitions in different forms, which indicates their importance and the complexity of the concept. There are three features that are unique among these definitions: 1) school effectiveness in establishing cohesion (UNESCO, 1994; Polloway, Patton and Dowdy, 2001), 2) Ballard's (1995) emphasis on organisational arrangements that deliver a curriculum for all students, and 3) O'Brien's (2001) insistence on 'learning there' over merely 'being there'.

Table 3.2 Definitions of Inclusion

Authors	Date	Definition
Forest and Pearpoint	1992	Being with one another...how we deal with diversity, how we deal with difference.
Uditsky	1993	A set of principles which ensures that the student with a disability is viewed as a <u>valued</u> and needed member of the school community in every respect.
UNESCO: Salamanca Declaration	1994	Inclusive schools are the most effective at building solidarity between children with special needs and their peers.
Clark et al.	1995	Inclusion can be understood as a move towards extending the scope of mainstream schools so they can include a <u>greater diversity</u> of children.
Ballard	1995	Inclusive schools deliver a curriculum to students through organisational arrangements that are different from those used in schools that exclude some students from their mainstream classrooms.
Rouse and Florian	1996	Inclusive schools are diverse problem-solving organisations with a common mission that emphasises <u>learning for all students</u> .
Hall	1996	Being a full member of an age-appropriate class in your local school doing the same lessons as the others with the others, and it mattering if you are not there. Also you have friends who spend time with you outside school/college, while others who care for you work hard to ensure that you are fully included in the mainstream of community life and use generic services along with other citizens.
Sebba	1996	Inclusion describes the process by which a school attempts to <u>respond to all students</u> as individuals by reconsidering its curricular organisation and provision.
Potts	1997	Increasing <u>participation</u> and decreasing exclusion from mainstream social settings.
Thomas	1997	An inclusive school is one which is accepting of all students.
Barton	1998	Inclusive education is about the participation of all children and young people and the removal of all forms of exclusionary practice. Inclusive education is thus about responding to diversity, it is about listening to unfamiliar voices, being open and empowering all members. It is about learning to live with one another.
Bailey	1998	Inclusion refers to being in a mainstream school with other students, following the same curriculum at the same time, in the same classroom, with the full acceptance of all, and in a way which makes the student feel no different from other students.
Corbett and Slee	1999	Proceeds from larger political, as opposed to technical questions about the nature of society and the status afforded to people in varying forms and structures of social organization. As a political movement in the first instance, inclusion is about establishing access for all people. It is not conditional, nor does it speak about partial inclusion.
Wade	1999	Securing appropriate opportunities for learning, assessment and qualifications to enable the full and effective participation of all students in the process of learning.
Ballard	1999	What we refer to as inclusion is, and should be, derived from mainstream approaches to instruction and school organization, creating an alternative to special education knowledge and practices.
O'Brien	2001	Inclusive schools must offer more than inclusive placement (being there) and focus upon the provision of inclusive learning: "learning there".

Farrell	2004	The extent to which a school or community welcomes students as full members of the group and <u>values</u> them for the contribution they make. This implies that for inclusion to be seen to be “effective” all students must actively <u>belong</u> to, be <u>welcomed</u> by and <u>participate</u> in a mainstream school and community—that is, they should be fully included.
Polloway, Patton and Dowdy	2004	Becoming part of the general education classroom, receiving a meaningful curriculum with necessary support and being taught with effective strategies.

Source: Adapted from Tilstone, Florian and Rose (1998)

Powers (2002) discusses the complexity of reaching an agreement on the inclusion concept, identifying some factors that would prevent such a consensus in terms of three levels. The first level of difficulty is the confusion among educationalist over terms such as ‘mainstreaming’, ‘integration’, ‘inclusivity’, ‘full inclusion’ and ‘least restrictive environment’ (Dyson and Millward, 2000; Norwich, 2000). The second is confusion in setting a clear-cut differentiation between mainstreaming, integration and inclusion, with their various connotations, which can lead to an overlap in terms of policy, regulation and practice (Thomas, Walker and Webb, 1998). The third level of confusion arises from asking what inclusion exactly stands for. These terms are widely used in various countries outside the UK and have different meanings depending on different contexts (Dyson and Millward, 2000). In conclusion, some clarification of the terms ‘integration’, ‘mainstreaming’ and ‘inclusion’ is required, as they are used differently in various disciplines and socio-cultural contexts, by different researchers, reviewers and education authorities (Antia, Stinson and Gaustad, 2002; Powers, 2002; Hyde et al., 2004). Various schools of thought in the UK in recent years have defined inclusion as a psychological, sociological or educational construct (Corbett, and Norwich, 1997). These different disciplines have complex and multi-dimensional understanding of integration and inclusion, of how they differ qualitatively and what makes a school more inclusive. Each of these theories has proponents who may advocate variously positivist, interpretive, pragmatic or critical approaches.

Responses to the Warnock Report (1978) and to a more recent pamphlet by Warnock (2005) reflect diverse and conflicting policy and political stances on inclusion. Norwich (2007) offers a critical review of Warnock’s (2005) proposal that inclusion should mean all engaged in learning, but not necessarily under the same roof (Terzi, Warnock and Norwich, 2010). In the original report, Warnock (1978) recommended abolishing constitutional categories of disabled students; instead, students who required special

educational provision should be identified on the basis of a detailed profile of their needs following assessment. But Norwich (2007) argues that this proposal simply replaced a set of disability-specific categories with a more general category. It could also be criticised as focusing on the individual needs of students in pedagogical terms, rather than on participation and membership of a category (Elshabrawy, 2010). In addition, Warnock (1978) conceived of SEN as lying on a continuum with ordinary needs and proposed that provision too should be on a continuum. Norwich (2007) asserts that the Warnock Report and the legislative framework established in 1981 recognized the continuing requirement for some separate provision in the form of special units or special schools. Thus, the 2005 pamphlet did not mark as radical a change in Mary Warnock's position as some commentators had argued. Norwich (2007) interprets it rather as representing Warnock's concern with the 'balance' between special and mainstream school placements for students with significant special educational needs.

Norwich (2007) lists three different positions in relation to the pamphlet: a) special schools to increase slightly (Mary Warnock's position), b) special schools to reduce as mainstream becomes more accommodating (Colin Low's position), and c) special schools to close in the foreseeable future (Mark Vaughn's position). This suggests three alternative versions of special and mainstream education provision. However, in evidence to a House of Commons Select Committee Inquiry (2006), the UK government stated that it had no policy to close special schools, which it saw as having "an important continuing role to play", and that its position was flexible: "Government policy is to promote a continuum of provision". The Ofsted report (2006) also supported this notion of flexibility in educational provision: "...mainstream schools with additionally resourced provision were particularly successful in achieving high outcomes...". The Select Committee's response was that more consistency was needed between this 'flexible continuum' position and previous guidance and approaches. In addition, the Committee advocated a system of provision where there is a "specialist, broad range of high quality, well resourced, flexible mainstream provision to meet the needs of all children, advanced skills for some teachers at all schools, and specialist skills in some schools" (section 171). Following the lead of the Audit Commission (2002) and Ofsted (2004), as well as Warnock (2005), the Select Committee (2006) concluded that there were "serious flaws"

in the SEN system, leading it to call for national strategic direction and for a “major public review of SEN policy”.

Warnock’s (1978) recommendation that students with SEN should be integrated wherever possible is reflected in the UK in the 1981 Education Act, while the concept and value of inclusion are tackled in more depth by Warnock (2005). The Warnock Report (1978) led to a commitment to a continuum of special educational provision for all children with SEN in Britain. The report identified integration as “the central contemporary issue in special education”. It shifted the focus from separate or alternative provision to provision that was additional or supplementary to that normally available in mainstream schools. Since the implementation of the 1981 Education Act in April 1983 there has been a trend towards the greater use of mainstream placement (Frederickson and Cline, 2002), but Terzi et al. (2010) argue that there are aspects of the later pamphlet (Warnock, 2005) for and against inclusion. The inclusion-exclusion continuum can also be understood in resource allocation terms, where physically at least, disabled students are not segregated. However, physical or locational integration does not always serve all disabled students’ social and emotional developmental needs. This can be seen to reflect the contradictory aims to educate all learners as the same and as different.

Warnock (2005) responds to these tensions regarding commonality and difference by dismissing them as ‘confusion’. Thus, Norwich (2007) reflects that her argument for more special schools is strengthened by the fact that some SEN students are bullied in ordinary schools. In this regard, Humphrey (2008) indicates that disabled pupils make easy targets for bullies and that teachers sometimes consider them relatively difficult to teach. The prevalence of bullying indicates that these children, while often physically included, are very likely to be emotionally excluded (Terzi et al., 2010). Dyson et al. (2004) also argue that more inclusion is not associated with increased attainment for nondisabled students, something that is sometimes argued in support of inclusive education. Therefore, Terzi et al. (2010) assert that the problem in inclusive education is not one of categorization, i.e. a failure to differentiate between educational needs, but of not having a dynamic education system for developing a range of appropriate fixable provision that matches a clearly specified inclusive framework.

In the UK, the 1981 Education Act, premised on the Warnock Report (1978), established the right of children with SEN to mainstream educational provision. The Act recognized the constitutional right of children with SEN to receive free public education, and the ability of their parents, through specific review procedures, to request the allocation of appropriate resources for each child (Elshabrawy, 2010). The Code of Practice for the Identification and Assessment of Children with Special Educational Needs (DfE, 1994) states that all children should have access to a “broad and balanced education” including the national curriculum. The UK government was interested to discover whether the presence of SEN students in mainstream secondary schools had a significant negative impact on the academic performance of all students (Terzi et al., 2010). A survey of all English secondary schools found a very small negative relationship, such that higher levels of inclusion were related to slightly lower levels of attainment. Its authors concluded that this small negative relationship was of marginal educational significance, because of confounding factors in the analysis (ibid).

Norwich (2007) also states that in arguing for inclusion as a process of valuing active participation in a general educational arena and not under the same roof, Warnock represents this educational project more in terms of academic and individual performance than of social outcomes. The common educational enterprise can also be interpreted as including the social learning that comes from such direct participation. Additionally, Norwich argues that being ‘under the same roof’ may be one requirement for those with special needs to learn to be active participants in the wider society. It may also be beneficial in helping those without special needs to learn to respect, value, tolerate and appreciate the contribution of those with disabilities. Inclusion, according to Norwich (2007), is about much more than the type of school that children attend; it is about the quality of their positive experience, how they are helped to learn achieve and participate actively within the mainstream school’s life. Jordan (2008) argues that this requires greater flexibility and diversity in provision, where specialization has a key role in making inclusion work. As such, specialist schools should engage in research and training in collaboration with mainstream schools.

Warnock (2005) refers to special schools taking on new roles such as supporting mainstream schools in SEN provision and IT training courses, providing extra facilities

to practitioners and others, who would come to these schools. For Norwich (2007), these new arrangements appear to be the obvious way to connect the common educational enterprise concept of inclusion with the ‘under the same roof’ concept of inclusion, whereas Warnock (2005) wishes to keep them apart. She revisits her position that one of the flaws of the educational system is the size of schools, suggesting that the “single most effective way to improve educational provision” for children who are “fragile” and have “learning disabilities” is to teach them in small maintained schools. Alternatively, Norwich (2007) proposes that mainstream secondary schools might be reformed to become smaller, closer to the size of primary schools, and that parents could choose this kind of smaller school. Preference might be given to parents of SEN children, but registering at these schools would be open to all children. This flexibility in mainstream provision might be more appropriate for all students.

Warnock (2005) states that the original idea of special educational needs implied that some disabled students were different or exceptional in being ‘vulnerable’. In response, Norwich (2007) argues that while inclusion can be defined in terms of participating in the common enterprise of learning, it could also be defined in terms of participating in local common schools. Although there may be tensions between learner-centredness and full-time participation in common classrooms for some children with learning difficulties, it is possible to connect these concepts of inclusion through new hybrid types of provision (ibid). What is important, Norwich argues, is what is meant by ‘learn in the same environment’. The ‘same environment’ might not be full time ‘under the same roof’, but that clearly depends on exactly what is meant by ‘same’. Similarly, there is no simple split between focusing on differences or on similarities. Focusing on similarities would sometimes benefit the inclusive education project, while focusing on differences would be more beneficial at other times (ibid).

In conclusion, this continuing argument demonstrates that inclusion remains a generalized and disputable educational and philosophical concept that is open to ongoing interpretation by practitioners from various disciplines. Educators, administrators, psychologists, and other researchers continue to engage in debating inclusion and the term appears to mean different things (Avramidis, 2001) to different people with differing interests, in how it is deconstructed, constructed and interpreted (Elshabrawy, 2010). In

spite of the absence of political and conceptual harmony, most conceptualizations discussed above reflect common themes. Some conceptualizations focus on practical issues at the school and pedagogical level, while others concentrate on the philosophical foundations of inclusion (ibid).

3.4 Impact of D/deafness

There is no doubt that the extent of hearing ability has a direct impact upon all aspects of the development of Deaf and hard-of-hearing children, extending to the linguistic, social, emotional, cognitive and academic spheres. The nature of this impact will depend, amongst other factors, on their family's hearing status, its dominant means of communication, when deafness occurred, which part of the hearing function is impaired, what type of support they have received and when. There follows a brief review of the literature to illustrate the varying impact of deafness upon these aspects of development.

3.4.1 The impact of D/deafness on language development

Language can be said to have two major components, spoken and written, which interact and correlate, with the spoken form being the weaker skill among Deaf and hard-of-hearing students (Hallahan and Kuffman, 1992). Language plays a crucial role in socialization, either spoken for hearing students or through cued signs for DHH students (Magnuson, 2000). Cued signs for DHH people were developed by Orin Cornett (1967), who introduced manual signals differing in hand shape and in the location of production, which would deliver information normally available from seeing lip shape and movement. Cued signing is thus essentially a visual representation of the phonemes of spoken language, which uses eight hand shapes in four different locations in combination with the natural mouth movements of speech to represent all the distinct sounds of spoken language. It aims to provide DHH students access to the phonology of spoken language and thus to improve the acquisition of literacy skills (Spencer and Marschark, 2010). Hard-of-hearing people represent a larger group than Deaf people and have a delay in verbal development because they partially lack oral inputs; while this delay may be trivial, it becomes more apparent with severe and profound hearing loss (Marschark, 2007). Overall, reading ability among DHH students is persistently low and they have a constantly lower level of reading achievement than hearing students of the same

chronological age (Luckner, Sebald, Cooney, Young and Muir, 2005; Powers, Gregory and Thoutenhoofd, 1998; Swanwick and Watson, 2005).

However, studies that have compared the language development of Deaf students born to Deaf parents show that their rate of sign language learning/acquisition is comparable to the word learning of hearing students born to hearing parents (Andrews et al, 2004). Another study, by Magnuson (2000), examined the cases of two Deaf children, where the first was detected at the age of four months and intervention began, while the other was not detected until the age of two years. Magnuson emphasizes the importance of early identification and intervention, as the second child experienced a lack of early linguistic stimulation which clearly resulted in weak language development compared with the first. Similarly, Sarant et al. (2009) studied fifty-seven Deaf children in terms of their spoken language outcomes as related to four variables: degree of hearing loss, cognitive abilities, age of entry to early intervention and parental engagement with intervention programmes. They employed a combination of three instruments: the Child Development Inventory, the Peabody Picture Vocabulary Test and the preschool clinical evaluation of language. They concluded that three variables, family participation, degree of hearing loss and cognitive ability, were significant predictors of differences in language outcomes. They stress the importance of active family engagement in all intervention programmes for a Deaf child in order to enhance language acquisition and outcomes. Conversely, however, Meizen-Deer et al. (2011) found that the degree of hearing loss had no impact on language progress as long as there were interventions in the first six months of life. They conclude that if children with DHH are enrolled in early intervention programmes prior to age six months they will be more likely to acquire age-appropriate language skills than those for whom intervention starts later.

3.4.2 The impact of D/deafness on social and behavioural development

It is natural that students usually prefer to socialize with peers of the same hearing status who use the same communication methods (Lloyd, 1999b). Thus, some Deaf and hard-of-hearing people may face great difficulties in establishing sustainable relationships with hearing people and may feel socially rejected because of the lack of good relationships and opportunities to interact with people from the same group, which could result in some form of isolation (Gregory et al, 1995). Human beings are social creature and cannot live

in isolation. This is the basis of the main goal and objectives of inclusion. Inclusive education for DHH students aims to provide them with equal opportunities to emulate positive behavioural examples (Al-Rousan, 1998). Mainstream programmes have been launched to remove any type of stigma and socialize this group of students within mainstream school settings, where the opportunity to have friends from all backgrounds is much higher than in special schools. There is some evidence that inclusion improves the level of social adaptation among the Deaf and hard of hearing (Madden and Slavin, 1993; Roberts and Zubric, 1992; Lynas, 1994; Powers, 2001). These studies indicate that in mainstream schools, Deaf and HH students have more chances of social interaction with their hearing peers and educators, and that they thus acquire the basic skills for social inclusion. Additionally, Hadjidakou (2002) found that the majority of DHH children integrated in mainstream schools had very promising results regarding their emotional and social adaptation and self-esteem.

However, other researchers have argued that mainstreaming has negative effects on the social development of DHH children. For example, Stewart and Kluwin (2000) argue that integration can influence the identity and self-esteem of students with hearing loss and that it isolates them from their society and culture. Furthermore, others argue that the education of DHH students should take place in special schools because their hearing problems limit their participation in mainstream classes. DHH students are isolated from the mainstream school environment and this can have implications for their psychosocial development (Jarvis et al, 2003; Sinka et al, 2003). Similarly, Nunes et al. (2001) found that Deaf students who were recently included in mainstream schools were more likely to be neglected by their hearing peers due to the absence of common communication ground between them. In their interviews with Deaf students, some raised concerns about bullying and the fear of being bullied due to the lack of an adequate medium of communication. This prompts concerns about moving all Deaf and HH students into schools that are not well prepared to accept and welcome them, because inclusion should be understood as a goal, not just a process (RNID, 1999). The absence of new and effective communication strategies, lack of additional supporting services, absence of a Deaf person (as a teacher or teacher assistant) who could be seen as a role model for Deaf students, a school ethos that fails to promote a positive Deaf self-image or to assure

interaction between Deaf and hearing students may harm their self-image and lead them to see themselves as failed hearing persons (Moore, 1999; NDCS, 1990; Ladd, 1991).

In addition, Arnold and Atkins (1991) conducted a study of Deaf social and emotional adaptive behaviour at an inclusive primary school, using the Children's Behaviour Questionnaire (CBQ) and Bristol Social Adjustment Guide (BSAG), on a sample of ninety students. Having compared a control group of 23 hearing students with a group of Deaf students (with a mean hearing loss of 67 decibels), they conclude that these measures showed little difference between the groups for emotional development, but a difference for social development. However, it is uncertain if this is a reliable finding, given the relatively small differences measured.

Some parents of children without disability believe that their children can benefit both socially and academically from inclusion because of the increased availability of additional supporting services and enhanced teaching resources inside the classroom (e.g. ElZein, 2009; Tichenor, 1997). In the USA, Giangreco et al. (1991) surveyed 81 parents of typically developing children attending an elementary school with a peer having a severe disability. The results indicated that over 80% of parents believed that inclusion enhanced their child's social/emotional growth, while over 90% reported that their children had a positive experience from the presence of a child with severe disability in the class. Additionally, parents of typically developing children believed that their children learnt about and accepted individual differences through inclusive education (Bennett, 1997; Gallagher et al., 2000).

Angelides and Aravi (2007) investigated the views and experiences of 20 Deaf and hard-of-hearing people who had studied at special and mainstream schools in Cyprus, in order to compare the two systems from the viewpoint of those involved. They were also interested to explore the possible implications of these views and experiences for the development of the educational system in Cyprus regarding inclusive education. Data analysis indicated that the impression prevailed among DHH students that mainstream schools had a higher academic level and provided more opportunities for learning. However, ex-pupils of special schools pointed out that they had more opportunities to develop interpersonal relations with their educators and peers, in contrast to those who had attended mainstream schools, who appeared to be isolated from their environment.

Additionally, the latter suffered from marginalization and exclusion. The authors concluded that attendance at mainstream schools has the great advantage of providing more opportunities for learning than attendance at special schools, notwithstanding some problems at mainstream schools related mainly to communication and alienation.

Kliewer (1998) explored the benefits of full inclusion for students with severe SEN (including the Deaf). He reports that such students are more likely to acquire functional skills in areas such as communication, ICT, team-working, presentation and problem solving if they study in inclusive classrooms. Hence, it is important that students should move away from isolated classrooms. He adds that these high performance skills would possibly be achieved in classrooms similar to other social institutions, where SEN students and their peers communicate and learn cooperatively. However, in a comparative study of the education of Deaf students in Australia and Norway, Hyde, Ohna and Hjulstad (2004) report that results in Australia showed very good levels of academic attainment, but that a majority of Deaf and HH students had difficulties with socialization; two-thirds were rated by their teachers at competitive levels academically, but only one-third as being socially well integrated. In Norway, observation of classes suggested that there was little interaction among deaf and hearing children.

In conclusion, it is worth mentioning that several factors appear to affect the social and behavioural development of D/deaf students. For example, Vetter et al. (2010) compared inclusion experiences of German elementary DHH students in separate educational settings (n=31) with those of counterparts at the same level in integrated settings (n=26) and evaluated psychosocial behaviour, semantic-lexical abilities and communicative skills. They found that the only difference between the samples was on self-reported wellbeing at school, which favoured the integrated students, who also demonstrated a higher level of integration experience, associated with fewer psychosocial abnormalities and better communicative skills. The authors argue that the educational setting is not the only factor influencing DHH students' perceived wellbeing. Other contextual factors may also have contributed, such as the hearing status of parents, dominant communicative skills used at home and school, and collaborative work by teachers and parents to facilitate the literacy development of Deaf students (Swanwick and Watson, 2005), which can have a similar positive impact on integration experiences.

3.4.3 The impact of D/deafness on emotional development

The impact of hearing loss differs considerably from one person to another, depending on various circumstances such as the status of the parents' hearing, level of hearing loss, whether the hearing loss happened before or after acquiring language, the quality of the family environment, parental adaptation to deafness, family coping, the nature of school and community resources, the child's characteristics and transactions with his or her ecology, and whether identification and intervention took place at an early stage (Calderon, 2000; Calderon & Greenberg, 1999; Montanini-Manfredi, 1993; Stinson & Foster, 2000). It should be noted here that most social and emotional development research on DHH subjects was carried out in the 1970s (Moore, 2001). Still et al. (2011) state that research regarding the impact of hearing loss on social-emotional development has mixed results. They argue that the study of the social-emotional development of deaf and hard-of-hearing children, while extensive, has yet to provide an accurate understanding of the differences between deaf and hearing children (cited in Marschark and Spencer, 2003).

Greenberg and Kusché (1993) identify eight defining features of students' social and emotional competence: 1- good communication skills, 2- the capacity to think independently, 3- the capacity for self-direction and self-control, 4- understanding the feelings, motivations, needs, and so forth, of oneself and others, 5- flexibility in appropriately adapting to the needs of each particular situation, 6- the ability to rely on and be relied upon by others, 7- understanding and appreciating one's own culture and its values, as well as those of the cultures of others, and 8- utilizing skilled behaviours to maintain healthy relationships with others and to obtain socially approved goals. In addition, they found that deaf students were often delayed in language development, resulting in more impulsivity and less emotional regulation, manifested in impoverished vocabulary of emotion language. Therefore, DHH students' lack of spontaneously mediated experience with linguistic symbols of internal emotional situations might be one important factor having a negative impact on social-emotional development.

Moore (1982) reports that male Americans with DHH tended to experience some psychological maladaptation, such as emotional instability, anxiety or depression, and less self-assertion. He justifies these findings by explaining that these participants had

from an early age faced rejection, aggressiveness and lack of acceptance by friends and some family members, which had reflected upon their self-acceptance and self-esteem. Additionally, despite their attempts to engage in conversation, their educators and parents often tended to speak on their behalf without bothering to ask them for their opinions. Such people may think that Deaf and hard-of-hearing people would not be able to guess the subject of a conversation, which might not be the case at all.

Similarly, Stuart et al. (1991) demonstrated that D/deafness is not the sole factor that shapes the emotional development of DHH students, but that the attitudes of people surrounding them, including family, school, friends, neighbourhood and relatives, play a major role in facilitating their personality development. Ladd et al. (1984) made an extensive observation of various mainstream classrooms and found that in some instances the class as a group of people with similar collective thoughts may behave in ways that lead DHH students to feel rather abandoned, isolated, rejected or uncomfortable, which in turn would limit their social and emotional development. Nonetheless, this does not necessarily mean that full or partial inclusion of DHH students always prompts these reactions.

Kluwin (1985) conducted a survey among five residential primary schools for Deaf boys to measure any patterns of emotional disturbance among their students. He found that mildly and moderately HH/partially deaf students with a low level of academic attainment tended to have high levels of emotional disturbance. Other research also suggests that deaf children struggle significantly with emotional issues and that these difficulties can affect their ability to socialize effectively (Vostanis, Hayes and Du Feu, 1997).

The effect of the school environment on the emotional development of DHH students has also been investigated. Indeed, a review of the literature indicates that the results regarding the effect of the school setting (inclusive versus special school) on the social/emotional development of DHH students are inconsistent (Al-Zahrani, 2005). That is, some studies have reported satisfactory outcomes for academic progress and social development of DHH students, including positive attitudes and acceptance by their hearing peers (Kluwin, 1999; 2002; Kluwin and Stinson, 1993; Luckner, 1999; Power and Hyde, 2002; Powers, 1996), whereas others have reported that DHH students have encountered negative attitudes from their hearing peers, have experienced isolation and

loneliness at mainstream schools, leaving them frustrated, rejected, unable to interact effectively with classmates and without friends (Al-Zahrani, 2005), or have failed to establish close relationships with their hearing peers (e.g. Weisel, 1988; Angelides and Aravi, 2007; Antia, 1982).

Still et al. (2011) conducted a profile analysis to determine similarities and differences between Deaf and hearing children in social and emotional functioning. The sample consisted of 20 hearing and 20 Deaf children aged 8-11 years. Significant differences were found in two areas: school interest and on-task behaviour. However, the results showed that children did not differ significantly in social skills, behaviour control patterns or social anxiety. Overall, data from the study showed few differences between hearing and Deaf children. The authors conclude that Deaf children may not be at a great risk of social-emotional problems (cited in Marschark and Spencer, 2003). Nunes, Pretzlik and Olsson (2001) propose that DHH inclusive education should be assessed not only on cognitive gains but also in terms of its social consequences. They argue that if DHH students are isolated or/and rejected within inclusive classrooms or schools, their education may eventually deteriorate. They examined the social adaptation of nine DHH students in two different mainstream schools using three approaches: peer ratings, sociometric status and interviews. On one hand, the average peer ratings received by DHH students were not significantly different from those of their peers, meaning that they were not more disliked by their peers than non-DHH students. On the other hand, DHH students were significantly more likely to be neglected by their peers and less likely to have friends in their mainstream classes. Hearing friends of DHH students explained their friendship as involving pro-social functions. However, many hearing students who had no deaf friends found communication a major obstacle to friendship. The authors conclude that even if DHH students are not rejected in mainstream schools, they may feel isolated. It is possible that mainstream schools can have a constructive role in helping hearing students to learn how to solve communication barriers. This is consistent with the finding of Roda and Grove (1982) that scepticism and uncertainty are not characteristics of people with DHH, as many successfully socialize with others (cited in Marschark and Spencer, 2003).

The above review indicates that research regarding the impact of hearing loss on social, behavioural and emotional development has had mixed results and that there are several factors which may significantly affect the social and emotional development of DHH students, such as impoverished emotional vocabulary, the quality of the family environment, parental adaptation to deafness, communication methods used by members of mainstream school staff, family coping, the nature of school and community resources, the child's characteristics and transactions with his or her environment, whether identification and intervention took place at an early stage, the attitudes of the people surrounding the students, lack of acceptance, rejection, aggressiveness and their parents' tendency to speak on their behalf.

3.4.4 The impact of D/deafness on cognitive development

Studies of the impact of D/deafness on cognitive development, which Marschark (2007) defines as referring to "the increasing knowledge and mental abilities that are seen in children as they get older", show contrary findings regarding, for example, problem solving, executive functions and attention. Some show the importance of language and cognitive development for the early processes of attachment and bonding (Marschark and Hauser, 2008), while others deny any relationship between them (Remine et al., 2007; Marschark et al, 2011). Yet other studies, however, strongly imply the inappropriateness of verbal ability testing to examine DHH students' cognitive abilities without helping them to benefit from the new technologies of hearing aids and CIs, because of the verbal modality of the tests.

One way to look at this issue is to note that language ability tests, on which DHH students score less well than their counterparts at the same chronological age, do not cover performance IQ or nonverbal intelligence tasks (Remine et al., 2007). Many studies have found that the same bell-shaped normal distribution of intelligence applies among the deaf as the hearing. This provides evidence that being Deaf or hard of hearing does not necessitate low cognitive development and these studies also found no significant differences between hearing and DHH students in terms of cognitive skills (Abu Alazes and Algaruity, 2001; Marschark, 2002). Some other authors argue that it is inappropriate to measure the intellectual abilities of DHH subjects through exams or tests that require verbal intelligence.

Furthermore, cognitive development is not restricted to intelligence. It has various components, which Marschark et al (2011) call the cognitive foundations of learning among DHH children. These include knowledge and knowledge organisation, metacognition, memory and executive function. They argue that DHH students differ in these elements in comparison to their hearing peers, but that “recent explorations into the foundations of learning by DHH children, in contrast, provide a starting point for increased understanding of how we can better support their learning in both formal and informal educational settings” (Marschark et al., 2011: 19).

Research suggests that a better understanding of cognitive development in DHH children and its interaction with classroom learning activities should lead to better outcomes. Marschark et al. (2011) assert that taking this into account allows experienced teachers of DHH students to develop instructional methods and materials that employ the cognitive strengths of DHH students (e.g. using mental imagery) while accommodating their needs. They suggest that this may be because experienced teachers of DHH students are more aware of what these children know and how they differ from hearing students in their reasoning, memory, attention, auditory and visual processing and problem-solving skills. They conclude that when the term ‘DHH’ is used in the context of cognitive development, it should be taken to refer to all children who qualify for additional support services on the basis of their hearing status.

3.4.5 The impact of SEN and DHH inclusion on academic attainment

There have been many studies of the impact of various aspects of DHH inclusion on academic attainment. As already noted, the overall academic attainment of DHH students is inferior to that of hearing students of the same age (Powers, Gregory and Thoutenhoofd, 1998; Marschark, 2011). In a case study of an individual Deaf pupil placed within a resourced mainstream classroom, Jarvis (2002) found that the level of linguistic communication was far too complex for him to participate actively with his peers and consequently comprehend literacy lessons. She concludes that five factors should be addressed to improve the academic attainments of Deaf students: providing well trained assistant teachers, particularly in literacy lessons, employing an IEP to address linguistic issues, improving the acoustic conditions of resourced mainstream classrooms in terms of isolation and supporting equipment, encouraging assertive decision-making by

teachers on when to include Deaf students in class teaching and when to send them to the resource room for individual linguistic teaching, and finally raising educators' awareness of what Jarvis calls "internal exclusion". She means by this phrase that D/deaf students may be apparently included in the mainstream classroom, but educators tend to see D/deafness as a deficit and thus have low expectations that constrain any effort at active engagement made by Deaf students (Jarvis, 2002).

Another reason for the low attainment of DHH students in inclusive settings may be the pace of instruction. For example, Foster et al. (1999) explored Deaf post-secondary students and their instructors' experience of mainstream university classes in the UK. Their results indicate that Deaf students viewed classroom communication and engagement in a similar manner to their hearing peers. However, they were more concerned about the pace of instruction and did not feel as much a part of the university activities did their hearing peers. According to other UK research, some teachers have expressed resistance to the idea of inclusion, fearing that children with SEN may negatively affect the achievements of other students (Hick, Kershner and Farrell, 2009), which may also be applied to DHH students. Consistent with this view, Rose (2001) argues that some children with SEN may divert attention from other students during lessons, causing them to become dissatisfied, while Frederickson and Cline (2002) found that inappropriate teaching methods, unattainable curricula, the wrong environment and incompatible groupings of students could increase exclusion tendencies among students themselves, which may affect their academic attainment.

Some researchers have investigated teaching and learning effectiveness in mainstream and separate classrooms as a factor affecting the academic achievement of DHH students. For example, Spencer and Marschark (2010) found that there had been few studies of the academic achievement of deaf students enrolled in mainstream versus separate programmes. Powers (2002: 236) argues that even if there are such differences, they cannot be interpreted as providing "evidence of a difference in teaching effectiveness because special schools and mainstream programs serve quite different populations". Stinson and Antia (1999), for example, note that DHH students who attend mainstream schools tend to have more residual hearing than their peers in separate settings. However, degree of hearing loss does not appear to be a direct predictor of academic achievement

(Powers, 2006; Tymms, Brien, Merrell, Collins and Jones, 2003), although it does affect access to communication within the classroom and has more subtle long-term effects insofar as cognitive skills, world knowledge and fluency in language are acquired through an incremental and interactive process extending over many years.

Stinson and Kluwin (2003) review the literature in the USA with regard to the academic placement of DHH students and conclude that the largest contribution to academic achievement came from differences in student and family characteristics (e.g. age of hearing loss onset, prior academic achievement and parental hearing status) which affect initial placement decisions. Placement itself accounted for only about 1 to 5% of the variability in academic outcomes, while as much as 75% of this was unexplained. Similarly, Powers (2011) investigated the reasons for the success of twenty-seven high achieving Deaf students in England. The study sought the views of the students, their parents, teachers and other school professionals. The findings indicate that the two key factors in explaining success are the Deaf children's personal attributes and the character and influence of their parents. The author argues that this provides further support for the notion that parents are the key to deaf children's success and that it is crucial for teachers to work with parents.

Richardson et al. (2011) examined the experiences of post-secondary students enrolled in mainstream programmes (with hearing students) versus separate programmes (without hearing students) at the same institution. Their study aimed to better understand academic achievement among Deaf and hard-of-hearing students in different educational placements in the UK. Both groups were concerned with good teaching and the acquisition of generic skills. Both were motivated by the demands of their assessments and by a fear of failure, while being alert to both positive and negative affect in their classroom interactions. Overall, students in separate classes were more positive about workload expectations, instructor feedback and the choices they had in coursework. Students in mainstream classes were more positive about their acquisition of analytic skills (rather than rote memorization) and about their instructors' interest in them, including flexibility in methods of assessment.

Other researchers have argued that academic performance is an interactive function of many psychosocial and demographic variables. Thus, in a study set in India, Satapathy

(2008) explored the nature and degree of the relationships between academic performance and selected psychosocial variables, such as stress, self-esteem and social-emotional adjustment, and demographic ones, such as age, parents' education and occupation, family income, age of onset of disability, preschool training and type of schooling. The sample consisted of 80 hearing-impaired (HI) class VIII and X students of both sexes aged 13 to 21 years, mostly from lower and middle socio-economic backgrounds. A comparative group of 111 non-disabled students was also included. The differences were analysed in relation to impairment-specific academic problems, the educational system and the vital role played by the family. Social-emotional adjustment was found to be significantly better in HI students, consistent with the study by Jyothi and Reddy (1996). The author justified this finding by many factors. Firstly, the social-emotional adjustment of HI students could be related to the quality and quantity of social interactions inside the school (Meadow, 1980). Preschool training, alongside the early placement of HI students in schools, was expected to help them to improve their fluency in the total communication approach (which encompasses sign language, finger spelling, cued signs and gesture). Satapathy (2008) also notes that teacher-student interaction, in particular, could have affected teachers' rating of students' social-emotional adjustment. In addition, the author proposes that a higher level of stress affects levels of problem-solving skills, with a negative effect on academic performance. This result is consistent with many research findings (Ranganathan, 1987; Mecan et al., 1990; Felsten and Wilcox, 1992; Grannis, 1992; Srivastava and Naidu, 1982).

The same study also demonstrated that stress had a significant inverse correlation with the academic performance of non-impaired students, whereas the relationship was weakly positive in HI students. The better academic performance of hearing-impaired students could be partly explained by variations in additional academic support given by special or mainstream teachers before examinations, or by the fact that normal surroundings tend to compound the inferiority feelings in HI persons, which makes them try hard to develop and strengthen compensatory mechanisms to achieve academic superiority (i.e. better academic outcomes). While social-emotional adjustment enhanced the academic performance of both groups (Rogers, Rogers and Belanger, 1992), there was no significant association with self-esteem in either case. To some extent, the higher social-emotional adjustment of the HI students could be sample specific, as the hearing impaired

group were a more heterogeneous group with a wide range of hearing loss. However, many socio-demographic variables like severity of impairment, socio-economic status and age were found to have significant correlations with the academic performance of HI students. A significant positive correlation was found between severity of impairment and academic performance of HI adolescents. This shows Deaf students to be better performers than hard-of-hearing students, contrary to the findings of Powers (1999). The differences in academic performance between Deaf, as good performers, and hard-of-hearing students could also be attributed to the difference in sample characteristics of age, descriptive small-sample studies, lack of rigorous control, instruction mode and different levels of hearing loss.

Further to this, socio-economic variables such as parent's education, occupation and family income had significant positive correlations with the academic performance of the HI adolescents. This is consistent with several studies (Kluwin et al., 1992; Kluwin and Stinson, 1993) which have identified the role of higher socio-economic contextual factors in their psychological wellbeing and academic performance. In the case of students without impairment, only father's occupation had a significant positive relation with academic performance. As these students had a lower socio-economic background, the father's occupation played a fundamental role in helping the family to achieve better academic results. The final interesting finding by Satapathy (2008) was that HI students with more siblings had poorer academic performance. The author explained that the development of language competences in HI children requires good parent-child interactions, which might become weaker in larger families. As the HI children grow up and face increased linguistic and social demands, they may require extra help from their family members. This might need a great deal of family time, energy, money and emotional resources. The lack of such interactions raises the risk that deaf children will not be able to reach their full potential (Vaccari and Marschark, 1997a).

In this regard, it is also important to consider parents' concerns about the academic attainment of their children, as these might lead them to prefer a certain setting for the education of their children. Martin (2002) points out that some parents of non-disabled students disagree with the idea of inclusion and feel uncomfortable, worrying about the presence of a disabled child in the same class as their own children and rejecting the idea

that their children might have friendships with disabled children. They also worry that inclusion could have a negative effect on their children's behaviour and academic achievement. Similar concerns were identified by Shipley (1995), who reports that the parents of children without SEN often express different concerns. First, they are concerned that 'good' students would be bored because of the relaxed teaching environment. Second, they may be concerned that classes including children with special needs might have lower expectations. Students without special needs might also be disappointed to discover that the students with SEN studied less and achieved the same or even better grades. Finally, these parents may fear that teachers will allocate too much time to controlling and managing students with behavioural problems or that they will work at a slower pace in the class. These findings correspond with an international review of parents' views by De Boer et al. (2011), which found that parents of a child with SEN hold significantly more positive attitudes than parents of a child without SEN.

In another study set in India, Narumanchi and Bhargava (2011) found that parents of students without SEN and with typical development felt that inclusion would be beneficial for subjects such as art, music and sports, but that separate classrooms would be more appropriate for academic subjects. Furthermore, these parents were found to be apprehensive, particularly about the effect of full inclusive education on students with typical development, as they would tend to be disturbed by children with special educational needs, while the latter (including DHH students) are often not able to meet the standards set for typically developing children. Thus, although parents might have positive attitudes towards the inclusion of children with special needs, they appear to prefer separate special classrooms for academic subjects (such as literacy lessons), which in a sense reflects concerns about the low achievement of those children in inclusive settings. In addition, the authors indicate that parents' positive attitudes can be attributed to two factors: that the students with special needs had mild or physical disabilities and that they chose to continue at mainstream school despite having the option to withdraw, which indicates that they were satisfied. This conclusion by Narumanchi and Bhargava (2011) could be extended to DHH students in the sense that they are taught via different teaching styles from those applied to hearing students, which may be a potential source of disruption. DHH students usually prefer to learn via BSL, oral or auditory-visual therapy, sign-supported English (SSE) (Watson, 2009), total communication (Denton,

1976), or sign bilingualism (Swanwick and Gregory, 2009), which differ considerably from the usual teaching methods for hearing students in mainstream classrooms.

In conclusion, it could be argued that the academic attainment of DHH students, whether taught in inclusive settings or in special classrooms, can be attributed to several factors, including differences in student and family characteristics (e.g. age of hearing loss onset, prior academic achievement and parental hearing status) and certain psychosocial and demographic variables. In a sense, this supports the argument that it is difficult to attribute any difference to the programmes themselves (Karchmer and Mitchell, 2003). However, teachers and parents have some concerns about the quality of attainment of those students in inclusive settings in comparison with their peers without SEN in the same settings. In this regard, teaching methods, experienced teachers, curricular inclusion and peer support could help in enhancing academic attainment. As Marschark and Hauser (2008) explain, recent studies have shown that although both signing and/or oral DHH students generally come into the classroom with less content knowledge than their hearing peers, when they are taught by experienced teachers of the deaf in inclusive (DHH/hearing) classrooms, they can learn as much as their hearing peers. In general, DHH students appear to gain some academic advantage but suffer some loss of self-concept when placed in general education. The strength of DHH oral skills is a critical determinant of success in any inclusive setting. Finally, from an academic point of view, HH students do not perform as well as hearing students and the gap in performance increases with age (Hocutt, 1996).

3.5 Some Studies of Attitudes towards SEN Inclusion

Sections 3.5 and 3.6 review studies of attitudes towards SEN inclusion, organised according to whether they were conducted in the Middle East or elsewhere (principally in the West), whether they were concerned with SEN in general or DHH in particular, and which aspects were examined, as shown in Table 3.3. Section 3.7 then examines factors affecting teachers' attitudes to SEN inclusion.

Table 3.3 Studies of attitudes towards SEN and DHH inclusion by geographical region

	West etc.	Middle East / Saudi Arabia
SEN in general	Effects of inclusion Section 3.5.1 on learning behaviour	Effects of inclusion Section 3.5.2 on learning behaviour.
	Attitudes (pro/con) to inclusion, barriers to and supports for inclusion and other relevant aspects.	Attitudes (pro/con) to inclusion -Barriers to & supports Section 3.5.3 for inclusion and other relevant aspects
DHH	Effects of inclusion Section 3.6.1 on learning behaviour	Effects of inclusion Section 3.6.2 on learning behaviour
	Attitudes (pro/con) to inclusion, barriers to and supports for inclusion and other relevant aspects.	Attitudes (pro/con) to inclusion, barriers to and supports for inclusion and other relevant aspects.

3.5.1 International studies of attitudes towards SEN inclusion in general

This sub-section reviews studies of students’, teachers’, administrators’ and parents’ attitudes to SEN inclusion in general which were conducted outside the Middle East, i.e. mainly in the UK, the USA and other Western countries. These cover the effects of inclusion on learning behaviour, attitudes towards inclusion, barriers and supports for inclusion, and other relevant aspects. Inclusion is widely conceived as having overall beneficial effects and reported as a desirable option by educators and integrated students with a variety of special needs (Andrews and Lupart, 2000; Biklen, 1992; Bunch, Lupart and Brown, 1997; Goodlad and Lovitt, 1993; Green, 1990; Lipsky and Gartner, 1989; Lombardi, Nuzzo, Kennedy and Foshay, 1994; Northcott, 1973; Stoker and Spear, 1984; Winzer, 2002). The success of inclusive education depends strongly on teachers’ and parents’ attitudes, because they play a central role in developing an effective inclusive environment. Based on this assumption, many researchers have sought to examine parents’ and teachers’ attitudes towards the concept of including DHH and other SEN children in mainstream schools and the factors that could influence these attitudes.

Avramidis and Norwich (2002) point out that teachers’ attitudes towards inclusion have been seen as important among professionals. This is because teachers are the ones who deal with special needs students every day. Thus, if they hold negative attitudes towards inclusion, it would be very difficult to expect major changes in their teaching practices to accommodate special needs students in their classrooms. However, the mainstreaming

movement started in Western countries in the late 1970s by advocating the principle of equal opportunities and normalization, which meant being taught in the least restrictive environment. Then there was a rapid increase in mainstreaming as a vibrant social movement demanding academic, physical and social integration. More recently, the concept of inclusion (partial or sometimes full) was widely used in the educational literature (e.g. UNESCO, 1994), promoting the removal of barriers to participation and the restructuring of mainstream schools as a human rights issue. It arose to address the importance of restructuring the ecology of mainstream schools in a way that would allow all special needs students to reach their academic and social potential, regardless of the nature and severity of their difficulties. These changes are as significant as are professional attitudes to these changing practices.

To begin with, Marston and Heistad (1994) carried out a study of 670 learning disabled students across 26 different schools, some of which followed partial inclusion and others full inclusion. They meant by full inclusion that special needs students were placed full time in mainstream classrooms (e.g. Lipsky and Gartner, 1991; Stainback and Stainback, 1988). Marston and Heistad (1994) compared three types of classes, the inclusion only, pull-out only and combined services models, for a sample of elementary students with mild disabilities. Results suggest that teacher satisfaction and student progress in reading were significantly greater for the combined services model, which supports commitment to the continuum of mainstream services and provision. Various reasons were found for the success of the combined services model. The authors report that the rate of early literacy development was similar in both types of school settings, i.e. partial and full inclusion. The second main finding was that both SEN and mainstream teachers felt that the quality of additional support services improved considerably where schools operated full inclusion and the combined services model, which indicates more acceptance of full inclusion.

Waldrop (1999) investigated the attitudes of parents, teachers and administrators towards SEN inclusive practices and their impact upon school ethos by distributing a questionnaire. He concluded that there were statistically significant differences among these three different groups. Parents of SEN students had more positive attitudes towards inclusion than did mainstream teachers. Despite their overall positive attitudes, there was

a sub-group of parents of students in the lower grades of primary schools who were more aware of and knowledgeable about inclusion than those of pupils in the higher grades (cited in Marschark and Spencer, 2003). The reasons for teachers' less positive attitudes have been investigated by several studies. Kauffman and Hallahan (1995) assert that despite the positive potential impact of inclusive education, the practice may create prejudicial liability on the system to meet the needs of all students. Harrington and Quinn-Leering (1996) draw a similar conclusion, noting that opponents of inclusion propose that placing students with SEN in mainstream classrooms places a load on teachers in general education to educate these students. It also fails to provide a setting where the students can receive individualized instruction through an IEP.

Marzano (2002) also conducted a study of the knowledge and attitudes of students with and without SEN and their parents towards inclusion, examining the impact of the requirements of the national curriculum. The sample consisted of 110 participants divided into two major groups: 54 middle-class parents and 56 students in the state of New Jersey, USA. There were three main findings. Parents were generally more interested in their children's academic performance and progress compared with the students themselves. Parents paid more attention to the impact of inclusion on the requirements of the state curriculum. Finally, parents showed more positive attitudes towards the inclusion of students with mild SEN who were to be included in the same classroom as their children.

In the same year, Beyer (2002) investigated the attitudes of parents, mainstream teachers, administrators and SEN teachers towards different types of SEN inclusion practices at a Californian high school. The main finding was that of the four groups, the mainstream teachers had the most positive attitudes towards inclusion, whereas SEN teachers had less positive attitudes towards inclusion. This surprising finding may have arisen because of a fear that inclusion would put specialist SEN staff at risk of redundancy.

In another study, Praisner (2003) surveyed 408 primary school head-teachers' attitudes towards inclusion and how their attitudes related to three variables: experience, training and participants' opinions of appropriate educational settings. Her findings identify the importance of a positive experience of provision of various inclusion implications and in-service training provision in inclusion practice. Another important finding is that only 20% of participants had positive attitudes towards inclusion. Among these, head-teachers

tended to prefer the ‘least restricted environment’ over all other educational alternatives. Finally, their knowledge base about SEN concepts and implications had an impact on the positiveness of their attitudes.

In a review that illustrates the significant expansion of the number of school districts operating inclusive education programmes, an American national study of state initiatives on alternative education for SEN inclusion reports detailed findings from a 1995 national survey (Katsiyannis and Williams, 1998). The combined sample of this survey was 891 schools across the USA. Five of the findings relate directly to the current study. Firstly, there was a rapid increase in the number of schools with SEN inclusive classrooms, from 267 in 1994 to 891 in 1995. Secondly, the report showed participating teachers to have positive professional outcomes. Thirdly, school restructuring was reported to have an impact on the success of inclusive education programmes. Fourthly, teachers at these schools made use of similar teaching strategies and SEN classroom supporting services to their general teaching. Finally, both students with special needs and those without achieved successfully in inclusive schools.

Avramidis (2001) argues that the essence of inclusion as an ideal educational initiative is to bring about change, whether in the quality of the teaching-learning process and/or in terms of restructuring the mainstream school ecology to accept individual differences and enhance students’ and teachers’ strengths. The inclusive model supports the idea of nurturing every SEN individual in his/her natural environment. Inclusive educators seek the elimination of stigmatization, isolation and marginalization by improving the quality of inclusive education. This improvement should be beneficial not only for D/deaf students but also for their parents, mainstream teachers, the local community and society at large (Andrews and Lupart, 2000).

Further to this, de Boer et al. (2011) conducted a study to analyse which variables relate to the attitudes of teachers, parents and peers towards students with SEN including ADHD, ASS or a cognitive disability. Their second aim was to examine the effect of teachers’ and parents’ attitudes on the attitudes of peers. They found that none of the variables explored related to teachers’ attitudes, i.e. gender, years of teaching experience, assistance in class, type of case study and experience with inclusive education. This finding contradicts other educational studies which indicated significant differences in

teacher attitudes according to gender, years of teaching experience, type of SEN and experience with inclusive education (Alghazo and Gaad 2004; Glaubman and Lifshitz, 2001; Kalyva, Georgiadi and Tsakiris, 2007). Relevant to parental and peer attitudes, the researchers report that age of peers, type of case study, having a child with SEN and peer friendship with a SEN student were all related to their attitudes. With respect to the second aim, they conclude that teachers' attitudes have a significant negative effect on the attitudes of peers, while parents' attitudes have a significant positive effect. These outcomes partially confirm our expectations, while the insignificant findings may be a result of the small sample size, which could be viewed as a limitation of the study.

In Malaysia, Jelas (2000) investigated the opinions and beliefs of parents, teachers and administrators about the inclusion of students with SEN (including DHH) in various primary schools. He found that while SEN parents and teachers expressed generally negative opinions of SEN inclusion, parents of children without SEN had more positive attitudes towards inclusion in terms of its social benefits, acceptance and the interactions between different students in inclusive classrooms.

3.5.2 Middle Eastern studies of attitudes towards SEN inclusion in general

Having reviewed international studies of SEN inclusion, this section turns to those conducted in the Middle East, including Saudi Arabia (SA). To begin with, Alfayez (1997) conducted a study to explore female Saudi kindergarten teachers' attitudes towards SEN students' inclusion. Her sample consisted of 607 teachers at various kindergarten schools in Riyadh. The first of her main findings was of significant statistical differences in the attitude scale according to four variables: specialty in SEN, years of experience, in-service training and type of inclusive provision practised. Second, teachers specializing in kindergarten SEN had significantly higher scores on the attitude scale, indicating more positive attitudes towards inclusion compared to unspecialized teachers. Finally, teachers who attended more in-service courses had more positive attitudes towards inclusion.

Also in Saudi Arabia, Alsartawi (1995) conducted a study to measure teachers' and students' attitudes towards SEN students' inclusion in SA general education classrooms. The sample consisted of 249 teachers and students in various schools in Riyadh. The

teachers' and students' attitudes toward SEN inclusion were assessed on a Likert scale type of questionnaire which was designed by the author. This questionnaire is divided into two parts. In the first part there are some demographic questions as independent variables such as specialization in special education, knowing special needs students, having relatives with special needs and professional experience. In the second part there is a teachers' and students' attitudes towards SEN students' inclusion scale. It is five point Likert Type scale and each statement were labelled as 5= strongly agree, 4= agree, 3= undecided, 2= disagree and 1=strongly disagree. There were two significant results. Teachers as well as students showed negative attitudes towards including students with and without SEN in the same classroom. The negative attitudes were statistically significant in respect of four variables: a) specialization in SEN, b) novice teachers with less than five years of experience, c) knowing special needs students, and d) relatives of SEN students, with more positive attitudes shown by those who had specialized in special education, with less than five years' experience, and those who had relatives with special needs. The first three factors are similar to those identified by Alfayez (1997), which indicates their importance. However, these studies concern attitudes towards SEN inclusion in general, which may or may not be directly applied to DHH inclusion.

Al-Abduljabbar and Masoud (2002) conducted a study of 447 Saudi teachers and administrators in Riyadh LEA, measuring their attitudes towards inclusion, i.e. special classrooms and programmes attached to mainstream schools. Participants answered a Likert-scale questionnaire that consisted of four components: a) the impact of inclusion on participants' opinions, b) typical SEN students' acceptance of SEN students, c) modification of negative behaviours, and d) teachers' willingness and cooperation with inclusive policy and practice. The correlation coefficients between the four components and the overall score ranged from 0.42 to 0.89 and all values were statistically significant at the 0.001 level, meaning that these aspects of attitude were interconnected. The first main finding was of a consensus among administrators, special and mainstream teachers alike, on the positive impact of inclusive practice upon participants' opinions. There were also statistically significant differences in participants' positive opinions about inclusion according to four variables: 1) position at the school, 2) qualifications, 3) type of disability and 4) type of inclusive programme. Specifically, more positive attitudes towards inclusion were associated with administrators, those with specialized qualification in

SEN, students with sensory and physical disability, and partial inclusion. This study is relevant to the current investigation in that it indicates the importance of disability type, which means that people differentiate between special needs students and accept or reject inclusion partially based on this. In the current study, differences may be found between attitudes to inclusion of the Deaf and to inclusion of the hard of hearing.

A fourth Saudi study was conducted by Alkhashrami (1995), to explore the advantages and disadvantages of SEN integration practices at various schools in Riyadh, Jeddah and Dammam LEAs, and attitudes towards SEN integration. There were ten variables associated with this study: a) types of integrated programmes, b) types of special needs students integrated, c) age, d) teachers' qualifications, e) numbers of SEN integrated students, f) what types of modification or preparation took place at mainstream schools, g) success ratio, h) factors affecting the integration process, i) barriers and j) what needed to be changed. The main research tool was a Likert-scale questionnaire distributed at 136 male and 28 female state schools and four male special schools with different integration programmes in the academic year 2000. The study covered patterns of provision and attitudes, and a critical account of the attitude findings was reported. Firstly, seven types of integration programme were identified: special classrooms, SEN/general education classroom with part-time resource room service, special classroom with part-time attendance in general education classroom, special classroom with additional support, itinerant teachers, teacher advisors and finally, mixed SEN/mainstream classrooms. Secondly, eight types of special needs were identified: hearing impairment, visual impairment, learning disability, social and emotional disturbance, autism, physical impairment, learning difficulties and finally, speech and language difficulties. The third finding was that of the three local educational authorities under investigation, only about a third of mainstream schools provided SEN certified teachers and other related specialists in additional support services, barely half of mainstream schools provided awareness and education campaigns, while 61% of schools provided facilities and teaching aids. At the level of social interaction in mainstream schools, there were more opportunities for SEN children and their counterparts to interact on a daily basis, while overall there was better performance by special needs students, better cooperation among staff members at mainstream schools and positive changes in participants' attitudes towards SEN students.

Alkhashrami (1995) identifies certain factors that contributed to the success of inclusion, including school administration, simplicity of disability, teachers' role and taking into account individual differences. More importantly, mainstream schools' desire to embrace positive attitudes towards SEN students played a significant role in improving the quality of integration practice. Participants in the study gave an overall score for integration success of 84% on Alkhashrami's scale. Finally, she identifies eight barriers hindering successful inclusion in SA as emerging from this study: a) overall negative attitudes, b) lack of SEN-related knowledge and experience, c) shortage of certified teachers in various special education specialties (only 35% were SEN certified), d) the multiplicity and complexity of disability in some cases, e) absence of adequate preparation, f) lack of cooperation by families, g) misdiagnosis and h) a lack of structural facilities and classroom resources. The author clearly identifies overall negative attitudes towards SEN inclusion as representing a major barrier to successful inclusion. In addition, the lack of certified teachers is a barrier because it will be more difficult to expand integration programmes without enough well-prepared staff. These findings are in line with those of Alsartawi (1995) and Alfayez (1997).

Dirham (1997) conducted a national survey in the neighbouring UAE, to investigate the attitudes of 110 male and female administrators and teachers towards two ways of including SEN students in mainstream schools. In the first, they attended mainstream classes most of the time, with resource room services for some lessons, while in the other they were in special self-contained classrooms (SCCs) all the time. There were three principal findings. The great majority of male and female teachers opposed the integration concept and believed it had no visible usefulness for students either with or without SEN. Administrators also expressed negative attitudes towards SEN integration. This is quite relevant to the present study, as it indicates the negative position of administrators towards accepting DHH students in their schools and shows the significance of their role in facilitating successful inclusion (AlHennawi, 2003; AlAmri, 2009). Finally, a majority of participants believed that integration had some useful elements for students with SEN, although negativity was prevalent in this study and half of the sample considered integration to have no potential benefit for students without SEN.

In a study in Jordan, Alghazo and Gaad (2004) found that teachers were most positive towards pupils with physical disabilities, with specific learning difficulties and with visual impairment, while they expressed the most negative feelings about the inclusion of pupils with learning/cognitive disabilities, behavioural difficulties and hearing impairment (including DHH). This relates to the present study in that general education teachers who lack fluency in sign language may find it stressful to teach students with whom they cannot communicate effectively. Parmer and Cawley (1993) argue that mainstream teachers' inability to communicate with DHH students may cause many students to miss fundamental concepts being taught. This also relates to the study of Alkhashrami (1995), who found that only a third of all mainstream programmes in Riyadh, Jeddah and Dammam had specialized/certified teachers.

3.5.3 Middle Eastern studies of perceived barriers to SEN inclusion

This subsection concludes the review of Middle Eastern studies of attitudes to SEN inclusion by considering two specifically concerned with perceived barriers to its success. First, the difficulties or barriers that SEN students experience in mainstream schools from their parents' and teachers' perspective were studied by AlHennawi (2003). The focus was on attitudes according to six variables: a) school administration, b) school building, teaching aids and equipment, c) teachers' role, d) students without SEN, e) the national curriculum and f) the local community. The first finding was that teachers and parents believed that there were barriers facing SEN students in regard to all six variables. Secondly, teachers believed that the four main barriers were school administration, teachers' role, non-SEN students and the national curriculum. Finally, the author underlines the importance of school preparations and planning in order to bring about successful inclusion, arguing that mainstream teachers and administrators should obtain in-service training (c.f. Alfayaz, 1997), that modifications should be made to facilitate access to all SEN students (c.f. Jafar, 2003, cited in AlAmri, 2009; Alkhashrami, 1995) and that the national curriculum should be modified to match the characteristics of SEN students (c.f. AlAmri, 2009; Zahir, 1990). This study is relevant to the current one in two ways: it indicates the importance of in-service training, particularly for teachers newly transferred to special needs education, and it illustrates the problems facing DHH students

following the imposition throughout all mainstream schools of a national curriculum having no elements of sign language or Deaf culture.

Another study of barriers to successful SEN integration from the teachers' perspective was conducted by Jafar (2003), who measured four variables: gender, position at mainstream school, experience and private versus state schools. The sample consisted of 100 male and female teachers, half working in general education classrooms and half in resource rooms, who were given a Likert-scale questionnaire comprising 36 items. Again, there were three main findings. Overall, the participants considered the greatest barrier to integration to be their attitudes towards SEN students, followed by teachers' competences, school and classroom facilities and resources, school administration and finally students without SEN. The author also found significant differences in the way participants evaluated integration barriers according to their position at the school. Finally, while there were no significant gender differences in the way participants evaluated integration barriers, a significant difference was found in respect of school administration, which was perceived as more problematic by teachers working in state schools (Jafar, 2003, cited in AlAmri, 2009). It is notable that teachers' competences (speciality, qualification and training), school administration and facilities are factors identified by several studies as affecting SEN integration, which gives an indication of their importance.

3.5.4 Summary of Middle Eastern studies of attitudes to SEN inclusion

Table 3.4 summarises the studies discussed in sections 3.5.2 and 3.5.3.

Table 3.4 Summary of ME studies of attitudes towards SEN inclusion

Author/date	Place and Aims	Results
Alfayez (1997)	-Survey in Riyadh. -Explore Saudi female kindergarten teachers' attitudes towards SEN pupils' inclusion.	1-There were statistically significant differences for kindergarten SEN pupils' inclusion based on the speciality in SEN, the acquisition of in-service training, years of experience and the type of inclusive provision practiced.
Alsartawi (1995)	-Survey in Riyadh. -Investigate teachers' and students' attitudes towards SEN students' inclusion in the same classroom.	1-Teachers and students showed negative attitudes towards SEN inclusion in the same classroom. 2-Four variables were found to influence participants' attitudes towards SEN inclusion: speciality in SEN, having SEN relative, knowledge and awareness about special education and teachers with less than five years of experience.
Al-Abduljabbar and Masoud (2002)	-Survey in Riyadh. -Explore teachers' and administrators' attitudes towards inclusion.	1-Administrators and teachers were positive towards the impact of inclusion. 2-Four variables were found to influence participants' attitudes: position at school, qualification, type of disability and type of inclusive programme.
Dirham (1997)	-Survey in UAE. -Explore male and female teachers' and administrators' attitudes towards SEN inclusion.	1-The majority of male and female teachers opposed the inclusion concept as having no visible usefulness. 2-Administrators held negative attitudes towards DHH inclusion. 3-The overall population believed in some useful elements for SEN inclusion, but not for typical students.
Alkhashrami (1995)	-Survey in Riyadh, Jeddah and Dammam. -Explore pros and cons of SEN inclusive practices in SA. -Ten variables examined: types of programme, types of disability, age, qualification, students' numbers, type of school modification, success ratio, intervening factors, barriers and what needs to be changed.	1-Seven types of mainstream programme identified. 2-Eight types of disability found in various school settings. 3-Only 35% of programmes had specialized teachers, 52% had special education awareness programmes and 61% had special facilities and aids. 4-Better opportunities for social interaction among students. 5-Eight barriers emerged: overall negative attitudes towards SEN inclusion, lack of knowledge in special education, shortage of specialized teachers, some cases of double disability, absence of adequate preparation, lack of female cooperation, misdiagnoses and lack of structural facilities and classroom resources.
Algazo et al. (2004)	-Survey in UAE. -Explore general education teachers' acceptance of students with disabilities.	1-Teachers were positive towards students with physical disabilities, visual disability and specific learning difficulties. 2-Teachers were negative towards inclusion of cognitive disability, hearing impairment and behavioural difficulties.

Author/date	Place and Aims	Results
Alhennawi (2003)	-Survey in Amman. -Explore barriers to SEN inclusion in mainstream schools from teachers' and parents' perspective. -Six variables examined: school administration, school building, teachers' role, other students, national curriculum and local community.	1-Teachers and parents believed that there were barriers interfacing SEN students for all six variables. 2-Teachers believed that the four main barriers were: school administration, teachers' role, typical students and the national curriculum. 3- Author emphasises the importance of: a) school preparations, b) advance planning, c) in-service training, d) ease of access to all SEN students and e) modification should be applied into the national curriculum to match the characteristics of SEN students.
Jafar (2003)	-Survey in Riyadh. -Explore barriers to SEN inclusion from teachers' perspective. -Four variables examined: gender, position at school, experience, school type (state/ private).	1-Barriers in descending order: SEN students, teachers' competences, school/classroom facilities, administration and other students. 2-Significant differences in the way participants evaluated inclusion barriers based on their position in schools. 3-No significant differences in the way participants evaluated inclusion barriers based on gender. 3-Significant differences in perception of administration as a barrier according to type of school.

In conclusion, in a majority of the studies reviewed in sub-sections 3.5.2 and 3.5.3, several elements seem to appear repeatedly: a) a failure by mainstream schools to prepare for effective inclusion, b) poor quality of school buildings and resources, c) a shortage of appropriately qualified teachers, d) insufficient professional in-service training, e) inappropriate national curriculum, f) inclusive education seen as mostly beneficial to students with special needs, not to other students, g) poor knowledge and experience of SEN, h) length of experience, i) type of inclusive provision practiced, j) position at school, k) acceptance of inclusion by schools' administration. The number and complexity of these factors means that attitudes towards SEN students' inclusion in the Middle East vary considerably, depending on the circumstances of speciality, type of disability (Morley et al., 2005), preparation of schools and teachers, and training. The research does not completely support inclusion for all students with disabilities. On the contrary, it seems that there is still a need for special schools to continue to provide a continuum of services (Hocutt, 1996; Elshabrawy, 2010). Furthermore, the research indicates that given adequate resources, planning, preparation and suitably qualified teachers, more students could be helped to become more successful in general education settings (Hocutt, 1996). Although most of these Middle Eastern studies were concerned with the integration of

students with special needs in general, their findings can be seen as relevant to the context of the current investigation.

3.6 Some Studies of Attitudes towards DHH Inclusion

While numerous studies have addressed attitudes to SEN inclusion, relatively few have researched attitudes to DHH inclusion in particular and the effects of inclusion on DHH learning behaviour, whether in the Middle East or elsewhere. This section turns to such studies, beginning with those conducted outside the Middle East.

3.6.1 International studies of attitudes towards DHH inclusion

In Greece, Lampropoulou and Padeliadu (1997) compared the attitudes towards disability and inclusion of three groups of teachers working in different placements, using the Attitudes toward Disabled Persons Scale designed by the authors. Results revealed that teachers' attitudes varied depending on their placement. Teachers of the Deaf had a more favourable attitude than the other groups of teachers towards people with disabilities, but their attitude towards inclusion was the most negative. Attitudes of general and special education teachers towards school inclusion can be explained by their attitudes toward disability. However, attitudes of teachers of the deaf towards school inclusion are not related to their attitudes toward people with disabilities.

The attitudes of hearing students towards the inclusion of their DHH peers have also been explored and studies have indicated positive attitudes. Hung et al. (2006) investigated the views of hearing students at an Ohio state secondary school on the inclusion of Deaf or hard-of-hearing peers in their general education classes. The researchers examined the effects of contact-related factors (contact experience, closeness and class norms) and of demographic variables (class setting, grade level and gender) on these attitudes through the use of a self-reported survey. They found that the majority of subjects showed a positive attitude towards the inclusion of DHH peers.

Table 3.5 displays an overview of these international studies of attitudes towards DHH inclusion.

Table 3.5 Overview of international studies of attitudes to DHH inclusion

Author/date	Place and Aims	Results
Hung et al. (2006)	-Ohio state secondary school -Explore hearing students' views on inclusion of D or HH peers in general education classrooms -Investigate effects of contact-related factors	The majority of subjects showed positive attitudes towards the inclusion of DHH peers
Lampropoulou and Padeliaou (1997)	-Greece -Compare attitudes to disability and inclusion of three groups of teachers working in different placements	1-Teachers of Deaf had most favourable attitudes towards people with disabilities, but least favourable towards integration 2-Attitudes to disability explain attitudes to inclusion in general and SEN teachers, but not in teachers of Deaf.

3.6.2 Middle Eastern studies of attitudes towards DHH inclusion

Having reviewed international studies of attitudes towards DHH inclusion, this subsection turns to those conducted in the Middle East. An important study was conducted in Riyadh by Al-Braheem (2003), whose first main objective was to explore what type of social, administrative and technical problems faced head-teachers of mainstream schools with an attached DHH programme. The second was to determine if there were significant differences in the opinions of head-teachers, deputy head-teachers and DHH programme supervisors towards these problems and how they could be resolved. The sample consisted of 130 participants, who completed a survey consisting of 51 items divided equally into three sections, on social, administrative and technical components. There were four important findings. The most significant social problem facing head-teachers was that neither DHH nor hearing students were prepared for integration before it began. The second finding concerned the most significant administrative problem facing head-teachers, which was the “poor quality of mainstream school buildings” in which to integrate DHH students. Thirdly, the most significant technical problem facing head-teachers was the decision made by the MoE to teach the national curriculum to DHH students. Finally and most importantly, there was significant overlap in the job descriptions of head-teachers, deputy head-teachers and DHH programme supervisors regarding the administration of special DHH classrooms, as there was no step-by-step handbook or guide. Similar findings are reported by AlAmri (2009).

Abdullah (1998) carried out a study to investigate teachers' and administrators' attitudes towards Deaf inclusion at all primary schools in Nablus LEA, Palestine. The sample comprised 106 schools: 54 female and 52 male. A Likert-scale survey questionnaire with 48 items was distributed to 1251 participants. There were two main results: teachers and administrators held positive attitudes towards DHH inclusion in mainstream education; and no significant statistical difference were found among the study population according to gender, position at school, experience, speciality or qualifications.

Another interesting study was conducted by AlAmri (2009) to examine problems that resulted from imposing the Saudi national curriculum on special and mainstream schools in Jeddah LEA, from the perspectives of 90 DHH teachers and 26 administrators. There were a number of findings relevant to the current research. Firstly, "the national curriculum goals and objectives were not suitable for the characteristics of Deaf pupils" (AlAmri, 2009: 3) and their language development, nor did they take into account the principle of individual differences among Deaf and HH students and between them and their hearing counterparts. Secondly, there were several problems related to textbook content, which did not "fit the experiences of Deaf students" (ibid: 4); some lessons did not suit Deaf students' characteristics; the language used did not correspond to Deaf vocabulary; there was no reference to aspects of Deaf culture; all exercises targeted hearing pupils only; teachers of the Deaf had no voice whatsoever in curriculum development; textbooks lacked cued signs, diagrams and other sign illustrations; lessons emphasised abstract not concrete meanings; and there was no handbook to guide teachers. The third finding, related to teaching experience and assessment, was that the workload seems to have hindered teachers from making use of IEPs and computer software and from preparing suitable educational aids. As to assessment, the national curriculum recognised only two types, viz. written and spoken exams, failing to take sign language into consideration. Finally, there was no clear mechanism for the assessment of Deaf students by unspecialized teachers.

Al-Zahrani (2005) made a comparative study of Deaf students' social and emotional development at special and mainstream schools in Riyadh. His first main finding was of no significant differences in peer relations, academic behaviour, self-management or social adjustment based on educational placement or type of programme. Nor were any

significant differences found in academic behaviour or self-management based on gender. However, there were significant gender differences in peer relations and social adjustment. The literature reviewed by Al-Zahrani (2005), supported by more recent findings (Zureikat, 2007; Majeed, 2008; Kurdistani, 2008) indicates the existence of three common problems among DHH students in mainstream settings, namely isolation, rejection and loneliness. However, he concludes his study by noting that the overall results were contradictory, not confirmatory.

A recent descriptive-comparative study conducted by Abu Shaira (2013) in Jeddah examined the effects of inclusion on the language development of hearing-impaired students (HISs) according to their educational settings from teachers' and parents' viewpoints. To do this, the author designed a Language Development Estimation List that consisted of two main dimensions: receptive language and expressive language. The teachers' assessments showed higher receptive language scores for the HISs taught at inclusive schools, but the parents' assessments showed no statistically significant differences in either variable based on placement. This offers a rather tentative indication of the positive impact of inclusion on receptive language, from a teacher's perspective only.

Finally, Zahir (1990) examined educational problems in schools for hearing-impaired students in Egypt and teachers' opinions of their effects on the education process. The results include the view that the special education programme had only vague objectives, that inclusive programmes were inflexible, textbooks inappropriate and teaching skills inadequate. These findings are supported by two studies conducted more recently and discussed above (Albraheem, 2003; AlAmri, 2009), which indicate the importance of preparing mainstream schools, their administrative staff and hearing students for DHH inclusion.

Table 3.6 gives an overview of the studies discussed in this section, showing that several common factors can be identified. First, mainstream schools in the Middle East tend to prepare inadequately for DHH inclusion in terms of hearing students and administration, exacerbated by poor buildings and low quality resources. Second, there is an overlap of job description between administrators and mainstream teachers, leading to problems in assessing DHH students which seem to hinder successful inclusion. The national

curriculum was also found to be unsuitable for the characteristics of DHH students. A fourth common finding was that mainstream schools and special day schools tended to have a better impact on DHH students' self-concept, receptive language and adaptive behaviour. Overall, administrators and teachers seemed to have positive attitudes towards DHH inclusive education. Although there was some evidence of negative effects of inclusion, overall attitudes towards DHH inclusion were relatively positive, with some areas of concern around peer/social interaction and mainstream schools' lack of preparation.

Table 3.6 Overview of ME studies of attitudes to DHH inclusion

Author/date	Place and Aims	Results
Albraheem (2003)	-Survey in Riyadh. -Explore technical problems faced by mainstream school administrators. -Investigate their opinions on supervising DHH programmes.	1-Head-teachers' main problem is poor preparation of DHH and hearing students for inclusion. 2-Poor quality of mainstream school buildings. 3-National curriculum inappropriate for DHH students. 4-Overlap of job description between administrators among DHH programmes.
Abdullah (1998)	-Survey in Nablus. -Explore teachers' and administrators' attitudes towards inclusion in primary schools.	1-Administrators and teachers held positive attitudes towards DHH inclusive education. 2-No statistical differences related to gender, position at school, speciality, experience or qualifications.
AlAmri, (2009)	-Survey in Jeddah LEA. -Investigate problems that resulted from imposing the Saudi national curriculum in DHH programmes.	1-The national curriculum objectives were not suitable for the characteristics of DHH students. 2-Mainstream education textbooks do not fit the experience of DHH students; contain difficult vocabulary; not related to DHH culture; all exercises designed for hearing students; complete absence of sign language and DHH teachers' voice; lessons based on abstract not concrete reasoning; no teachers' handbook. 3-Teachers' workload hindered their use of IEPs, assessment relied on spoken and written exams.
Al-Zahrani (2005)	-Survey in Riyadh. -Investigate DHH social competences and adjustment skills according to the type of placements, programme and gender.	1-No significant differences in peer relations, academic behaviour, self-management and social adjustment based on educational placement or type of programme. 2-No significant differences in academic behaviour and self-management based on gender. 3-Significant differences were found in peer relations and social adjustment based on gender
Abu Shaira (2013)	-Survey in Jeddah. -Examine the effects of inclusion on the language development of HISs	1-Teachers' assessments showed higher receptive language scores for HISs taught at inclusive schools.

	according to their educational settings from teachers' and parents' viewpoints.	2-Parents' assessments showed no statistically significant differences in either variable based on placement.
Zahir (1990)	-Survey in Egypt. -Examine teachers' opinions of educational problems in schools for HISs and their effects on the education process.	1-Special education programme had vague objectives; inflexible inclusive programmes; inappropriate textbooks; inadequate teaching skills.

3.7 Factors Influencing Educators' Attitudes towards SEN Inclusion

This section reviews studies of teachers' attitudes to SEN inclusion, with the specific aim of identifying factors tending to influence these attitudes. Unlike the earlier sections, there is no geographical division into subsections, as very little work was identified as having been done on this topic in the Middle East.

Numerous factors have been found to influence teachers' attitudes to SEN inclusion in general and DHH inclusion in particular. Salvia and Munson (1986) categorise these as school-related, teacher-related and child-related factors. School-related factors are concerned with all environmental variables relevant to physical resources and teaching aids. They are considered first, as they are most consistent in their impact on teachers' attitudes. In a review of the literature, Avramidis (2001) indicates that according to teachers' beliefs, there should be substantial restructuring of mainstream schools' resources and facilities prior to inclusion. Secondly, teacher-related factors are demographic variables such as teaching experience, training, gender, school stage, teachers' beliefs and qualification type. Unlike school-related factors, there is inconsistency in their impact; Avramidis (2001) asserts that no particular teacher-related variable can be perceived as a reliable predictor of teachers' attitudes. Finally, child-related factors include the special needs condition, severity, educational needs, age, gender, prevalence of D/deafness and other person-related factors (Clough and Lindsay, 1991). The nature and severity of a disability influences the attitudes of teachers. Some teachers prefer to include children with visual and hearing needs, rather than those with learning difficulties (ibid). Forlin (1995) found that while teachers were accepting of including children with intellectual impairments, they were more accepting of those with physical impairments. To conclude, child-related factors matter in the acceptance of special needs students and most teachers support the inclusion of children with mild-to-

moderate rather than severe disabilities. The child-related factors relevant to DHH students might include type of HL based on severity (mild, moderate, severe, profound), on location (conductive, sensorineural, mixed) or on time of onset (pre-lingual, post-lingual) and language preference at home (spoken, sign, bilingual).

To focus the discussion on teacher-related variables, multiple factors have been found to be associated with teachers' attitudes towards inclusion. Several studies have reported that the practice of inclusion has an influence on teachers' attitudes. According to the British research discussed by Avramidis et al. (2000), the study of 81 primary and secondary teachers in one LEA in the southwest of England found that teachers who had implemented inclusive practices and had more experience of inclusion had attitudes that were significantly more positive than those of teachers from another school which had not implemented inclusion. This indicates that long-term practice of inclusion, positive experience of inclusion and appropriate training programmes can produce positive attitudes. Age and teaching experience are also related to teachers' perceptions of inclusion, based on the findings of several studies.

Florian (1998) found that the approval of including a child with a physical disability in mainstream school was highest among teachers with less than six years of teaching experience, while Alsaratawi (1995) found that those with 6-10 years' experience tended to reject inclusion. Other researchers have found that younger teachers and those with less teaching experience were more likely to support inclusion (Berryman, 1989; Center and Ward, 1987; Clough and Lindsay, 1991). Conversely, teachers with greater teaching experience were more likely to have negative attitudes towards inclusion, partially because this is a relatively new movement and they have not experienced it before (Forlin, 1995; Leyser et al., 1994; Soodak et al., 1998; Harvey, 1985). However, other researchers have reported that the length of teaching experience did not significantly correlate with teachers' attitude towards inclusion (Avramidis et al., 2001; Kalyva et al., 2007; Leyser, et al., 1989; Rogers, 1987; Reynolds et al., 1982; Stephens and Braun, 1980; Al-Ahmadi, 2009). Thus, it seems that there is inconsistency in this factor's relationship to inclusion attitudes, as some researchers see no significant relationship, while others have reported significant relationships between age or experience and teachers' attitudes, particularly among those at the beginning of their teaching careers (Berryman, 1989; Center and

Ward, 1987; Clough and Lindsay, 1991; Forlin, 1995; Leyser et al., 1994; Harvey, 1985; LeRoy and Simpson, 1996; Koutrouba, 2008).

Another important factor in shaping teachers' attitudes towards inclusion is the experience of contact and relationship with special needs children. Further to this, the results of the studies of El-Ashry (2009) and Subban and Sharma (2006) reveal more positive attitudes towards inclusion among participants with a friend or a family member with SEN, while Cook (2001) reports that children with specific learning disabilities, ADHD or behavioural disorders were nominated significantly more often by teachers in the attitudinal category 'rejection' than those with DHH.

Having reviewed the literature, de Boer et al. (2011) report that several studies have revealed that teachers are most negative about the inclusion of students with learning disabilities, behavioural problems and cognitive disabilities. In contrast, teachers are the most positive about the inclusion of students with physical and sensory disabilities (which include DHH students). This conclusion is in accordance with an earlier review by Avramidis and Norwich (2002) of teachers' attitudes towards integration/inclusion, which concluded that while attitudes are generally positive, the nature and severity of children's needs are strongly related to teachers' disposition towards inclusive practices. Teachers showed more positive attitudes towards the inclusion of students with mild disabilities or physical/sensory impairments than students with more complex needs. In particular, in the case of the more severe learning needs and behavioural difficulties, teachers held negative attitudes to the implementation of inclusion. To conclude, most teachers support the inclusion of children with mild to moderate disabilities rather than severe ones.

Lambe and Bones (2006) argue that some teachers could have a negative attitude towards the inclusion of children with SEN because of their lack of skills in dealing with different kinds of disabled children. These teachers struggle to create a balanced environment for all the students in inclusive settings. Barnett et al. (1999) found that general education teachers in the USA (including those newly transferred from general to DHH education) needed training in special education, in teaching strategies and in strategies for promoting collaboration.

Other researchers have found that the greatest challenge to the implementation of inclusion is the lack of time needed to consult with specialists, particularly in the case of generalist teachers, to apply effective lesson plans (AlAmri, 2009) and to teach disabled students in mainstream classrooms (Santoli et al., 2008). The barriers associated with managing time relate to a lack of preparation, which causes difficulties for untrained or less well trained teachers (Al-Hennawi, 2003), when it comes to coping with inclusive settings. Therefore, lack of preparation might have a negative effect on their attitudes towards inclusion. According to a survey of the attitudes of Greek teachers towards inclusion conducted by Avramidis and Kalyva (2007), training in special education needs and inclusion matters was positively related to teachers' attitudes. This finding is supported by the results of other studies (Gaad, 2004; Subban and Sharma, 2006). Although these contextual factors differ from one context to another, these studies generally found that teachers who had undertaken either pre- or in-service training courses in special education had more positive attitudes and fewer concerns about the implementation of inclusive education.

Another important factor shaping teachers' attitudes towards inclusion is the experience of contact and relationships with disabled children. Parasuram (2006) conducted a study to investigate variables affecting teachers' attitudes towards disability and inclusive education in Mumbai. The sample consisted of 300 teachers and covered eight background variables: a) age, b) gender, c) income level, d) education levels, e) years of teaching experience, f) acquaintance with SEN person, g) having a SEN as a family member, h) usual contact with a person having special needs. She employed two scales in order to measure attitudes, namely the Attitude toward Disability Scale (ATDP; Dalal, 1996), and the Attitudes towards Inclusive Education Scale (ATIES; Wilczenski, 1992). Parasuram (2006) concludes that the only variable influencing teachers' attitudes toward inclusion was previous acquaintance with a disabled person. Similarly, the results of the studies by El-Ashry (2009) and Subban and Sharma (2006) reveal more positive attitudes towards inclusion among participants with a friend or a family member with SEN.

It has been argued that one way of changing policy and developing the practice of inclusive education is to identify challenges and barriers to inclusion (Buysse, Wesley, McWilliam and Bailey, 1998; Elshabrawy, 2010). The process of developing inclusive

educational systems requires extensive personal, policy, educational, organizational and socio-cultural changes. These are particularly vital in the context of Saudi DHH inclusion. Several studies (e.g. Forlin, 1998; Hodge, Ammah, Casebolt, Lamasterd and O'Sullivan, 2004; Vaughn et al., 1996; Elshabrawy, 2010) have argued that teachers' negative attitudes may have weakened the progress of inclusion. Without teachers' willingness to tolerate differences and accept special needs students, DHH in particular, in their classrooms, practice cannot successfully move forward to inclusion. Research has also indicated that absence of pre-service and in-service training and the availability of specialized courses were deterrents to inclusion (Corbett, 2001; Kristensen, Omagorloican and Onen, 2003; Reid, 2005; Winter, 2006). Thus, mainstream teachers and administrators who do not have the essential competence to teach and effectively communicate with DHH students might feel 'burned out' (Crane and Iwanicki, 1983; Nichols and Sosnowsky, 2002; Embich, 2001; Wisniewski and Gargiulo, 1997; Frank and McKenzie, 1993; Weber and Toffler, 1989) and therefore unable to accommodate DHH children and others with SEN in their classrooms. Moreover, these studies have shown that specialized training, professional development and pedagogy are critical to the success of inclusion programmes.

Other factors which play an active role in achieving successful inclusion for SEN students are school and classroom facilities, provision of support and resources, availability of resource rooms, auditory training laboratories and other teaching aids, and adequate governmental funding (Lewis and Doorlag, 1991; Clough and Lindsay, 1991; Forlin, 1998; Hodge et al., 2004; Macleod, 2001; Morley et al., 2005). Additional concerns have been recorded about the vital role of training in shaping positive attitudes (Beh-Pajoo, 1992; Shimman, 1990; Dickens-Smith, 1995), modification of the national curriculum to suit DHH linguistic needs (AlAmri, 2009), teaching methodologies, assessment and examinations (Kristensen et al., 2003; AlAmri, 2009).

To give an example of school-related variables, there has been a major transition in some educational research that focuses on features which would facilitate inclusive practices. Ainscow (2007) has researched the improvement of effective strategies for making inclusive policies more applicable. Much of his work has been concerned with school contextual factors in relation to school improvement and effectiveness. He initiated

‘Improving the Quality of Education for All’ (IQEA), which is an approach to school improvement with four features: firstly, developments in teaching and learning, through the creation of conditions among mainstream schools for managing successful change; secondly, school improvement led from within mainstream schools themselves, focusing on areas that are seen to be higher in priority; thirdly, collecting and engaging with evidence in order to move thinking and practice forward to evaluate progress; and finally, collaboration amongst colleagues in partner schools and with IQEA consultants, so that a wider range of expertise and resources is available to support improvements in all of the participating schools. These four factors are important to ensure successful inclusion for DHH students and others with SEN.

There are several contextual factors that are influential in shaping an inclusive school culture. These include embracing the value of equity for individual success and wellbeing, instilling a democratic governance ethos, establishing the value of a collaboration culture which seeks to bridge the gap between home and school, making a commitment to professional growth and establishing strong, supportive leadership (Kilgore, Griffin, Sindelar and Webb, 2002). Other relevant features include moving from teaching to learning, from offering ‘services’ to providing inclusive supports that benefit all students equitably, from individual methods to a whole-school approach, from parent involvement at some family assemblies to active family-school participation and from school reform to ongoing school improvement (Ferguson, 2008).

In Jordan, Alghazo (2002) found that special education teachers showed more positive attitudes towards SEN integration than other teachers in mainstream schools. This might be because they are more specialized in special needs or it may be explained by other contextual factors. Evidence from the literature suggests that teachers are more likely to develop positive attitudes towards inclusion when they have access to adequate and appropriate resources and materials (Avramidis, 2001), when they are able to provide a physical environment conducive to students with physical disabilities and when the class size is smaller (Clough and Lindsay, 1991; LeRoy and Simpson, 1996; Koutrouba et al., 2008; Mushoriwa, 2001).

It could be concluded that the results of studies examining teachers’ attitudes towards inclusion provide a mixed picture. Several factors have been found to affect teachers’

attitudes either positively or negatively. Among the factors identified as important here are active experience with inclusion, experience of contact, pre-service or in-service training in special education and inclusion matters, and the availability of relevant and modernized resources. Furthermore, most of the studies mentioned above found that teachers were more willing to accept or support the inclusion of children with sensory special needs/disability, visual disabilities or specific learning difficulties, compared to those with cognitive delay, hearing impairment, learning disabilities and behavioural or emotional disturbance (Algazo and Gaad, 2004). Most teachers were also found to advocate the inclusion of children with mild/moderate needs (Clough and Lindsay, 1991; Forlin, 1995) rather than severe/profound ones (Elshabrawy, 2010). This means that the nature and severity of disability are strongly associated with attitudes (Avramidis and Norwich, 2002). In this regard and relevant to the current research aims and questions, teachers might have positive attitudes towards hard-of-hearing students rather than Deaf ones.

It is not easy to move from partial or locational integration as a matter of presence and assimilation where special needs student had to fit into the mainstream school to a new concept of full participation for all, academic and social belonging, effective learning to accommodate all learners, school restructuring, inclusive standards and ethos. In the Saudi context, the emphasis has been on aspects of disability, rather than the potential of children with special needs. A change is needed in educators' attitudes, otherwise there will be inadequate progress towards inclusion. This type of change in collective attitudes towards special needs inclusion might increase the formation of accommodating diversity, accessibility rights, participation, belonging, professional specialized services and better expectations: it is "society and not people with impairment that should be the target for professional intervention and practice" (Oliver, 1996: 43). Figure 3.1 depicts the basic factors for the human rights of Deaf people proposed by the World Federation of the Deaf (WFD).

Basic Factors for Human Rights of Deaf People

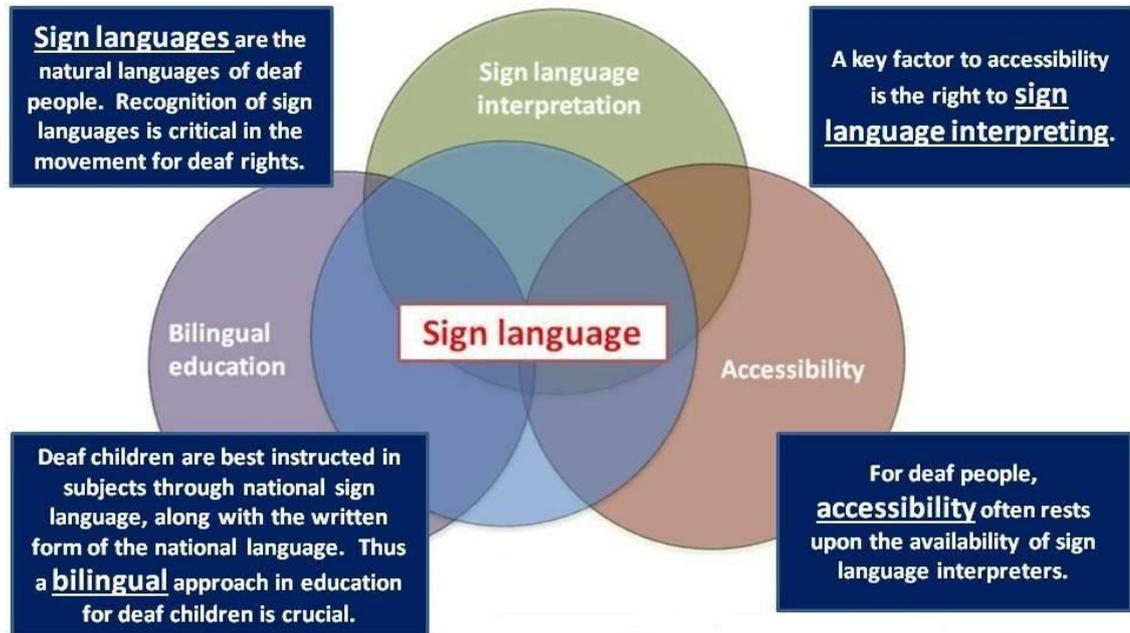


Figure 3.1 Deaf people and human rights, adapted by H. Hauland and C. Allen for the World Federation of the Deaf and the Swedish National Association of the Deaf, 2009

3.8 Studies of factors influencing the success of DHH inclusion

This section reviews a few studies which have identified factors influencing the success of DHH inclusion in particular. The development of auditory/oral skills appears critical to the success of HH students in mainstream settings. Pflaster (1980) conducted a study involving such students in the USA, 90% of whom received support services from speech therapists, hearing teachers and/or teachers of deaf students. Three factors were found to be most related to their better academic performance in inclusive settings: oral communication, personality, such as the level of motivation and self-concept, and linguistic competence. The students in this study were not profoundly Deaf. Students with more profound hearing loss who use manual sign language might have great difficulty in general education classrooms, because manual sign language has its own rules of grammar, and teachers who use standard English (or standard Arabic in the case of Saudi Arabia) may not be effective at communicating abstract concepts to these students within the constraints of a general education classroom (Liben, 1978).

Another study in the USA, by Eriks-Brophy et al. (2006), found that the degree of hearing loss and the extent of any delay in fitting the child with appropriate amplification (i.e. hearing aid or cochlear implant) were two vital factors directly affecting spoken language acquisition (expressive language). In addition, young students with cochlear implants showed better language development and academic achievement than deaf counterparts without implants; their reading achievement was improved at the primary school stage (Marschark et al, 2011). The language delay often found in children with hearing loss has been seen as an underlying cause of reduced academic performance (Moores, 1996; Maxon, Rose and Brackett, 1982). Due to this often significant language delay, the placement of students with hearing loss into inclusive settings has been a controversial and highly debated educational alternative. Eriks-Brophy et al. argue that reading and writing ability, as well as level of speech intelligibility, have been frequently cited as important individual characteristics that impact directly on successful DHH inclusion into mainstream educational placements (Allen and Osborne, 1984; Geers, 2004; Goldgar and Osberger, 1986; Holt, 1993). Predictors of successful inclusion have typically focused on individual characteristics of the DHH students themselves, such as early identification of hearing loss, early and consistent use of amplification, early family-oriented infant/preschool programming, an auditory/oral approach to language learning using speech as the primary mode of communication and early placement into mainstream school with regular support services (Brackett, 1993; Geers, 1990; Geers and Moog, 1989; Goldgar and Osberger, 1986; Moores and Sweet, 1990; Northcott, 1990; Pflaster, 1980). Although degree of hearing loss has often been cited as an important predictor variable (Allen and Osborn, 1984; Brackett, 1993; Geers and Moog, 1989; Karchmer, Milone and Wolk, 1979; Karchmer and Trybus, 1977; Strong, Charlson and Gold, 1987; Wolk, Karchmer and Schildroth, 1982), some other studies have contradicted this assumption (Geers, 1990; Biro et al, 1985; Goldberg and Flexer, 1993), arguing that age at identification and intervention, rather than degree of hearing loss, is a significant predictor of language outcomes for DHH students and their success at school (Apuzzo and Yoshinaga-Itano, 1995; Calderon and Naidu, 2000; Moeller, 2000; Yoshinaga-Itano, 1999). Active parental engagement at an early stage of identification and intervention in achieving positive language outcomes for DHH students has also received considerable

research attention (Calderon, 2000; Meadow-Orlans, Mertens and Sass-Lehrer, 2003; Moeller, 2000; Yoshinaga-Itano, 2000).

Marschark et al. (2007) conducted a study in the USA into the extent to which cochlear implants improved academic achievement and the likelihood of successful inclusion. Their study was a critical analysis of empirical studies assessing literacy and other domains of academic achievement among children with cochlear implants. They emphasize the importance of factors such as age of implantation, age of hearing loss and degree of hearing loss, arguing that early implantation and longer periods of implant can be associated with better reading and higher academic achievement. However, although there are strong benefits of cochlear implantation for reading proficiency and general achievement in young DHH students, empirical results have been rather inconsistent. Marschark et al. suggest that this is because of failures to control difficult variables such as age of implantation, language skills prior to implantation, reading ability prior to implantation and regularity of implant use. They conclude that studies of other aspects of academic achievement such as writing and comprehension are infrequent, while the extent to which performance in such domains is mediated by reading ability or directly influenced by hearing, language and speech remains unclear (Marschark et al., 2007).

Yet another US study, by Leigh, Brice and Meadow-Orlans (2004), explored the level of attachment between Deaf mothers and their 18-month-old children and identified relationship patterns similar to those of their hearing peers. This finding is supported by Sieratzki and Woll (2004), who investigated an indicator of early mother-child interactions, cradling laterality, and found that the cradling bias of Deaf mothers was similar to that of hearing mothers. The significant differences among Deaf mothers related to the hearing status of their own parents and to the hearing status of their children: Deaf mothers of Deaf parents showed a strong leftward cradling bias with both hearing and Deaf children, whereas Deaf mothers of hearing parents showed a leftward cradling bias with hearing children and a rightward cradling bias with Deaf children. These researchers also found significant differences between Deaf mothers with hearing parents and Deaf mothers with Deaf parents, in that the latter ascribed greater importance to tactile interaction. This may in part be because Deaf mothers with Deaf parents may have experienced more responsiveness by their mothers to their tactile needs as infants in

comparison to Deaf mothers with hearing parents (Koester et al., 1998; Koester, Brooks and Traci, 2000). This in turn suggests that Deaf students with Deaf parents develop better in their tactile/kinaesthetic movement and learning styles.

3.9 Definitions of attitude and justification of the three-component model

The model of attitudes adopted for this study is the three-component model, widely known as the ABC (affective, behavioural, cognitive) model, which has a long history (Eagly and Chaiken, 1993). There are many definitions of attitudes, but for the purpose of the current study a number are summarised in Table 3.7.

Table 3.7 Definitions of attitude

Author	Date	Definition
Rosenberg and Hovland	1960	Predispositions to respond to some class of stimuli with certain classes of response.
Zimbardo and Ebbesen	1970	It is either mental readiness or implicit pre-dispositions that exert some general and consistent influence on a fairly large class of evaluative responses.
Scharm	1982	An assumed case of tendency to respond by approving or rejecting a specific position.
Eagly and Chaiken	1993	A psychological tendency that is expressed by evaluating a particular entity with some degree of favour or disfavour.
Fishbein and Ajzen	1997	A learned predisposition to respond in a consistently favourable or unfavourable manner with respect to a given object.
Shapiro	1999	The tendency for an individual to act or react positively or negatively to his or her world based on values, beliefs, and paradigms rooted in his or her social experiences.
Hogg and Vaughan	2005	A relatively enduring organization of beliefs, feelings, and behavioural tendencies towards socially significant objects, groups, events or symbols.

In these definitions of attitudes, several common factors can be identified. The classes of responses include three components or dimensions. First, the cognitive component means a person's knowledge/beliefs and opinions about the object; this component is mainly related to the probability that an object or event is associated with a given attribute (Fishbein and Ajzen, 1975). Second is the affective component, which entails the feelings that people experience and may or may not concern a particular object or event (Berkowitz, 2000). Finally, the behavioural component (conative or action tendencies) is typically defined as the overt actions of an individual which entails the way the attitude we have influences how we act (ibid).

The cognitive component refers to thoughts and knowledge about the attitude object (Ajzen, 2005; Eagly and Chaiken, 1993; Stahlberg and Frey, 1996). These thoughts are often conceptualized as beliefs, where beliefs are understood to be associations that people establish between the attitude object and various attributes. These cognitive evaluative responses include the covert responses that occur when these associations are inferred or perceived, as well as the overt responses of verbally stated beliefs. The attributes that are associated with the attitude object express positive or negative evaluation and therefore can be arguably located by psychologists on an evaluative continuum at any position from extremely positive to extremely negative. The cognitive component of attitude has sometimes been referred to as constituting beliefs, knowledge, opinions, information, cognitions and inferences (Eagly and Chaiken, 1993). In general, a person who evaluates an attitude object favourably is more likely to link it with positive attributes and vice versa (Elshabrawy, 2010).

The affective component encompasses feelings, moods, and emotions that people experience, associated with attitude objects (Albarracin, Zanna, Johnson and Kumkale, 2005; Ajzen, 2005; Eagly and Chaiken, 1993). In general, people who evaluate an attitude object favourably are likely to experience positive affective reactions towards it and vice versa (Elshabrawy, 2010). The behavioural component encompasses the explicit actions that people perform in relation to the attitude object and includes intentions to act which are implicit (Ajzen, 2005; Eagly and Chaiken, 1993; 1998). As described in the two previous dimensions, responses in the conative component can also range from very positive to very negative, which can be located on a continuum of evaluative meaning. Eagly and Chaiken (1993) argue that people who evaluate an attitude object favourably tend to engage in behaviours that foster or support it and vice versa. The problematic argument here is that these responses, being either explicit or implicit, are sometimes quite complex, socially situated and context-driven, and they do not depend exclusively on attitudes. As Franzoi (1996) points out, during the formation of a person's attitude towards an object, the cognitive dimension may play a crucial role in shaping what is important. In other situations, however, the affective dimension would be the critical factor.

I have employed the ABC model of attitude because of its potential to reflect the complexity of educators' attitudes towards DHH inclusion. The multidimensional model of attitudes offers a holistic way of understanding and a dynamic conceptual framework which permits practitioners to express the fact that evaluation can be demonstrated via responses of all three types, without regard to whether the types prove separable in appropriate statistical analysis (Elshabrawy, 2010). This approach is maintained by Schlegel (1975) and Schlegel and DiTecco (1982), who argue that if beliefs are numerous, complicated and sometimes contradictory, a simple evaluative response will fall short of representing the whole attitude structure. This is particularly true with a problematic construct such as DHH inclusion, which gives a multidimensional attitude scale more weight than a simple model. Finally, the results of some studies which have utilized this approach in the field of special education and disability (e.g. Avramidis et al., 2000; Findler, Vilchinsky and Werner, 2007; Elshabrawy, 2010) indicate that it illustrates attitudes appropriately.

3.10 Limitations of the reviewed literature

The literature reviewed in this chapter can be seen to suffer certain limitations. Most of the studies reviewed above have used traditional quantitative methods (self-report instruments) in an attempt to ascertain the extent to which participants accept or reject the general concept of integration/inclusion as related to a range of disabling conditions. Indeed, as a teacher and administrator of Deaf and partially deaf (hard of hearing) students for a decade and a half, and as a lecturer for two years at the SEN Department, College of Education, King Abdulaziz University, I became aware that all SEN research in Saudi Arabia has been located within the scientific/positivistic quantitative research paradigm (e.g. Al-Musa, 2005; Al-Zahrani, 2005). This is because most Saudi academics firmly believe in the 'golden rule' of basing their educational research on measurement and quasi-experimental designs. However, this type of methodology alone does not give a full and thorough interpretation of such deep and complex concepts such as Deafness, disability, inclusion, special needs, mainstream schooling and attitudes to them (Elshabrawy, 2010). These concepts are embedded and rooted in local contexts and it would be difficult or impossible to isolate all of the factors affecting teachers' attitudes towards inclusion.

It is also worth mentioning that most of the studies do not directly address DHH, but other areas of SEN. For this reason, some of the results of these studies might not be relevant to the focus of the current study. However, they were analysed here to establish general attitudes towards the philosophy of inclusion. Another limitation concerns the sensitivity of attitudes to disability. These issues can arouse over-cautious positions in which teachers and administrators often appear to give responses which they deem to be culturally or politically acceptable, rather than stating unequivocally what they actually believe. In other words, teachers may make positive statements about the philosophy of inclusion in general, but when it comes to teaching students with special needs in their daily lessons, their practice may reflect a less strongly committed attitude (Avramidis, 2001).

3.11 Reflections on the reviewed literature

The findings of many of the studies reviewed in this chapter indicate that the academic attainments of DHH students, whether taught in inclusive classrooms or in special classrooms, could be attributed to several factors, including differences in student-related and family characteristics (e.g. age of hearing loss onset, prior academic achievement and parental hearing status) and certain psychosocial and demographic-related variables. In a sense, this supports the argument that it is difficult to attribute any difference to the programmes themselves. This conclusion is supported by the assertion of Spencer and Marschark (2010) that there was little available evidence concerning academic achievement of deaf students enrolled in mainstream versus separate programmes.

Notwithstanding such uncertainty, the above review has identified several studies in favour of the integration/inclusion of Deaf and hard-of-hearing students. Overall, there seems to be a consensus in favour of the importance of integration for students with special educational needs generally and for DHH students as a part of this group. Some of these studies have also emphasised the importance of having clear-cut legislation that regulates the process of moving such students from special to mainstream schools and of providing all necessary human resources, teaching aids and other relevant prerequisites beforehand, to make inclusive education successful (Al-Musa, 2007).

However, this general feature of positive attitudes towards integration/inclusion of all special needs students was not unconditional and there were some reservations about its implications; for instance, more teachers were uncertain about the practicality of full inclusion. In addition, there were inconsistencies, whereby some studies found that participants' attitudes towards integration were positively related to length of experience (Berryman, 1989; Center and Ward, 1987; Clough and Lindsay, 1991), gender (Aksamit, Morris and Leunberger, 1987; Eichinger, Rizzo and Sirotnik, 1991; Thomas, 1985), nature of disability (Center and Ward, 1987) or specialization (Sari, 2007), whereas others indicated a negative influence of these contextual factors and some found no relationship at all (Avramidis et al., 2000; Leyser, Volkan and Ilan, 1989; Rogers, 1987; Stephens and Braun, 1980; Elshabrawy, 2010). There was also some inconsistency between groups, with students showing positive attitudes towards integration (Hung et al., 2006), while teachers and administrators working at special schools tended to express relatively negative attitudes towards some inclusive practices and believed that there was little benefit for students either with or without SEN. In particular, it seems that teacher-related factors were inconsistent as a reliable indicator of teachers' attitudes towards integration (Avramidis, 2001; Avramidis and Norwich, 2002; Elshabrawy, 2010).

Additionally, this review indicates that it is very important to provide mainstream schools with consistent support (Sari, 2007) and resources, in order to accommodate all the additional needs of students with special needs (Center and Ward, 1987; Clough and Lindsay, 1991; Myles and Simpson, 1989). This includes easy access to all classrooms, toilets, playgrounds, dining-rooms, teaching aids, lab materials, DHH user-friendly posters and banners with cued and alphabetical Arabic Sign Language, and other related resources would be provided, such as auditory training of specialized teachers, teaching assistants (El-Zraigat, 2013), in-service training and resource rooms where individualized education plans would be carried out. The availability of teaching materials is important (LeRoy and Simpson, 1996; Center and Ward, 1987), while itinerant teachers could give short courses in advanced sign language for special teachers and basic courses for generalist teachers and administrators.

It is usually advisable that education reform does not blindly replicate others' experience of inclusion. It might take the form of a gradual systematic transfer of educational

experiences, leading to educational progress socially and academically compatible with the Saudi educational ethos, embedded within Islamic ethics. It could carry on from the point that others have reached, benefiting from their experience and avoiding known drawbacks (Elshabrawy, 2010). Norwich (2013) proposes that to achieve a level of conceptual reform and to address the multidimensional nature of inclusion, educators should distinguish ‘placement inclusion’ from ‘participation inclusion’ in order to make its implications more explicit. For instance, in Greece (as in Saudi Arabia) separate special classes in mainstream schools (presence inclusion) of SEN students are called ‘inclusion classes’ (participating exclusion), whereas in the UK withdrawal units for students with behavioural difficulties are called ‘inclusion centres’ (Norwich, 2013). Research has indicated that some educators working in special schools view temporary withdrawal to a separate setting as being ‘inclusive’ in the sense of facilitating access for SEN students to engage in learning the same curriculum as other students (Norwich, 2008). Norwich then suggests four dimensions and four levels of inclusion (Figure 3.2).

	Presence	Academic Participation	Belonging: Social Participation	Achievement
National				
Local				
School	4		2	
Class	3	1	1	

Figure 3.2 Levels and dimensions of inclusion (Norwich, 2013)

This arrows indicate tensions in the meaning of ‘inclusion’ across the levels and dimensions:

- Class level: students with disability/difficulty might be included in terms of presence at mainstream school (placement inclusion) but not necessarily participating academically or socially (participating exclusion) (arrow 1).

- School level: students with disability/difficulty might be present at mainstream school (placement inclusion) but not necessarily feeling that they really belong there (belonging exclusion) (arrow 2).
- Local authority level: students with disability/difficulty study at separate locations from ordinary schools (placement exclusion) but are sometimes in the mainstream school system at local authority level (arrow 4).
- Presence dimension: students with disability/difficulty might be members of mainstream school (placement inclusion) but outside the mainstream classroom (academic exclusion) (arrow 3).

It is important for the GDSE, as the major stakeholder in Saudi special education policy-making, to learn lessons from other countries that have introduced DHH inclusive education. We should build on the successes of others, as evidence-based practice, not try to reinvent the wheel. For example, Table 3.8 lists UN documents concerning SEN-related legislation, policies and regulations.

Table 3.8 UN conventions affecting DHH inclusion

The UN Convention on the Rights of the Child (UNICEF, 1989) states that inclusive education should be the goal for the education of ‘children with disabilities’.
The Salamanca Statement and Framework for Action on Special Needs Education (UNESCO, 1994) requires signatory nations to ensure that all their educational policies stipulate that disabled children attend the local school that would be attended if the child did not have a disability.
The United Nations Convention on the Rights of Persons with Disabilities (UN, 2006), requires state parties to ensure that there is an inclusive education system at all levels (Article 24).

In the United Kingdom, the concept of inclusion in education goes back to the Warnock Report of 1978. Table 3.9 lists UK legislation and policy documents relevant to the education of children and young people with SEN and disabilities in mainstream schools.

Table 3.9 UK legislation and policy documents on SEN and inclusion

The Warnock Report on special educational needs (1978).
The Education Act (1981).
The Excellence for All Children with Special Educational Needs Green Paper (1997), which emphasised educational commitment to the principle of inclusion.
The Special Educational Needs and Disability Act (SENDA, 2001).
Every Child Matters Green Paper (2003).
Warnock Report (2005).
Special Educational Needs Green Paper (Support and Aspiration: A New approach to Special Educational Needs and Disability, 2012).

However, it does not appear that legislation has led to the delivery of full/radical inclusive practices for all special educational needs students in the UK. In 2005, Baroness Warnock publicly specified what she had said before, that some special schools were needed. In 2011, the National Union of Teachers reaffirmed its “commitment to the goal and development of inclusive education” (Cheshire East Parents and Carers Voice Conference, 2012, p. 4). The Green Paper ‘Support and Aspiration; A new Approach to Special Educational Needs and Disability’ (2012) proposes changes to the current approach to providing support for SEND students, by “removing the bias towards Inclusion in education”. Some other literature provides detailed accounts and guidelines on approaches to developing effective inclusive policies and practices for all students, with and without SEN (Farrell & Ainscow, 2002; Booth & Ainscow, 2002; Ballard, 1999; Mittler, 2000; Audit Commission, 2002). These have been complemented by reviews of research in this area (Sebba & Sachdev, 1997; Harrower, 1999; Farrell, 2000). These publications focus on two main interrelated aspects that appear to be critical to the success and effectiveness of SEN inclusion: mainstream class teachers’ beliefs and experiences (Ward, 1994; Forlin, 1995; Davis, 2002; Ainscow et al., 2003) and the way in which support is provided to SEN students in the mainstream classroom (Farrell, Balshaw, & Polat, 1999; DfES, 2000; Balshaw & Farrell, 2002). Inclusion advocates talk of children’s right to be included in mainstream education, assert the wider personal and societal benefits of inclusion and describe education in special schools as segregated, discriminatory and oppressive (Cheshire East Parents and Carers Voice Conference, 2012).

Similarly, there are detailed regulations related to the provision of special education and inclusion policies in the USA, as presented in Table 3.10.

Table 3.10 US legislation and regulations on special education and inclusion

The Education of All Handicapped Children Act (Public Law 94-142, 1975).
Individuals with Disability Education Act (IDEA, P.L. 101-476, 1990) and its amendment (P.L. 105-17, 1997).
No Child Left Behind, IDEA (2004).

While these various Western and international documents go into considerable detail on the provision of inclusive education and other alternative placements for children with SEN and disabilities, DHH inclusion in Saudi Arabia is still in its early stages (Al-Musa, 2007). This implies a threefold need: for major infrastructure improvement, for an open theoretical and academic debate on the inclusion philosophy and its implications, and for steps towards inclusive education. More lessons should be learned in the form of organisational and legislative improvement at the various levels of the GDSE, the MoE and the thirteen LEAs regarding their policies towards DHH inclusion, mainstream programmes, CPD and in-service specialized development of teachers and administrators, moving towards a whole-school approach for better parental involvement, maintaining modern in-class support services and resources for DHH students, and consistent evaluation of successful mainstream programmes. Peneston (2012) argues that the MoE should support local authorities and mainstream schools as resources for providing in-service assistance as they transition those newly transferred teachers, which may lead to improved student outcomes. Furthermore, fundamental to ongoing professional development opportunities for new teachers and those transferred into DHH inclusive education are policies, procedures of mainstream school inclusive pedagogy, classroom modifications, behaviour management techniques and general classroom operations. Norwich (2013) suggests a model of inclusive pedagogy in terms of curriculum, knowledge and teaching strategies as interactive elements. The pedagogy in this model involves decisions about three elements of inclusive pedagogy as a generic term (Figure 3.3):

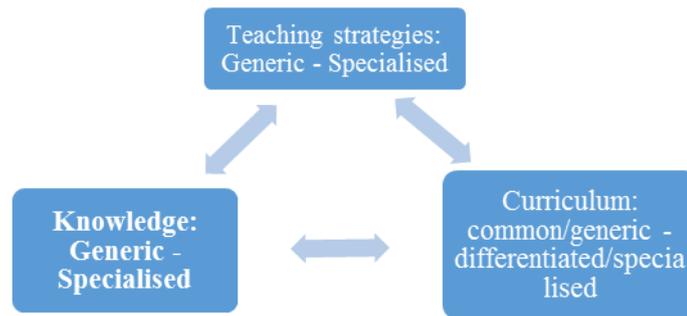


Figure 3.3 Model of pedagogy in terms of curriculum, knowledge and teaching strategies

Curriculum here means what is to be learned, while knowledge refers to what is required to decide on teaching strategies, i.e. how to teach (sign language in case of DHH inclusion). The effectiveness and importance of this model is that it makes it easy to consider specialisation of one or more elements in the pedagogical model. This implies, for instance, that DHH students may require teaching strategies (sign language or bilingual approach) and knowledge specialization (the implications of D/deafness for teaching and learning) for mainstream teachers to support these students to learn in mainstream classrooms. The current study also found that some educators had unfavourable views of Deaf inclusion. This is consistent with the historical tendency for special schools to persist as a parallel, separate educational alternative for SEN students (Ainscow et al., 1999). This implies that newly qualified or transferred teachers need to be professionally well prepared, specially trained in sign language fluency and exposed to experiences of teaching differently in order to welcome diverse students and to change classroom practices from within (Ainscow, 2007).

3.12 Chapter summary and research aims

This chapter has reviewed the literature relevant to the inclusion in mainstream education of Deaf and hard-of-hearing students and their educators' attitudes towards it. Having addressed the definition of D/deafness, it examined studies of DHH integration and of the impact of D/deafness on language, on social activity, on behavioural, emotional and cognitive development and on academic attainment. It reviewed studies of educators' attitudes towards the inclusion of DHH students, then some Middle Eastern studies of D/deafness and inclusion in general, as well as of attitudes towards SEN and DHH inclusion. It next considered factors influencing educators' attitudes, offered some reflections upon this review and addressed the limitations of the reviewed literature.

The aims of this study, derived from the literature review, are as follows:

- i To examine Saudi educators' attitudes towards DHH inclusion in Jeddah as a three-component construct: beliefs, affect and behaviour (See sections 3.4.4, 3.4.3 and 3.4.2 on the impact of D/deafness on cognitive, emotional and behavioural development).
- ii To examine the influence of background factors such as type of D/deafness, length of experience/age, qualification, education stage, school type and in-service training on Saudi educators' perceptions of and attitudes towards DHH integration/inclusion.
- iii To explore Saudi educators' understanding of five basic themes: D/deafness concept, inclusion concept, the process and requirements of inclusion, barriers to inclusion and the changes needed for successful DHH inclusion.

This review has shown that studies examining the factors that affect teachers' attitudes towards inclusion have tended to follow a scientific approach in terms of methodology and data collection. The current study has clearly focused on these two points; in addition, it contributes to research in this domain and aims to complement the current literature by adopting an exploratory sequential mixed-methodology research design (as explained in Chapter 4) in order to investigate Saudi educators' understanding of the main themes in relation to successful DHH inclusion. In a conservative society such as that of Saudi Arabia, all types of social change, including educational change, involve complex, comprehensive and ongoing processes. However, there is a gap in the literature, as there have been no previous studies with this focus. The literature indicates that successful inclusion practices include the step-by-step implementation of new inclusive policies based on legal, educational and practical criteria (Elshabrawy, 2010). Thus, moving from integration practices into a more progressive construct of inclusion depends on various prerequisites, such as a collaborative environment, specialized and well-trained educationalists (including teachers and administrators alike), a high level of awareness of the characteristics of D/deaf people (e.g. their social and emotional needs) and of D/deaf-culture. It is also necessary to ensure that mainstream school staff members have positive attitudes towards DHH inclusion and that the schools are equipped with all necessary educational aids and additional supporting services.

The next chapter addresses the methodology adopted to realise the aims set out above.

CHAPTER FOUR

Methodology

4 Methodology

4.1 Introduction

This chapter offers an account of the mixed methodology and methods used in the current two-phase study. After that, this chapter justifies the use of mixed methodology and the choice of setting, then describes the research design and methods. It discusses the collection and analysis of the data, its trustworthiness and dependability, the ethical issues which were taken into account and the integration of the two phases. It ends with a summary.

4.2 Research questions addressed in each phase

RQ1- What are educators' attitudes (beliefs, emotions and behaviour) towards current practices of DHH integration/inclusion?

RQ2- What is the impact on Saudi educators' beliefs and attitudes towards DHH integration/inclusion of these six background factors: teaching setting/type of D/deafness, years of experience/age, qualification level, education stage/grade, school type and in-service training?

This first phase was thus concerned with exploring Saudi educators' beliefs about and attitudes towards DHH inclusion, with reference to six contextual factors, taking a broadly objectivist epistemological stance. The questionnaire instrument used to gather the necessary quantitative data was adapted from Elshabrawy (2010) to include only DHH students, rather than those with other special needs which had been included in his original scale (ATIES).

The second, qualitative, phase of the study was introduced to explore in depth the understandings of Saudi educators in Jeddah of the following themes: Deaf and Hard of Hearing concept, integration/inclusion, the inclusion process and requirements, barriers to and the changes needed for successful DHH inclusion. The research questions addressed in this second phase were as follows (where 'Saudi educators' refers to educators of DHH students):

RQ3- What are Saudi educators' perceptions of Deaf and hard of hearing as a concept?

RQ4- What are Saudi educators' perceptions of and attitudes towards DHH inclusion?

RQ5- What are Saudi educators' beliefs about the inclusion process and its requirements?

RQ6- What are Saudi educators' beliefs about the main barriers to attaining successful DHH inclusion?

RQ7- What are Saudi educators' beliefs about the major changes that need to be implemented in order to improve DHH inclusion practices?

4.3 Justification for using mixed methodology

This section provides a justification and explanation of the mixed philosophical stance taken in the two phases. The interpretive research paradigm is primarily concerned with human understanding, interpretation, intersubjectivity, lived truth (i.e. truth in human terms). It uses ethnographic case study, largely qualitative forms of inquiry, and such things as triangulation (multiple viewpoints on the same object of interest, an in survey) to overcome the weaknesses of subjectivity. Of course quantitative methods can also be used, as and when appropriate. The overall design of the current study assumed an objectivist epistemology in the first, quantitative phase, and an interpretivist in the second, qualitative phase. Thus, the current study uses a sequential mixed methodology approach of both objectivist and subjectivist epistemology in their separate phases with greater emphasis placed on the second phase.

This study attempts to explore and describe the experience of inclusion of DHH students in order to understand it better within the particular context of Jeddah as representative of Saudi Arabia. Saudi Arabia is very different from the UK, not only because the former is a developing country, but in terms of culture, language, education, collective thoughts, lifestyles, world-view and thus potentially of attitudes towards DHH inclusion. Some contextual factors within the Saudi mainstream educational system are explored in the current study and found to contribute to the cumulative knowledge of this particular context. It aims to search for definitive patterns of meaning in order to reach an illuminative understanding of how educators of DHH students in Saudi Arabia construct their understandings (Radnor, 1994), of what it means to be a DHH student and what integrative/inclusive education entails, and their attitudes towards such students and their inclusion. The interpretive epistemology takes such subjective understandings and shared

meanings (Ritchie and Lewis, 2003), to be the sort of things that can be known and discovered by the researcher.

Methodology is defined in the Oxford Advanced Dictionary (2005, p. 190) as “a set of methods and principles used to perform a particular activity”. Crotty (2003, p. 3) indicates that methodology should be seen as:

“the strategy, plan of action, process or design lying behind the choice and use of particular methods and linking the choice and use of methods to the desired outcomes.”

In the process of analysing any social phenomenon, methodology and method should be located, after establishing the ontological framework, epistemology and theoretical perspectives. As there will be more emphasis on the second qualitative phase, the reader will notice that more information is provided in the interview analysis to build up rich description of the participants under study (Chapter Six). As the qualitative phase was concerned with Saudi educators and their interrelationship with DHH inclusion, this thick description allows for transferability (Merriam, 1998), and enables the reader to fully comprehend the case through identification (Lincoln and Guba 1985), and empathy and to live in the reality of DHH inclusion or as Ernest described what he called ‘the novelist’ perspective (1994, p. 25):

“The truth derived from identification with and living through a story with richness and complex inter-relationship of social, human life.”

While the quantitative data collected in the first phase fit well with an objective/realist stance, a social constructivist stance in the second has more potential to broaden the understanding of the complexities of the concepts under investigation (i.e. D/deafness, inclusion and attitudes). It provides ways to overcome barriers. Attitudes from a social constructivist view, as context dependent and responsive to factors within a particular sociocultural environment, also indicate directions for educational change. Eiser (1994) argues that in attitude studies there is an active interdependent relationship between the individual and the social. Therefore, teachers’ perceptions should be considered within the socio-cultural context where they usually live (Carr & Kemmis, 1986), interact, communicate, socialize and think in certain and unique ways which are strongly bound by cultural and social norms and parameters (Elshabrawy, 2010). The significance of qualitative data is that it focuses deeply on the holistic picture (Guba and Lincoln, 1991),

via small-scale personal contact with the people under investigation. The educational researcher in this type of enquiry perceives social reality as inter-subjective, relative, complex (Cohen et al., 2007; Crotty, 2003; Ritchie & Lewis, 2003), and inductive (Bryman, 2008). Creswell (1998: 13) likens qualitative research to a fabric:

“I think metaphorically of qualitative research as an intricate fabric composed of minute threads, many colours, different textures, and various blends of material. This fabric is not explained easily or simply. Like the loom on which fabric is woven, general frameworks hold qualitative research together.”

As alluded to in the introduction in this chapter, it is essential for any researcher to be clear in each phase of a research project whether he/she is planning to follow a single research design of an interpretive subjective direction, scientific objective direction, a mixed methodology research design of a pragmatic orientation or other possible designs. Employing a mixed methodology design means having a positive attitude towards methodological pragmatism. The pragmatic educational researcher uses qualitative research to inform the quantitative portion of research studies, and vice versa (Onwuegbuzie & Leech, 2007). This is important for seeking to falsify or verify a set of hypotheses, to understand a social phenomenon interpretively from a new perspective that is context-driven, to use a multi-methodology research design that combined the strength of both objective and subjective epistemologies, or to constructively criticise a social problem in order to change the reality, as each one of these goals represents a different research paradigm. The review of the relevant literature indicated that a sequential multi-methodology quantitative/qualitative research approach that combines the strength of both objective and subjective epistemologies would improve the quality, integrity and trustworthiness of the findings (Johnson & Christensen, 2004; Patton, 1990), and would make an essential contribution to a better understanding of educational practices and attitudes concerning the inclusion of Deaf and hard-of-hearing students in Saudi Arabia.

Quantitative designs generally use large scale systematic surveys to generalise from a sample to a wider population. Educational research in this type of enquiry is mostly deductive, objective and detached. On the other hand, qualitative methodology yields data providing thorough and ‘rich and thick descriptions’ (Ernest, 1994, p. 25), in the form of words in order to gain better understandings of social (e.g. educational) phenomena. There are thus major differences between quantitative and qualitative data collection and

analysis, but they can be sequentially exploited in a mixed methodology research approach in order to produce rich and thorough data for the purpose of achieving rigour. Table 4.1 sets out some of these differences.

Table 4.1 Summary of major differences between quantitative and qualitative methodology

Epistemological stance	Quantitative	Qualitative
Philosophical foundation	Hypothetico-deductive reductionist	Naturalistic, inductive, holistic
Aim	To test pre-set hypotheses	To explore complex human issues
Study plan	Step-wise, predetermined	Iterative, flexible
Ontological position of researcher	Aims to be detached and objective	Integral part of research process
Assessing quality of data	Direct tests of validity and reliability via statistical means	Indirect quality of trustworthiness
Measures of utility of results	Generalizability	Transferability

Source: Adapted from Marshal (1996)

There are four principles to be acknowledged when employing sequential mixed methodology research, according to Tashakkori and Teddlie (2003). First, the main theoretical purpose has to be recognized all the way through the research journey. Second, the role of each important element in the research thesis should be distinguished. Third, the methodological rules of the initial approach should be adhered to. Fourth, there should be an excerpt of a few data sets utilized in order to give the reader a good presentation.

D/deafness, inclusion and educators' attitudes are complex and context-based constructs. To conceptualize them required a research framework able to deal with this complexity which a mixed methodology design could offer. The use of multiple sources of quantitative/survey data and qualitative/interview was believed appropriate to strengthen the research design (Dawson, 2009) and add depth to the findings (Johnson & Christensen, 2004; Patton, 1990), and interpretation of the data (Ernest, 1994; and Elshabrawy, 2010). This is because combining quantitative and qualitative designs (Creswell, 2003), helps to overcome a limited singular perspective (Ritchie & Lewis, 2003; Robson, 2002), the weaknesses of subjectivity (Ernest, 1994), utilizes different

elements of the social phenomenon under investigation and so to provide a coherent understanding of it (Creswell, 2003; Cohen et al., 2007; Steckler, McLeroy, Goodman, Bird & McCormick, 1992).

Thus, from a contextual viewpoint, it is important to employ an alternative research methodology to solely positivistic research, that is constructivist and pragmatic in nature and which reflects methodological pluralism, resulting in rich and thorough research findings (Johnson and Christensen, 2004). Therefore, an overview of the current approach would be to see it as a sequential mixed model research design (Tashakkori and Teddlie, 2003).

4.4 Justification for selecting Jeddah LEA

It is vital at this stage to shed some light upon the reasons for selecting the Western Province of Saudi Arabia and Jeddah LEA in particular, as the central focus of this doctoral thesis project. Quite simply, the researcher worked there for several years as a DHH teacher, then as an educational supervisor and finally as a lecturer. Table 4.2 lists the three largest cities in Saudi Arabia and provides information on the education facilities for DHH students there.

Table 4.2 Schools teaching DHH students in Riyadh, Jeddah and Dammam, 2009/10

City	Population	No. of special schools	No. of mainstream schools	No. of Deaf students	No. of HH/deaf students	No. of educators
Riyadh	5,194,230	4	20	394	876	180
Jeddah	3,430,697	2	11	258	175	149
Dammam	2,054,710	-	26	274	217	199

Sources: Population statistics from <http://en.wikipedia.org/wiki/>; schools data from the Directorate General of Special Education (DGSE), 2011 (<http://www.se.gov.sa/English/index.htm>)

There were three main reasons for choosing Jeddah from among the thirteen Saudi local educational authorities. First, Jeddah is the second largest city in Saudi Arabia in population terms, with a significant number of DHH students (433 in 2009/10) and many special and mainstream schools with around 42 classrooms (DGSE, 2011). Secondly, it has various types of DHH placement, including Al-Amal Institutes for the Deaf, mainstream classrooms for Deaf and for HH students, resource rooms with educational psychologists and language therapists, and internet teachers. Thirdly, the researcher's own experience during more than a decade as a DHH certified teacher, education supervisor and lecturer at a College of Education was in Jeddah city, which complies with the premise of the current study as seeking an interpretive worldview of the social construction of D/deafness and inclusion, and the attitudes of teachers to these in Jeddah.

It should also be mentioned here that it was very difficult to deal with two different bureaucracies (responsible for special and mainstream education) at the same time within a limited time and budget. The additional difficulty of setting up a rigorous series of interviews with female educators when there is segregation between the genders would have been too great, so it was decided to limit the research sample to male educators.

4.5 Overall Research Design

The current study aimed to explore Jeddah LEA educators' beliefs and attitudes (as a construct of three components), in relation to DHH inclusion, as representative of the Saudi context. Six factors related to these attitudes were examined a) type D/deafness, b) years of experience, c) qualifications, d) education stage, e) school type and f) in-service training. Two general research questions were addressed in the primary phase, to provide

a broad and general picture, then five more specific research questions were tackled during the secondary interview phase to deliver a deeper understanding of the themes under investigation.

As explained in Section 4.6.1 below, a questionnaire was administered in the first phase to collect quantitative data from educators at three special and seven mainstream schools. It is important to say that an immediate analysis was carried out in order to establish the big picture with regard to each component of the questionnaire and to establish background information on the factors included (as described in Section 4.6.1). This had a major impact upon the second phase of in-depth interviews with eleven of the educators (five teachers and six administrators): the researcher was able to modify, amend, add, delete and change the language of some statements in order to enhance the quality of the findings and to make thorough and insightful interpretations. Indeed, several topics, and subthemes emerged from the findings of the first phase and during the initial analysis of the interviews. These formed the basis of a group of in-depth questions which were included for the purpose of clarifying, elucidating and double-checking the research questions, to ensure that the primary findings were trustworthy and to offer a deeper understanding of participants' perceptions and opinions of DHH inclusion as well as the reasons behind these views. Figure 4.1 gives an overview of the research design.

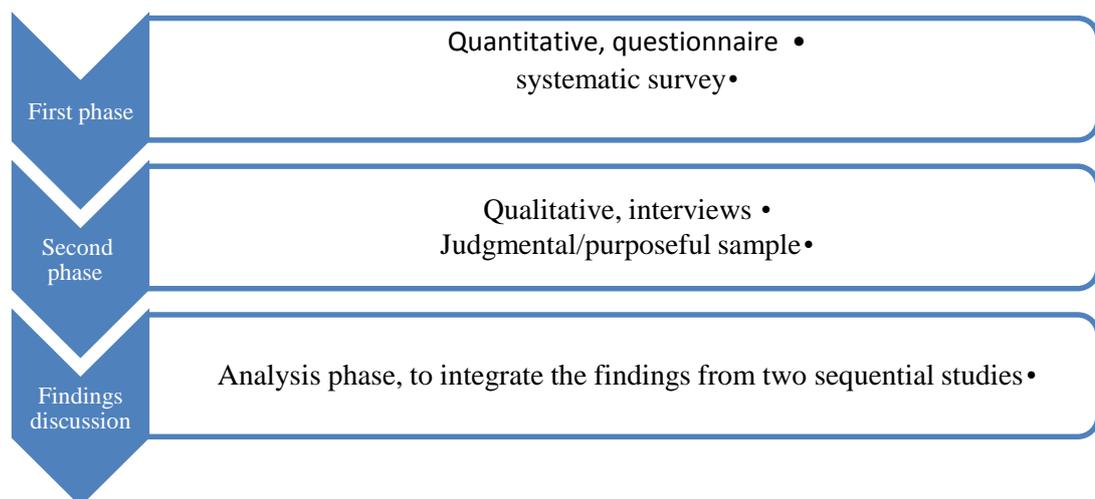


Figure 4.1 Methodological framework of the research design

4.6 Research Methodology

This enquiry aimed to explore factors that influence educators' attitudes towards DHH students' inclusion in Jeddah. The questionnaire was a very important tool to draw a broad picture in order to gather general background information about participants. This section, therefore, will deal with methodological issues relevant to how to measure educators' attitudes effectively in terms of perceptions, sentiments and behavioural dimensions.

4.6.1 Phase one: questionnaire

The topic of SEN in Saudi Arabia has long been researched using an exclusively scientific/positivistic methodology. Such educational research has been closely related to quantitative research methods with the aim of providing robust and objective generalized conclusions (Ernest, 1994). The importance of the current study is derived from its unique use of sequential mixed methodology in investigating DHH inclusive practices in the Saudi context, which has not been studied as such before.

Relevant to the first phase sample, Jeddah LEA reports annual statistics on all special and mainstream schools, in which it counts administrators who work with DHH students as teachers. This is because the Saudi education system allows long-serving teachers with excellent annual reports to be promoted to the rank of deputy head-teacher. They can then attend a one-year administration diploma course in order to be promoted to head-teachers. Thus, as all administrators have been teachers at an earlier stage of their careers, the first phase sample encompassed all educators (teachers and administrators) who worked directly with DHH students. The aim of this phase was to establish broad and general views of DHH inclusion, whereas the second phase was intended to gather more specific data, requiring a clear distinction between these two groups of educators. In other words, for the first phase only, the term 'educators' should be taken to refer to both teachers and administrators.

It is vital to identify any differences in the way that DHH students are taught and in their educators' attitudes towards these ways, in order to apply a new epistemological way of thinking that is interpretive in nature and to fully comprehend the diverse educational context of Jeddah, which has not been studied as such before. Hence, the researcher chose to take a social constructivist stance to understand the DHH inclusion phenomena in its

original contextual environment by applying a sequential mixed research methodology, as described by Tashakkori and Teddlie (2003).

4.6.2 Sample design of phase one

Breach (2009) notes that a questionnaire survey is an easy way to obtain data from large group of participants who could not be interviewed in a short time. The aim of this first round of data collection was to survey a comprehensive sample of 159 educators in direct contact with DHH students' at all three levels of schooling: primary, intermediate and secondary, in all ten special and mainstream schools in the Jeddah LEA serving DHH students. The overall number of participants was 120 which means that the response rate was 74.7% (discussed in more detail in Chapter 5, section 5.3, Tables 5.9, 5.10, and 5.11). Table 4.3 lists these schools and gives details of their operation, including numbers of DHH students, educators and classes. The first three were special schools run by the Al-Amal Institute (one primary, one intermediate and one secondary), serving 124 moderately to profoundly Deaf students in total. The intermediate and secondary schools occupied a single building and had 63 students in total. The remaining schools, numbered 4 to 10 in Table 4.3, were mainstream schools catering for a total of 101 Deaf and 176 HH students in self-contained classrooms.

Table 4.3 Special and mainstream schools serving DHH students in Jeddah LEA

No	Programmes' Code	D/deafness type	Founded	No. of educators	No. of students	No. of classes
1	APSD1/Amal	Deaf (moderate to profound)	1981	15	61	11
2	AISD2/Amal	Deaf (moderate to profound)	1991	14	29	6
3	ASSD3/Amal	Deaf (moderate to profound)	1994	14	34	6
4	SSC4/AMPS	(mildly) deaf or hard of hearing	1997	15	53	6
5	SCC5/SAPS	Deaf (moderate to profound)	1999	8	44	6
6	SCC6/AAAP S	(mildly) deaf or hard of hearing	2002	15	61	7
7	SCC7/AIS	Deaf (moderate to profound)	2000	10	14	4
8	SCC8/ASS	(mildly) deaf or hard of hearing	2003	13	39	5
9	SCC9/IHSS	Deaf (moderate to profound)	2004	6	43	5
10	SCC10/RSS	(mildly) deaf or hard of hearing	2006	10	23	4
Total				120	401	60

*SCC = Self-contained classrooms within mainstream schools (Source: DGSE website (2010))

Jeddah LEA, in line with the policy of the Saudi Ministry of Education, adopts the medical/disability model of defining, categorizing, helping and educating DHH students. Accordingly, there are two types of DHH students within these schools. The first is Deaf

students, who lost their hearing at a young age and before acquiring spoken Arabic, with 70dBHL or above in the better ear, which means severe and profound hearing loss and entails making use of sign language and manual methods of instruction only. The second group is deaf/hard-of-hearing students, who lost their hearing after acquiring spoken Arabic (after age five), with mild to moderate hearing loss of 69dB or less, who receive oral instruction.

The justification for including all schools was to ensure the richness of the data to facilitate findings broadly representative of the whole educational scene. Walliman (2006) stated that, in order to reach precise judgments about a population, a researcher should include a sample that is as representative as possible, and in this case it was not difficult to sample all of the schools in the LEA, as there were only ten. In particular, it was vital to survey educators from both special and mainstream school settings in order to gather balanced information. Again, as there were only 159 such people in daily contact with DHH students in Jeddah, it was practicable to select all of these teachers and administrators as the sample for the first phase in order to make this study comprehensive.

4.6.3 The Survey Instrument

The main tool used for collecting quantitative data was adapted from the Attitude Scale of Elshabrawy (2010), which aimed to collect broad data from a random sample of Egyptian educators in Cairo, Daqahliyah, Alexandria, Menoufiya, Sharqiya, Damietta, South Sinai, and Matrouh of Egypt. The author of the original scale used three measures in the development of his questionnaire: first, a review of related literature on inclusive education (e.g. Ainscow, 1995, 1997; Bayliss, 1998, 2000; Hegarty, 2001; Pivik, McComas, & Laflamme, 2002; Slee, 1993, 1998); second, a review of similar instruments designed for the same or similar purpose (Antonak & Larrivee, 1995; Avramidis et al., 2000; Forlin, 2001; Sharma, & Desai, 2002; Stoiber et al., 1998; Wilczenski, 1992, 1995); and third, the workability of the instrument for the target sample of participants.

The modified survey instrument began with a brief introduction to the questionnaire that provided instructions on how to answer the questions. The first modification for the purposes of the present study was to integrate perceptions of DHH inclusion and perceptions of barriers to successful DHH inclusion into one instrument instead of two as

they both measure perceptions. This also shortened the whole questionnaire, to encourage more educators to complete it, as recommended by the original author, the referees, and the research supervisors. The second modification was to remove the two open-ended questions, both at the recommendation of the original author, the supervisors, and the referees. This was because there were in-depth questions covering the perception and barriers and certain other themes in the second phase interviews, so it was not necessary to duplicate the questions here.

The first section then elicited background information on participants such as their teaching experience with DHH students, age, numbers of students in classes, types of students taught (Deaf or HH), qualifications acquired prior to teaching DHH, in-service training obtained, years of experience of DHH teaching, school stage, and type of school (special or mainstream). Elshabrawy (2010) constructed two Likert-scale instruments, attitudes towards inclusive education scale (ATIES) and barriers to inclusive education scale (BTIES), to measure respectively educators' perspectives and attitudes about inclusive education and their perception of barriers to it. His original scale covered all five broad groups of special educational needs and therefore had to be adapted to be applied to teachers of DHH students only.

The original ATIES instrument covered the main five groups of children's special needs (comprised 42 items): visual disability, hearing impairment, learning disability, physical disability, learning disability (cognitive delay) and behavioural disturbance. The original BTIES scale, referring to barriers, comprised twenty Likert-type items plus two open-ended questions with responses ranging from 1 to 5 and focusing on teachers' perceptions of barriers to inclusive education, making a total of 64 items for the three main components. The modified version was developed to suit the specific aims and objectives of this study (See the English version of the scale in Appendix A). The amended version was sent to Dr Elshabrawy and Dr Phil Bayliss (the original thesis supervisor) for their feedback, then the corrected draft was sent to seven academics in the Special Educational Needs Department of King Abdulaziz University to ensure "referees' validity". They changed the language of some items and asked the researcher to modify and reduce the total number of items from 65 to 46, because the referees considered the questionnaire too long and because the amended version was intended to cover only one of the main

five groups of students with special needs, viz. DHH students (See the Arabic version of the scale at Appendix F). This process enhanced the validity and coherence of the instrument and Dr Elshabrawy gave his permission for its use in this form after reviewing the final version. In order to ensure the accuracy of the translation and validity of the attitude scale, independent back translation was carried out. Three Saudi natives were asked to translate the Arabic version back into English for the purpose of maintain the meaning of the statements (Ercikan, 1998). Differences and unclear meanings were resolved in conversations and through emails exchange by the researcher, translators and proofreaders. A pilot study with a small group of teachers was also implemented in order to check the clarity and reliability of the scale and its subsequent statements. The participants did not report any main difficulties in completing the questionnaire.

The attitude scale consisted of three components: cognitive, affective and behavioural. I should report the first cognitive component and outline the full set of items and then describe how factor analysis (varimax rotation) refined/reduced them to a coherent set. Elshabrawy's original questionnaire consisted of twenty-six items of the belief/cognitive component (before factor analysis and varimax rotation, Table 4.4), covers five themes: participants' perceptions of the DHH concept, perceptions of the inclusion concept, perceptions of the inclusion process and requirements, perceptions of barriers and perceptions of change needed to achieve successful DHH inclusion and were chosen because they measured educators' knowledge and beliefs of DHH inclusion. The affective section was based on the semantic differential scale of bipolar adjectives (Osgood et al., 1957), measuring the participants' emotional feelings when they had to deal with newly included Deaf (5 items, Table 4.7), and HH students (5 items, Table 4.8). The scale, therefore, consisted of ten items in total and included adjectives in five pairs: 'comfortable-uncomfortable', 'negative-positive', 'pessimistic-optimistic', 'interested-uninterested' and 'unhappy-happy'. The behavioural component started with a general statement: 'If a Deaf or hard of hearing student were to be included in my classroom, I would...', then thirteen items describing actions to be taken were presented for participants' agreement or disagreement (Elshabrawy, 2010).

Table 4.4 The cognitive component (before factor analysis of varimax rotation)

	Statements
1	It is disadvantageous to have hearing and D or HH students in the same classroom
2	Inclusion increases self-respect, access and belonging
3	I can organize my mainstream classroom to include D or HH students
4	D and HH students have a right to be included in mainstream classrooms
5	D and HH students should be given an equal opportunity to participate effectively in mainstream school activities
6	It is quite problematic to teach D and HH students in my class
7	D and HH students lack the academic and social skills to be taught within my mainstream classroom environment
8	D and HH students would achieve better academically in Al-Amal Institutes (special schools)
9	Self-contained classrooms have a negative impact upon social and emotional development of D and HH students
10	Al-Amal institute is the most comfortable place for teaching D students
11	Inclusion of D of HH students could lead to unfair comparison with their hearing counterparts
12	Inclusion does not require active involvement in all mainstream school activities
13	D and HH students feel more isolated when been taught in special self-contained classrooms
14	Self-contained classrooms have a negative impact upon social and emotional development of D and HH students
15	In general, Deaf and HH students read at lower level than their hearing peers
16	Inclusion cannot function adequately without substantial resources
17	At lunch break, D and HH students gather together apart from hearing students
18	Inclusion of D of HH students could lead to unfair comparison with their hearing counterparts
19	Inclusion do not requires active involvement in all mainstream school activities
20	Physical education and art teachers have the knowledge, skills and training competences to teach D and HH students
21	D and HH students feel more isolated when been taught in special self-contained classrooms
22	Course content need to be modified for D and HH students
23	Deaf students feel more comfortable within special school “Al-Amal institutes”
24	Mainstream schools limit D and HH friendship networks
25	Inclusion encourages acceptance of differences between hearing, D and HH students
26	Inclusion cannot function adequately without substantial resources

The cognitive component consisted of 12 items after varimax rotation: seven items to measure educators’ beliefs and knowledge about DHH inclusion (Table 4.5) and five items eliciting participants’ views as to the most appropriate alternative placement for

each group of students (Table 4.6). The affective component was divided into two parts each containing five items: one part to measure feelings towards Deaf inclusion (Table 4.7), and the other to measure feelings towards HH inclusion (Table 4.8). The behavioural component had 13 items (Table 4.9).

The items of the cognitive component are given in Table 4.5, below. They each express an attitude which is against inclusion of DHH in mainstream classrooms.

Table 4.5 First part: cognitive component (after factor analysis of varimax rotation)

No	Statements
1-	D and HH students would achieve better academically in Al-Amal institute “special schools”
2-	Self-contained classrooms have a negative impact upon social and emotional development of D and HH students
3-	Al-Amal institute is the most comfortable place for teaching D students
4-	At lunch break, D and HH students gather together apart from hearing students
5-	Inclusion of D of HH students could lead to unfair comparison with their hearing counterparts
6-	D and HH students feel more isolated when been taught in special self-contained classrooms
7-	Mainstream schools limit D and HH friendship networks

The items in Table 4.6, the second part of the cognitive component, were in response to the following question: Which alternative placements do you believe to be the most appropriate educational placement for D and HH students in Jeddah? Please tick the appropriate box.

Table 4.6 Second part: cognitive component (alternative placement)

No	Alternative Placement	Deaf	Hard of Hearing
1-	Residential institute for D and HH		
2-	Al-Amal institute “Day school” for D and HH		
3-	Self-contained classrooms “special class” within mainstream school		
4-	Partial inclusion with resource-room and speech and language therapy unit		
5-	Full inclusion with all necessary support such as in-class interpreter, speech and language therapy unit, and clinical psychologist		

To ensure the internal reliability of the three attitude components, Cronbach’s alpha reliability coefficient was calculated for each component, as reported in Chapter 5

(section 5.5). For the cognitive component, the value of alpha was lower than the acceptable value of .70. Therefore, factor analysis was conducted using the principal components method and varimax rotation to see if it was possible to identify inter-correlated items and to check that the statements formed a coherent scale. Table 4.10 displays the output results of the varimax rotation from this analysis. The results show that seven items (11, 14, 16, 17, 18, 21, and 24) formed a coherent cognitive scale and that thirteen items formed a coherent behavioural scale (item 9 were discarded). Thus, these items are the only ones that were included in the final cognitive and behavioural scales. This is discussed in further detail in the next chapter (sections 5.4, 5.5, and 5.7).

Table 4.7 Rotated component Matrix

	Component								
	1	2	3	4	5	6	7	8	9
VAR00001	.081	-.009	-.793	-.228	-.041	.001	.101	.023	-.005
VAR00002	.011	.011	.043	-.015	.080	-.006	.857	.107	.027
VAR00003	.242	.271	.664	.013	-.029	.018	.349	-.011	.279
VAR00004	-.196	.150	.065	.603	-.160	.147	-.126	-.170	.294
VAR00005	.108	.232	-.409	.204	-.583	.035	-.049	-.033	.092
VAR00006	-.280	.504	-.100	-.019	-.093	.447	.008	-.330	.107
VAR00007	-.154	.786	-.035	.057	-.044	.196	.104	-.116	-.136
VAR00008	-.116	.742	.232	.112	.117	-.113	-.029	.176	.071
VAR00009	.028	.113	.035	.130	.709	.271	-.253	-.098	.203
VAR00010	.238	.149	-.107	.074	.664	-.071	.303	.220	-.100
VAR00011	.850	.031	-.062	.143	.100	-.141	.117	-.003	-.032
VAR00012	.122	-.064	-.106	-.110	.028	.761	-.083	.138	.083
VAR00013	-.107	.275	-.050	.440	.068	-.309	.298	.364	-.191
VAR00014	.569	-.171	.086	-.305	-.032	.132	-.292	.313	.093
VAR00015	.203	-.019	-.145	.514	.420	-.197	.341	.190	-.044
VAR00016	.828	-.172	-.007	.048	-.078	-.037	.016	-.030	-.022
VAR00017	.448	-.212	.206	-.119	.386	.071	.262	.100	.104
VAR00018	.503	-.391	.124	.260	.333	.055	.140	-.007	.105
VAR00019	.067	-.037	.060	.008	.072	.165	.042	.163	.808
VAR00020	.088	.011	.021	.089	.060	.072	.116	.846	.099
VAR00021	.517	-.109	-.016	-.201	.218	.077	-.364	.247	.042
VAR00022	.123	.004	.154	.786	.059	-.024	-.002	.109	-.064
VAR00023	-.141	-.084	-.511	.159	-.114	-.054	.022	-.159	.455
VAR00024	.370	-.136	.271	-.145	.150	.112	-.223	.343	.297
VAR00025	-.155	.267	.211	.082	.119	.604	.036	-.035	.068
VAR00026	-.080	-.127	.396	.210	-.007	.392	.140	.341	-.397

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 21 iterations.

Only the highlighted loading factors produce a scale with alpha of above 0.7. Thus, the items loading above 0.3 on this scale are the ones to use on the first cognitive component.

The modified instrument comprised 48 items, as outlined in Table 4.11: thirteen items on background information and a total of 35 on the three attitudinal components. The cognitive component contained seven Likert items regarding participants' beliefs (Table 4.5), and five items to examine the participants' views on the most appropriate alternative placement for DHH students (Table 4.6) (twelve items in total in the first component). The affective component had ten items (Tables 7 & 8) and the behavioural component had thirteen items (Table 4.9).

The items regarding the affective component about Deaf inclusion were in response to the following question (Table 4.7): If a profoundly Deaf signing student, i.e. with hearing loss (HL) of 70dB and above, was about to join your classroom, either full-time or part-time, with the additional support of an interpreter, speech therapy unit and clinical psychologist, how would you feel? Please tick the appropriate number on each line.

Table 4.8 Affective component about Deaf inclusion

Uncomfortable	1	2	3	4	5	Comfortable
Negative	1	2	3	4	5	Positive
Pessimistic	1	2	3	4	5	Optimistic
Uninterested	1	2	3	4	5	Interested
Unhappy	1	2	3	4	5	Happy

The items regarding the affective component about hard of hearing inclusion were in response to the following question (Table 4.8): If a hard of hearing (partially deaf) student, i.e. with HL between 25dB and 69dB, was about to join your classroom, either full-time or part-time, with the additional support of an interpreter, speech therapy unit and clinical psychologist, how would you feel? Please tick the appropriate number on each line.

Table 4.9 Affective component about hard of hearing inclusion

Uncomfortable	1	2	3	4	5	Comfortable
Negative	1	2	3	4	5	Positive
Pessimistic	1	2	3	4	5	Optimistic
Uninterested	1	2	3	4	5	Interested
Unhappy	1	2	3	4	5	Happy

The items regarding the behavioural component of DHH inclusion were in response to the following question (Table 4.9): Please indicate how much you agree or disagree with the following statements about what you would do if a Deaf or Hard of Hearing student was to be integrated in your mainstream classroom from the beginning of next term?

Table 4.10 Behavioural component

No	Statements
1-	Encourage hearing, D and HH students to interact and learn together
2-	Enrol on a specialized training course to learn Arabic Sign Language to teach D and HH in my school
3-	Collaborate with parents of D and HH students to design an Individualized Educational Plan (IEP) that suits their child's learning
4-	Adopt new teaching styles and modify testing methods to match D and HH characteristics
5-	Avoid using negative labels inside or outside my classroom
6-	Give equal respect to D, HH and hearing students
7-	Slow down the pace of lessons to enable D and HH students to learn at the same level as their hearing peers
8-	Collaborate with the school administration in decision-making relevant to D and HH students
9-	I will make use of technology to assist in teaching D and HH students
10-	Concentrate on the use of visual stimuli in the education of D and HH students
11-	Make sure that all D and HH students are wearing their hearing aids, particularly during lessons
12-	Make sure that D and HH students sit in the front lines
13-	Taking part in D and HH associations and private forums, and advocating their issues

To give the reader a sense of the overall items distribution, Table 4.11 shows the attitude components and numbers of questionnaire items:

Table 4.11 Attitude components and numbers of questionnaire items

Attitude Component	Number of items
Background information	13
Cognitive component (beliefs, and alternative placement)	12 (7+5)
Affective component towards Deaf inclusion	5
Affective component towards HH inclusion	5
Behavioural component	13
Total	48

4.6.4 Procedures and administering the survey

It was important for the researcher to distribute the first phase questionnaire himself, in order to get to know participants directly in all ten schools, to establish personal relationships, to elicit their thoughts about the whole project and to explain the purpose of the enquiry. Before beginning the fieldwork, the researcher obtained a supporting letter from the School of Education at Exeter University to confirm his status as a doctorate student and the academic nature of the study. Copies of the questionnaire were then handed in person to the head-teachers of all ten special schools and mainstream programmes. Guidelines were given to each teacher on a separate sheet of paper to make sure that every detail of the questionnaire was quite clear. The permission letter from Jeddah LEA was given in order to guarantee anonymity and confidentiality to the participants and to the schools (Appendix D and E).

After a week, the researcher made phone calls in order to check on the completion of the questionnaires, then visited each school to collect them. The procedures followed at each stage of data collection were explained, the participants were told that they had the right to withdraw from the research at any point and they were invited to ask questions if they felt that further clarification was needed. Each copy of the questionnaire had an envelope, so that completed copies would not be compromised by a third party.

It was explained to the schools that the process of filling in the questionnaire would take no longer than 10 to 15 minutes. The researcher's personal experience of teaching DHH students for more than ten years suggested that it would be difficult for the participants to fill in long questionnaires while having tight work schedules and other commitments, suggesting that a short survey would be more likely to be completed (Breach, 2009). They were also reassured that the study was an academic exercise whose outcome was intended to benefit their students, hearing and DHH alike. The completed questionnaires were collected ten days after distribution, in April 2010.

4.7 Quantitative data analysis

The questionnaire data were coded, statistically processed, organized and analysed using the SPSS19 software. In the following subsequent sections, scoring the questionnaire and ethical and socio-cultural issues were discussed in further detail.

4.7.1 Scoring the questionnaire

For the cognitive component, the five-point Likert scale allowed responses from ‘strongly agree’, ‘agree’, ‘undecided’, ‘disagree’, to ‘strongly disagree’; these were scored from 1 to 5. Since 5 represented strong disagreement with an attitude that was against inclusion, a high score now stood for a positive attitude to inclusion. For instance, in the first statement “D and HH students would achieve better academically in Al-Amal institute ‘special schools’”, someone supporting inclusion would choose SD and would be scored 5. The affective component offered responses along a scale scored from 1 to 5, with a high score indicating a positive feelings towards D and HH inclusion, for instance a respondent who was ‘comfortable’ with including a Hard of Hearing student in his class would score 5, while one who was ‘uncomfortable’ would score 1. For the behavioural component, since agreement with the statements indicated behavioural intentions that promoted successful inclusion, the initial scoring from 1 (definitely) to 5 (definitely not) was reversed, so that a high score indicated a positive attitude towards DHH inclusion. After this reversal, for example, a respondent who would ‘definitely’ ‘encourage hearing, D and HH students to actively interact and learn together’ would now score 5 (instead of the original 1).

For each component, the item scores were totalled to generate a composite score, so that on each component a higher score indicated more positive attitudes towards DHH inclusion.

4.7.2 Ethical and socio-cultural issues

For a researcher to know his/her contextual framework, he/she should acknowledge the socio-cultural boundaries surrounding the data collection process and interpretation of its findings. All educational and social research gives attention to a spectrum of ethical issues such as anonymity, confidentiality, informed consent, credibility, trustworthiness, and the desirability of the research. Thus, it is crucial to not only be aware of them but also to reflect on and respond to them (Blaxter et al., 2006).

Ethical considerations pervaded much of [the researcher’s] work (see Appendix I of GSE ethical approval) and these was no more so than at the stage of access and acceptance, where appropriateness of topic, design, methods, guarantees of confidentiality, analysis

and dissemination of findings must be negotiated with relative openness, sensitivity, honesty, accuracy and scientific impartiality (Cohen et al, 2000, p56).

There are several ethical dimensions and implications that have been clearly addressed in British (B.E.R.A.) and American Educational Research Associations (A.E.R.A.). According to the B.E.R.A. criteria, there should be a very clear plan for any educational researcher of how he/she will approach their audience and question them on any sensitive subject such as revealing their beliefs and emotions. There are likely be significant differences between non-disabled people's perceptions of what D/deafness means compared with what DHH people themselves understand it to be:

Research at any level goes against the grain. The natural tendency is to defend cherished beliefs, not to question too deeply, not to suffer the discomfort of doubt (Pring, 2000, p. 49).

At the macro level, there are substantial differences in socio-cultural constructions between, for example, Saudi Arabia as an Arabic and Islamic state and Britain as an example of Western Europe. In the Saudi context, people value tribal pride and traditions, extended family relationships, Saudi customs and heritage, and Sunni/Islamic Sharia worldview and practices. That is why sometimes researchers may be faced with teachers or/and parents who in the beginning deny that they have a 'disabled' child in their classroom or family and refuse to give any personal information (not to mention full participation). They do not want to be stigmatized or looked at as inferior by 'western-oriented outsiders' who may think they are superior.

In contrast, contemporary EU countries have a totally different world-view that depends to a large extent on individualism, single parent or nuclear families, secular and parliamentary democracy, free civil lifestyle and liberal values.

However, an ethical procedure is critical to guide the conditions under which the educational researcher is working. The researcher is obliged to bear in mind the importance of addressing the ethical implications of his responsibilities to participants, to his programme sponsor of research degree (King Abdulaziz University) and to the community of educational researchers (BERA, 2011). Moreover, the researcher should comply with conventional ethics in qualitative research, such as the four ethical principles proposed by Dickson-Swift et al. (2008) of respect for autonomy, not doing any harm,

beneficence, and justice for guaranteeing the rights of research participants (Dickson-Swift, James & Liamputtong, 2008).

In the Saudi context, however, anonymity and confidentiality are the first and foremost issues which need to be fulfilled, as educators would never willingly express their private details and true beliefs to an outsider if they suspected that their names would be published in any way. Hence, confidentiality is very important in a society that has its own manifesto of pride and prejudice.

Several ethical principles and issues in educational research had to be addressed before conducting the research study, such as confidentiality, anonymity, gaining access, and secure storage. It was also important to declare clearly that the main purpose of this study was purely academic. I obtained the ethical approval from my first supervisor at Exeter University. Then, I obtained the permission letter from the School of Education, King Abdulaziz University (see Appendix E), followed by the permission letter from Jeddah LEA to begin distributing the questionnaires (see Appendix D). The researcher wrote to the Saudi Cultural Bureau in London asking for permission from the Ministry of Higher Education, MOE and the Jeddah LEA to use a group of educators as participants in the study. This official letter gave details of the aims of the study, the number of participants in the two phases and the data collection processes; it was accompanied by a letter from the research supervisor stating his agreement for the fieldwork to be conducted at that time and the researcher's promise to keep the participants anonymous and the data confidential.

4.8 Second phase research questions and methodology

This second phase of the current study took place in late May 2010 and involved semi-structured interviews with eleven participants who were also members of the primary sample. For ease of access, I would like to remind the reader that the research questions addressed in this second phase were as follows (where 'Saudi educators' refers to educators of DHH students):

- 1- What are Saudi educators' perceptions of the Deaf and hard of hearing?
- 2- What are Saudi educators' attitudes towards Deaf and hard of hearing integration?

- 3- What are Saudi educators' perceptions of DHH teaching skills, in-service training, ASL, additional support, resource rooms, and teacher assistant (TA)?
- 4- What are the main barriers attaining successful DHH integration?
- 5- What is the major changes that need to be installed for successful DHH integration?

4.8.1 Phase Two: Interview sample

The researcher wrote to all ten schools which had participated in the quantitative phase of data collection, inviting a number of parents and educators to participate in the qualitative phase and enclosing a copy of the Jeddah LEA letter of permission to conduct this second phase (Appendix D). In response, I received thirteen preliminary acceptances, but two of these were from parents of DHH students who, when interviewed, confirmed that they did not have the necessary background knowledge of many of the topics associated with the seven main themes of this study. Thus, after discussing this matter with the research supervisors, it was decided to limit the sample to teachers and administrators working directly with DHH students in the field.

This was promising, because the researcher had already worked with DHH students for a decade and because Saudi DHH educators are usually under overwhelming pressure of paperwork related to classroom preparation, observing students during lunch breaks, tight lesson schedules, complying with IEP requirements and fulfilling administrative responsibilities. Hence, the researcher called each of the remaining eleven educators to arrange the most convenient time for interviews and to confirm that anonymity, confidentiality, the right to withdraw, secure storage and informed consent were guaranteed. I made it clear that the each interview would not take more than forty to fifty-five minutes. Respondent were informed that they would receive an email transcript of the whole interview and would be invited to reflect upon the accuracy of the transcript, the content, description and interpretation of the interview and whether they wanted to make any corrections or add any further comments. This purposeful second phase sample was justified because this type of sample is the most commonly used in educational research (Marchall, 1996). It is widely considered synonymous with qualitative research (Given, 2008, cited in Palys, 2008). Unlike the theoretical sample, the purposeful/judgmental sample allows the researcher to 'actively select' the most

productive sample to answer the research questions (Marchall, 1996). In practice, sampling in the qualitative research usually requires a flexible and pragmatic approach (ibid). More importantly, it provided a pragmatic approach to choosing my sample in order to address the current research questions, covering a broad range of subjects; furthermore, the subjects involved were known to the researcher and had specific experience of the themes under investigation (ibid). Table 4.12 lists relevant details of the eleven interviewees. The researcher was very much interested to find participants who were eager, committed and willing to be involved in detailed interviews to examine in greater depth the contributions made in the first phase. Participants occupied a range of positions representing the range of variation I was interested in, so the thoughts of teachers, and administrators were represented.

Table 4.12 Interviewees (qualitative phase sample)

Code	Students' D/deafness	Qualification	In-service training	Experience	Education stage	School placement	Age
M1t	Deaf	MA Deafness	Yes	Long*	Intermediate + Secondary	Special	42
M2m	Deaf	BEd Deafness	Yes	Long	Primary	Special	41
S3h	HH/deaf	BEd Education	No	Short**	Primary	Mainstream	44
S4s	HH	BEd Education	Yes	Short	Primary	Mainstream	41
I5m	HH	BEd Education	Yes	Short	Intermediate	Mainstream	40
K6a (Deaf)	Deaf	BEd Education	No	Long	Primary	Special	45
A7s (Deaf)	Deaf	BEd Geography	No	Long	Intermediate	Special	35
A8o	D & HH	BEd D/deafness	Yes	Short	All levels	Both***	33
M9b	D & HH	BEd D/deafness	Yes	Long	All levels	Both	40
G10a	D & HH	MA Deafness	Yes	Long	All levels	Both	40
M11s	Deaf	BEd Psychology	No	Short	Secondary	Special	34

*Long = more than a decade of experience in working with DHH;

**Short = less than a decade of experience in working with DHH.

***Both = mainstream school teachers recently promoted to become educational supervisors, responsible for inspecting and improving educational practices

The sample also included hearing and D/deaf educators, from special and mainstream settings. After discussing their demographic characteristics with my supervisor and colleagues at the department, the researcher decided that the interview sample would consist of two Deaf teachers at the Al-Amal Institute (K6a and A7s), three teachers at

mainstream schools (S4s, I5m and A8o), three administrators at Al-Amal (M1t, M2m and M11s), two educational supervisors recently promoted from being mainstream teachers (M9b and G10a) and an educational psychologist in an administrative position at Al-Amal (M11s).

4.8.2 Using the semi-structured interviews in phase two

It is well known that researcher reflexivity is vital in the social constructivist worldview, which is the case in this enquiry (Bloor and Wood, 2006). The researcher, having worked as a teacher in DHH education, is bound to accept the inter-subjectivist ontology of the construction of 'inclusion'. Thus, this circular relationship between the researcher, the research topic and the participants is constructively reflexive and gives DHH inclusion its contextual meaning. In addition, the interview can provide a very powerful yet sensitive, flexible, subjective and context-driven instrument for collecting qualitative data (Kvale, 1996; Rubin and Rubin, 2005). Interviews may be structured, unstructured or semi-structured. Structured interviews involve a formalized, predetermined, fixed and limited set of questions, while unstructured ones are more open and can be modified at any time according to the participants' flow of thoughts, beliefs and ideas. The current study has adopted the third, semi-structured, type, which allows emergent questions to appear at any time within a moderately firm framework (Radnor, 1994).

Semi-structured interviews have many advantages over other data collection instruments in order to deepen our understanding of teachers' attitudes. The main interview protocol was adapted from Elshabrawy (2010) with some modifications. Elshabrawy's interview topics were prepared in advance based on the initial analysis of the questionnaire and on the results of the interviews with two Egyptian teachers during the pilot stage. Additionally, some questions were added for later interviews as a result of earlier interviewees' comments. Elshabrawy's interview protocol covered five main themes: teachers' understanding of inclusion (Table 4.13 as an example), teachers' understanding of disability, skills & training, resources, and additional support, teachers' perceptions about barriers to inclusion and perceptions about change. For the reader to have a sense of what was modified in Elshabrawy's interview protocol, kindly see and compare, for instance, Table 4.13 from Elshabrawy's interview and Table 4.18 Inclusion theme from the current study (section 4.9.3).

Table 4.13 Elshabrawy's first theme: Understanding of inclusion

No	Understanding of inclusion
1-	Let's talk about inclusion, what does inclusion mean in your view?
2-	Do you think that the regular school environment is educationally suitable for children with SEN?
3-	What effect does the SEN Child's presence have on the regular classroom environment?
4-	Does the SEN Child benefit from regular education, considering both academic and social benefit?
5-	What is the ideal model of inclusion from your perspective?
6-	What is the relation between inclusion and the future of special schools?

In the current study, the first base-theme of (DHH concept) and the third base-theme (the inclusion process and requirements) were each divided into two themes, to reflect the richness and density of information obtained from the analysis of the first phase and to suit the participants. Other modifications were made according to three criteria (Table 4.14):

Table 4.14 Interview modification criteria

1-	From gaps in the reviewed literature.
2-	The suggestions of referees, Elshabrawy, supervisors, and interaction with interviewees, which prompted the researcher to take conversations further in order to extend or clarify some interesting points or double-check an ambiguous response.
3-	From the second phase data through coding process.

The interviews were guided by a list of seven themes (questions one and three were divided into two themes each), which covered the five research questions. These are discussed in some detail in Section (4.8 and 4.9). This indicates the importance of qualitative enquiry and provides the reader with a detailed account of the contextual circumstances and the relationships between the agents involved.

Furthermore, relevant to the circumstance in which interviews were conducted, Kvale (1996) suggested ten qualities for qualitative research interviewing, which provided the main guidelines for the second phase of data collection in order to gain a satisfactory level of quality assurance. They require the researcher to be: 1) knowledgeable about the various themes under investigation, 2) structuring, 3) clear, 4) gentle, 5) sensitive, 6) open, 7) steering, 8) critical, 9) remembering and 10) interpreting. These qualities are also

vital for rigour in qualitative research, as it aims to cover socially embedded issues such as educators' attitudes. They should apply to all interviews, to build a trusting relationship with participants and were therefore taken into consideration throughout all interviews.

4.9 Interview schedule design and areas covered

As noted in Section 4.7, various questions emerged from the analysis of the questionnaire data in May 2010, and the main themes of the qualitative phase, as listed in Table 4.15, were derived from three sources as indicated earlier (Table 4.14). The five base-themes listed in the first column of Table 4. can be seen to relate directly to the five research questions set out in Section 4.8. This section now takes each of the seven themes and sub-themes in turn (Table 4.15), explaining how the interview questions, set out in full in Appendix B, were related to them.

Table 4.15 Themes and subthemes (qualitative phase)

Themes	Sub-themes
1 Deaf and	Deaf concept
2 HH concept	Hard of hearing concept
3 Inclusion concept	Inclusion philosophy
4 Inclusion process and	Teaching skills & ASL
5 requirements	Additional supporting services
6 Barriers	Barriers
7 Change	Change

The interview was guided by a list of topics that covers the research questions (protocol of semi-structured interview was listed in Appendix B). The interview protocol covered seven themes: educators' understanding of Deaf, educators' understanding of hard of hearing, educators' understanding of inclusion, in-service training and teaching skills (including Arabic Sign Language), Additional support and resource room (including teacher assistant), educators' perceptions about barriers to successful DHH inclusion and change needed. The order they are presented in the protocol does not imply that interviews were conducted in the same order in the schedule. This is because of Saudi educators' abilities to articulate their views about certain issues provided opportunity for some probes to take the discussion a little further.

4.9.1 Understanding the concept of Deafness

In this qualitative phase, the first theme to be tackled in detail was ‘Understanding of Deafness’. It comprises various issues and general ideas about Deaf students and was represented by five interview questions about students with hearing loss above 70dB, dependent on Arabic Sign Language (Table 4.16). The first question was about the participant’s understanding of Deaf students, what he understood by the term ‘Deaf’ and whether he believed more in the social or medical perspective on Deafness. The second question was more concerned with terminology and whether Deafness is more relevant to the concept of disability or to special educational needs. The third question concerned the participant’s opinion regarding the inclusion of all Saudi Deaf students in mainstream schools and the reasons for this opinion. The fourth question was related to the previous one and investigated whether the participant believed that all Saudi Deaf students should be included in ordinary classrooms and the reason for this view. The final question concerned the Al-Amal Institute for the Deaf and whether it should carry on accommodating all Deaf students in the future.

Table 4.16 The first theme: Deaf concept

No	Deaf Concept
1-	What does being Deaf mean to you? And do you believe that it is more about medical issue or rather social/educational matter?
2-	As far as terminology is concerned, which do you believe is more relevant to Deaf: Disability or Special Educational Needs?
3-	Do you believe that all Deaf students should be included in mainstream school and why? Could you please explain your answer more?
4-	Do you believe that all Deaf students should be included in ordinary classroom and why? Could you please explain your answer more
5-	Do you believe that “Al-Amal Institute for the Deaf” is the most appropriate educational place for educating Deaf students?

4.9.2 Understanding of hard of hearing

The second theme was ‘Understanding of HH/deaf’, addressing various issues and general ideas about deaf students (i.e. partially deaf, with hearing loss from 25 to 69dB and able to communicate verbally with the use of hearing aids) (Table 4.17). This theme was tackled by repeating the first four questions detailed above, replacing ‘Deaf’ with ‘deaf/hard of hearing’.

Table 4.17 The second theme: HH concept

No	HH Concept
1-	What does being Hard of Hearing ‘partially hearing’ mean to you?
2-	As far as terminology is concerned, which do you believe is more relevant to Hard of Hearing: Disability or Special Educational Needs?
3-	Do you believe that all Hard of Hearing students should be included in mainstream school and why? Could you please explain your answer more?
4-	Do you believe that all Hard of Hearing students should be included in ordinary classroom and why? Could you please explain your answer more?

4.9.3 Understanding of integration and inclusion

The third theme was the interviewees’ understanding of integration and inclusion, examined by asking four questions about inclusion and its relation with mainstreaming and integration (Table 4.18). The first question concerned the informant’s perception of what inclusion meant to him. The second asked about his standpoint for or against Deaf inclusion and his reasons for this, while the third elicited his view of what inclusion-friendly schools should be like within the Saudi context and the fourth was concerned with his attitude to the future of DHH education in Jeddah in terms of the alternative settings: special schools and the relatively new movement towards more inclusive education.

Table 4.18 The third theme: Inclusion concept

No	Inclusion Concept
1-	What does inclusion of Deaf and Hard Hearing mean to you?
2-	Do you believe in equal access to mainstream education for students and access to ordinary classroom? Please explain more?
3-	From your viewpoint, what are the arguments for and against inclusive education?
4-	How do you envisage inclusion-friendly schools within the Saudi context?
5-	Do you believe that there will be no need for special schools in the future because of the movement towards inclusion in Jeddah, Saudi Arabia?

4.9.4 Teaching skills, in-service training and Arabic Sign Language

The fourth theme was the first of two examining the inclusion process and its requirements, entitled ‘Teaching skills, in-service training and Arabic Sign Language’ (Table 4.19). It encompassed five questions about the improvement of skills for teaching DHH students in mainstream schools and the effective use of ASL, particularly for Deaf students, as signing was not allowed for hard-of-hearing students within self-contained classrooms. This theme is dealing with inclusion processes and requirements in terms of

adapting the teaching strategies and the classroom structure to meet the need of DHH inclusion. The first question concerned whether the informant felt that he had received all the in-service training required to make him competent to teach Deaf and HH students within mainstream schools and the second related to his experience of teaching DHH students, whether in special or mainstream schools. The third question covered teacher training and its role in improving teaching skills to bring inclusion successfully from theory to practice. The fourth question was about the participant's fluency in ASL and whether he had received in-service professional training in ASL. The final one was concerned with the management of classrooms which included Deaf or HH students and whether professional training to teach within mainstream schools had been undertaken.

Table 4.19 The fourth theme: Inclusion process

No	Inclusion process
1-	If you are a certified teacher in SEN, have you received all of the required pre-service teacher competences for Deaf education?
2-	If you are not certified teacher in SEN, have you received the required in-service teacher competences for Deaf education?
3-	Have you ever had experience of teaching Deaf or Hard of Hearing students either in special or mainstream education? And how would you evaluate such experience?
4-	Do you believe that pre-service and in-service teacher training would successfully bring Deaf or Hard of Hearing inclusion from theory to practice in Jeddah? Could you please explain more?
5-	Are you fluent in Arabic Sign Language "ASL"? Have you had any certified courses in ASL, and for how long?
6-	Can you manage a classroom which contains D and/or HH students? Have you had any professional training in how to teach D and/or HH students?

4.9.5 Additional support

The fifth theme 'inclusion requirements' concerned the provision of additional support such as resource rooms, speech therapy units, teaching assistants and clinical psychology, examining the importance of such support, particularly in mainstream education (Table 4.20). The first of three questions sought the informant's opinion as to whether his school met all the requirements for accommodating Deaf and hard-of-hearing students and the second asked about his views on the provision of relevant teaching materials in

order to make the teaching approach more visual. The third question elicited the participant’s opinion on the possible future role of an assistant teacher/interpreter (which had not yet been implemented) to ensure successful inclusion for DHH students. The final outcome of this theme refinement process can be seen in the thematic map presented in Figure 4.2.

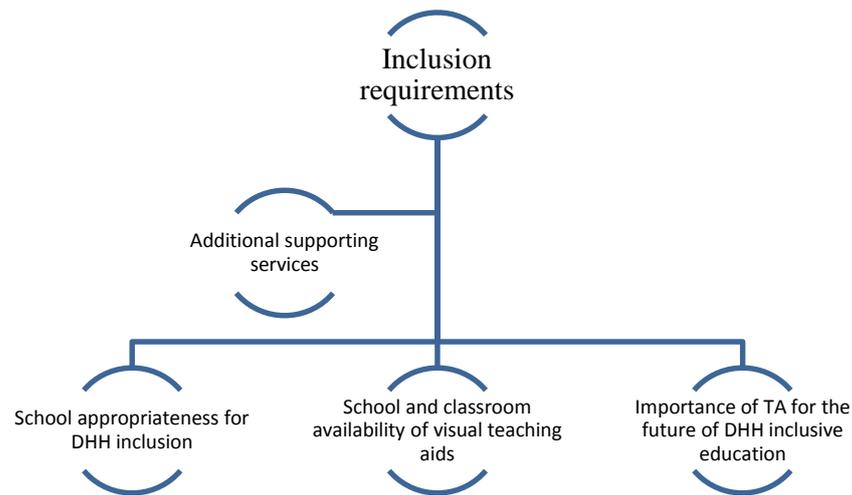


Figure 4.2 Final thematic map, showing subthemes derived from the fourth base theme

For the reader to have a sense of the inclusion requirements and its three questions, see Table 4.20:

Table 4.20 The fifth theme: Inclusion requirements

No	Inclusion requirements
1-	Do you believe that your school meets all the requirements for D or HH inclusion? Please explain?
2-	Have you received sufficient teaching materials to make your teaching approach more visual for D or HH students?
3-	Do you think there a need for assistant teachers/interpreters in your classroom for successful inclusion of D or HH?

4.9.6 Barriers to DHH inclusion

The sixth theme was that of the existence, identification and understanding of barriers to DHH inclusion, addressed by three questions (Table 4.21). The first concerned the informant’s belief as to the main barriers to successful Deaf inclusion in mainstream schools and classrooms. The second question concerned opinions on which factors were most difficult to change: student-related, teacher-related or school-related ones. The third

question was about the participant’s personal experience and views of how these barriers could be overcome.

Table 4.21 The sixth theme: Barrier

No	Barriers
1-	What do you think is the main barrier to inclusion of D or HH students in ordinary schools and in ordinary classrooms in Jeddah?
2-	Which are more difficult to change; student-related factors, teacher-related factors, or school/environmental-related factors?
3-	From your personal experience/perspective, how could you overcome these barriers?

4.9.7 Changes required for successful DHH inclusion

The final theme, entitled ‘Characteristics and quality of change’, was represented by four questions intended to elicit ideas about what needed to be changed to bring about successful Deaf inclusion in Saudi education (Table 4.22). The first question was about what the informant believed was the most crucial change needed to improve DHH inclusion. The second asked how the interviewee would modify classrooms to fully accommodate four or five DHH students, while the third related to the participant’s belief about how the curriculum should be changed or differentiated to match DHH students’ needs and the fourth concerned possible changes to the assessment and evaluation system to make it suitable for the characteristics of DHH students.

Table 4.22 The seventh theme: Change

No	Change
1-	What kinds of change do you think are the most important for bringing D or HH inclusion in Saudi into practice?
2-	How could you modify your classroom to accommodate four or five D or HH students?
3-	How could the curriculum be changed or differentiated to match their needs?
4-	How could the education assessment and evaluation systems be changed to make them suitable for D or HH students?
5-	How could the teaching strategies and homework be changed to make them suitable for D or HH students?

4.10 Conducting the interviews

It took three weeks to accomplish the whole process of the second phase of data collection. After acquiring permission from the Department of Special Educational Needs at King Abdulaziz University/Jeddah, the researcher went to Jeddah LEA in order to obtain permission to conduct the interviews. I then went to the Hearing Impairment Division for further permission and agreement for its personnel to be involved in this

qualitative phase of the research. They provided me with the latest statistics for Jeddah on the numbers of DHH students, teachers, educational supervisors, educational psychologists, administrators and speech therapists. The educational supervisor responsible for the Hearing Impairment Division telephoned the principals of all special and mainstream schools in order to advise them of the researcher's forthcoming visit. Prior to conducting the interviews, the researcher gave an explicit description of the research ethos, stating that the data would be digitally stored and used solely for academic purposes, that participants would be treated with confidentiality, reflexivity and autonomy, and that all other necessary ethical conventions would be respected (BERA, 2011).

Interviews have a reputation for potential in-depth insight and flexibility in the realm of educational research. In a Middle Eastern society built on close relationships and conservative traditions, semi-structured interviews offered a key solution to building conversations based on trust. It was very important to gain acceptance from potential interviewees and establish their willingness to participate in this relatively long data collection procedure. The researcher therefore attempted to establish a personal relationship with each participant, to make a valuable contribution to the interviews more likely, because a friendly and relaxed atmosphere would help to establish trust. The interviews, each of which lasted between forty and fifty-five minutes, were conducted in Arabic to avoid any technical translation problems and recorded using an Olympus digital voice recorder. During interviews, the researcher also used an A5 notebook to make notes about the interviewees' gestures and tones of voice, whether they insisted upon a certain point, eye contact, commonalities, patterns and impressions of comfort and ease with the pace of the interviews (Stainback and Stainback, 1988).

4.11 Phase Two: Qualitative data analysis

The data collected during the semi-structured interviews were subjected to theoretical thematic analysis as described by Braun and Clarke (2006) following their protocol for coding and analysing interview data (See sample of transcribed interview with and without coding at Appendix G and H). This provides a detailed, six-step guide to conducting thematic analysis, which the authors explain is not a linear method of analysis but a recursive and flexible one which develops over time and which should not be done

quickly Table 4.25. There are two ways of performing thematic analysis, either by following an inductive approach or in the form of theoretical thematic analysis. The former is more data-driven, where known themes are closely connected to the data themselves, as in grounded theory (Patton, 1990), not concerned with the researcher's preconceptions about the topic (Braun and Clarke, 2006), which is clearly not the case in the present study. In addition, the recommendations of Miles and Huberman (1994) were taken into account, as they offer a more detailed explanation of the thematic analysis of qualitative data. It was vital to be consistent in terms of choices of data collection, analysis, sample, audience, theoretical framework and methodological approach. There are various reasons why theoretical thematic analysis was considered appropriate and useful for this current study. As the researcher was interested in the way in which DHH integration was employed in Jeddah and in how participants' attitudes were shaped accordingly, this would be the focus of the process of coding the data, encouraging the emergence of subthemes around Deafness, attitudes, placements, beliefs, barriers and educational change.

Given the large amount of qualitative data obtained by asking twenty-nine questions of eleven participants, data reduction was undertaken to simplify (Namey, Guest, Thairu, & Johnson, 2007), abstract and transform the data into condensed and meaningful clusters (Miles & Huberman, 1994) or categorization of meaning (Kvale, 1996: p. 187). The three main stages in this summarising and reduction processes were: initial coding, where themes and units were identified; pattern coding, where theoretical remarks were reformulated; and proposition or theory building, where a model of perception was assembled by looking at similarities, differences, consistency etc. (Miles & Huberman, 1994). The purpose of this part of the study was to examine in depth the experience and perceptions of the second-phase participants. The data were coded according to the themes set out in Table 4.24.

Each base-theme, consisting of different sub-themes and codes, was analysed in this way to discover any emerging patterns. From these themes were derived various codes, as discussed in detail above, which were initially descriptive, inferential or interpretive, and broader themes, with the ultimate aim of building theoretical explanations of the phenomena (Miles & Huberman, 1994; Radnor, 1994). This took the form of deductive

theoretical thematic analysis, as proposed by Braun and Clarke (2006), which was found to provide a pragmatic tool for the analysis of themes within the data. An additional reason for adopting theoretical thematic analysis was that it has a great deal of flexibility (Table 4.25), in the sense that its six major steps of analysis are presented as guidelines, not rigid rules (Patton, 1990; cited in Braun and Clark, 2006) (**Error! Reference source not found.23**).

Table 4.23 Phases of Thematic Analysis

No.	Phase	Description of the process
1-	Familiarising yourself with your data	Transcribing data (if necessary), reading and rereading the data, noting down initial ideas.
2-	Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
3-	Searching for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
4-	Reviewing themes	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic „map“ of the analysis.
5-	Defining and naming themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
6-	Producing the report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

Sources: from Braun and Clarke (2005)

For example, the seventh theme of change was thematically analysed and organized, all in Arabic, then one interview was translated into English to provide an example for this thesis. Evidence of recurring themes was provided by quoting some responses of interviewees throughout the analysis, in order to have clear references, particularly when establishing cross-case similarities and differences (see excerpt from coding process of an extract transcribed translated interview at Appendix G). A description of each main finding was produced via data analysis and presented as base-themes, themes and sub-themes, which are listed in Table 4.24.

Table 4.24 Main themes, sub-themes and codes of interview questions

Themes	Sub-themes	Coding framework for thematic analysis	Coding label
T1 & 2: DHH concept	D concept	Concept model	Con. Mod.
		Terminological preferences	Ter. Pre.
	HH concept	Integration or Inclusion	Integ. or Incl.
		DHH better placements	DHH Plac.
T3: Inclusion concept	Inclusion philosophy	Meaning of inclusion	Mean. Incl.
		Attitudes towards inclusion	Att. Incl.
		Mainstream school specifications	Main. Sch. Spec.
		Future of Al-Amal special schools	Fut. Al-Am.
T4 & 5: Inclusion process and requirements	Teaching skills and ASL	Obtaining in-service training and related skills	Obti. In-ser.
		Evaluation of DHH teaching experience	Eval. DHH Teac.
		In-service training impact on integration success	In-ser. Impac.
		ASL proficiency	ASL Prof.
	Additional supporting services	DHH mainstreaming classroom management	DHH Incl. Man.
		School appropriateness for DHH integration	Scho. App. DHH Integ.
		School and classroom availability of visual teaching aids	Class. Aval. Visu.
		Importance of TA for the future of DHH inclusive education	TA and Incl. Fut.
T6: Barriers	Barriers	The major obstacle to better DHH integration	Maj. Obst. Of DHH Integ.
		Priority of barriers list: teacher-related factors, environmental-related factors and child-related factors	List; Ch., Teac., Env.
		How to eliminate these barriers	Elim. Barr.
T7: Change	Change	What must be changed first	Fir. Chan.
		Classroom adjustment	Class. Adj.
		Differentiation of the national curriculum	Curr. Diff.
		Change in assessment and exams	Eval. Ass. Modi.
		Teaching styles and homework alteration	Teac. Sty. Hom. Alter.

As the codes listed in (Table 4.24) and the associated interview questions were framed explicitly to address the five research questions set out in Section 4.2 and driven by theoretical interest in the area, the latter approach (theoretical thematic analysis) was considered the more appropriate way to provide a detailed account (Table 4.25), of some aspects of the data as indicated in (Table 4.**Error! Reference source not found.**23).

Table 4.25 Advantages of Thematic Analysis

No.	Ten positive features of using theatrical thematic analysis
1-	Flexibility
2-	Relatively easy and quick method to learn, and do
3-	Accessible to researchers with little or no experience of qualitative research
4-	Results are generally accessible to educated general public
5-	Useful method for working within participatory research paradigm, with participants as collaborators
6-	Can usefully summarise key features of a large body of data, and/or offer a „thick description“ of the data set
7-	Can highlight similarities and differences across the data set
8-	Can generate unanticipated insights
9-	Allows for social as well as psychological interpretations of data
10-	Can be useful for producing qualitative analyses suited to informing policy development

Source: Braun and Clarke (2006)

There were two major sources of interview data to analyse and compare, obtained respectively from interviews with five teachers and with six administrators. The research findings in this qualitative phase are presented as five theoretical base-themes (Table 4.23). In each case, the analysis yielded themes, sub-themes, codes and patterns attached to each of the five base-themes, which were then linked to fragmented quotations to help in drawing out within-case subtleties of meaning. The researcher then attempted to match and compare codes from within-case analyses to provide cross-case parallel comparisons. Relationships between themes, codes and their descriptive/interpretive analysis were illustrated with quotations from interview responses to explicate the links to the base-themes as indicated in **Error! Reference source not found.**Appendices (G and H).

Another intrinsic advantage of conducting qualitative data analysis through thematic analysis is that it actively functions as a recursive, and nonlinear process (See Table 4.25). Thus, there are two-way relationships between successive steps of the analysis. The coding process began by reading between the lines and becoming familiar with the interview transcripts as a whole. Secondly, throughout the process of reading and re-reading the eleven transcripts, initial descriptive codes were written in each section of the seven categories, with the aim of either identifying descriptors or ordering fragmented elements into base-themes (Radnor, 1994). Next, some themes were analysed in detail and linked to complementary subthemes in order to detect any emergent or recurrent

codes/patterns (Silverman, 2000). Constant reviews were carried out to ensure the clarity of themes, codes and subthemes, along with their associated data. Each theme and code was carefully defined and named to ensure that it truly reflected what it was attached to (Braun and Clark, 2006). The researcher translated the original English edition of the interview questions into Arabic and sent this translation to two professional friends, who member-checked it to safeguard, improve and maintain the validity of translation outcomes. The first was a lecturer at a Saudi university and graduate of the TESOL programme at the Graduate School of Education at Exeter University. The second was the original author of the attitude scale, an Arabic speaker, an expert in the same area of research and a graduate of the Special Needs programme at the same School of Education. They made some modifications, which took effect in the final draft of the interview protocol. Finally, the whole analysis report was written up to draw a global picture of the second phase.

This step was followed by the writing of the final chapter of this thesis, which discusses, interprets, confirms or contradicts and integrates the two parts of the project. Thus, this study can be seen as a realisation of sequential mixed methodology, beginning with a broad quantitative approach where two general research questions were examined, followed by a second, more specific, phase of detailed qualitative exploration in the form of interviews, to provide a deeper and more insightful understanding (Creswell, 2009).

Flexibility is one of the main characteristics of qualitative research and it allows for changes during data collection and analysis (Hodkinson, 2009). Due to the limitation of time, resources and access, a set of data collection instruments was adopted from Elshabrawy (2010). The semi-structured interview was a very useful tool of data collection because it allowed me to acquire a wide-ranging description from the participants about their views and opinions about DHH inclusion. Using the semi-structured interview gave my targeted participants a free voice to take the study one step further and to modify and generate new themes or subthemes to understand what they thought was important at their schools (Radnor, 1994). Most of the interview questions and themes were prepared in advance based on three sources: the initial analysis of the questionnaire, the results of the pilot interview with a Saudi academic, and Elshabrawy instrument (2010). The pilot interview involved a colleague from the SEN Department at

King Abdulaziz University who was selected purposively on the basis that he was knowledgeable in DHH inclusion and was a teacher of DHH students in the beginning of his career. Some questions were added and/or modified for later interviews as a result of earlier interviewees' comments which indicates flexibility of the interview protocol and meant that it did not appear to act as a "straitjacket" (Radnor, 1994; Elshabrawy, 2010). As the sequential mixed methodology strategy was followed, collecting data involved an iterative process whereby the data collected in the first phase support the data collected in the second (Teddlie & Tashakkori, 2003). Sequential mixed methodology design aims to provide supplementary data about results from the earlier phase of data collection and analysis, to select participants who can best provide that data and to determine which findings to augment in the next phase (Creswell & Plano Clark 2007: 121).

It is vital to recap that the themes presented in the second phase were partly emergent and partly influenced by my personal and theoretical positioning (Table 4.14). Following Braun and Clarke (2006), Kvale (1996), Miles and Huberman (1994), Teddlie and Tashakkori (2003) and Creswell (2009) I presented relevant findings with statements summarizing them through my own lens (Radnor, 1994), albeit with transparency of process (Habbash, 2011).

4.12 Trustworthiness and dependability

Trustworthiness in interpretive research is as important as validity and reliability in the scientific paradigm (Seale, 1999; Lincoln & Guba, 1985; Merriam, 1998). Social-constructivists and interpretivist educational researchers emphasize the importance of trustworthiness and credibility of the findings of mixed methodology research through careful attention to the research aims, conceptualization, methods of data collection, analysis, coding and interpretation (e.g. Lincoln & Guba, 1985; Maykut & Morehouse 1994; Miles & Huberman, 1994; Silverman, 2000). Therefore, some of the qualitative data were given to a researcher studying on a doctoral programme at the School of Education in order to have an independent analyst go through four randomly selected transcripts. It was considered vital to have peer review of how base-themes, themes, sub-themes and codes were constructed, and how the relationships between different themes were manipulated. This was done by asking him to code four interviews and see whether he gave the same codes for the same segments of the data. In terms of recurring themes,

agreement was reached between the researcher and the peer reviewer after three meetings. This gave the data analysis process the required dependability and rigour (Miles & Huberman, 1994: 64).

Transferability was gained by providing thick descriptions (Merriam, 1998), of the data and context (Lincoln and Guba, 1985). The results are illustrated with quotations from the interview transcripts to make sure that the reader has access to part of the original data and to justify the proposed interpretation of emergent patterns and subthemes. This led to the qualitative chapter comprising almost one third of the whole thesis, but it was essential to give the theoretical thematic analysis the richness and detail it deserved (Creswell, 2003). Nonetheless, social-constructivist research does not aim to generalize its findings, but to offer new perspectives that are unique, contextually based (Elshabrawy, 2010), and the lessons learned from this could be transferred to similar contexts (Lincoln & Guba, 1985).

4.13 Ethical issues relevant to the qualitative phase

In the last three decades, research ethics has become an essential issue that has to be dealt with cautiously in any educational research (Habbash, 2011). Some ethical principles in qualitative educational research had to be addressed, such as the right to withdraw at any time from participating in the interview, the right of interviewees to amend their transcripts to add or remove any phrases that they believed did not truly reflect their thoughts. Explicit notice was made that the main purpose of conducting this interviews was academic research.

A transcript was made of each interview, accompanied by brief notes and an initial interpretation in order that no details would be forgotten and to allow the preparation of an initial general coding, marginal remarks, categorization and patterns, forming a rough idea of the views of each participant. Each transcript was sent via email to the interviewee concerned in order to double check its accuracy, to test the validity of the researcher's interpretation and to invite the participant's reflections, feedback, comments and corrections (See Appendix G for an extract transcribed translated interview). As there are two Deaf teachers (K6a and A7s), a copy of their interview transcript was sent to each individual via email to ensure its accuracy including the interpreter. They were happy

with the interpretation and agreed with the transcript. According to Miles and Huberman (1994), it is quite important to have detailed reflections upon the writing up at this stage, as it helps both researcher and interviewees to have a clearer understanding. Unclear meanings were resolved in conversations and through emails between interviewees, the researcher, and proofreaders. The detailed reasons for inviting these reflections were firstly, that it was important to clarify the nature of the relationship with each participant at that time. The second reason was to give each interviewee a further opportunity to express what he truly wanted to convey about his beliefs, feelings and attitudes regarding DHH inclusion. Thirdly, these reflections had the potential to modify, eliminate or add new propositions which might provide a better understanding of interviewees' opinions. Fourthly, remarks made by significant participants could provide clues as to what issues needed to be emphasized in future. Finally, such reflections may give an explanation of prior occurrences which later prove to be more important than at first thought (Miles & Huberman, 1994).

Each interviewee was given an individual assurance about ethical issues and that the digital recording and transcript would be securely stored and used only for academic purposes, having nothing to do with inspections of the Jeddah LEA or the Ministry of Education. This was thought necessary because there is always a distrust of 'outsiders' in the Saudi school culture, based on the fear that they may represent a kind of authoritarian position or be working as inspectors for the Ministry of Education. If this point had not been made completely clear in the first place, there would have been a danger of not being fully transparent, which would have made it more difficult to accomplish the aims of the research. Anonymity is another important consideration in educational research. In the current study, participants are not identified directly, being referred to only by the codes listed in the first column of Table 4.12, to ensure that their anonymity and rights were protected. Furthermore, all participants were assured that the information obtained from them would be kept secured and confidential.

4.14 Integrating the two phases of the study

Different data sources were analysed via sequential analysis (Tashakkori & Teddlie, 1998; Teddlie & Tashakkori, 2010) and then brought together and integrated in the final stage of analysis and then in writing up results (Bazeley 2010b). Mixed methodology

reflects the way individuals naturally collect information by incorporating quantitative and qualitative data to enrich and explain information on variables (Caracelli et al., 1997) to provide a more complete story than either method would alone (Wisdom and Creswell, 2013). As showed in Figure 4.1 in Section 4.5, the two types of data were quantitative or qualitative and they were integrated during the interpretation and discussion phase (Creswell, 2003). This linkage process offered enhanced detail and a more colourful picture of the different themes. This allowed different but complementary questions to be addressed within the study, permitted data to be crosschecked, and allowed for more elaborate interpretation of data (Silverman, 2000). This was attained by complementarity and seeking elaboration, enhancement, illustration and clarification of the results from one method with results from the other method (Rossman & Wilson, 1985). For instance, the first phase showed that educators tended to hold more positive attitudes towards hard of hearing inclusion (students with mild special needs), but not the same positiveness with Deaf inclusion (severe or profound special needs). In the second phase, this aspect was traced and tackled in more detail in the first and second theme as the participants were asked to reflect upon their position towards D and HH inclusion (third question at the first theme, Table 4.16, and third question at the second theme, Table 4.17).

The development of any interview schedule in educational research could be directed by several efforts in general (Habbash, 2011). These included: a) a review of literature on the topic under investigation (e.g. inclusion, disability, and Deaf and hard of hearing education), and understanding gained from the existing empirical research related to inclusion as a relatively modern educational phenomenon and its implications on educational policies and practices, b) peer feedback and referees' reflections with respect to categorization of questions, themes, subthemes, recurring themes, and codes in the interview schedule, and c) from the second phase data through coding processes. These three steps were monitored to guarantee that the responses covered the themes and subthemes needed to achieve the research aims (Habbash, 2011).

4.15 Chapter Summary

This chapter has given a comprehensive account of the methodology adopted for the present study and details of how it was carried out in practice. It began by explaining the philosophical approach adopted, listed the research questions to be addressed, offered a

justification for adopting a mixed methodology approach and a justification of the specific setting, the Jeddah LEA. The theoretical framework was followed by an account of the research design and research methods. The design of the survey instrument, the selection of first phase sample, how the survey instrument was adapted to serve the current research aims and objectives, how it was administered, how the quantitative data were analysed statistically, and ethical issues related to the first phase were all discussed. The following sections then gave an account of the second phase of the research design, preparation of interview phase, details of the interview questions and their relation to the themes emerging from the first phase, interview sample, how interviews were conducted, interview schedule design and the areas covered in the interviews. The details of the qualitative data analysis approach (theoretical thematic analysis) were then described, followed by an account of how trustworthiness and dependability were ensured. Lastly, a full account was presented of the way in which ethical issues were addressed and how the results of the two phases were combined.

CHAPTER FIVE

First Phase Findings: Quantitative Survey

5 First Phase Findings: Quantitative Survey

5.1 Introduction

This is the first of two chapters reporting the research findings. It is appropriate to report findings based on the analysis of quantitative survey data first, in order to set the broad scene from a larger sample, before considering the qualitative data derived from in-depth interviews with fewer participants. This chapter therefore reports and analyses the findings of the first phase of the current study. It is divided into seven sections, the first of which addresses the seven demographic variables employed in the questionnaire. This is followed by brief reports of the return rates, the data analysis procedures, the internal reliability of the attitude component scales and the linear correlation results. Section 5.7 then reports the results in detail and analyses them, showing how each of the three components of attitude varied according to each of the seven variables discussed in Section 5.2. The chapter ends with a summary.

5.2 Questionnaire sample and demographic variables

Questionnaires were distributed to 159 Saudi educators (teachers and administrators) working in direct contact with students with DHH; of these, 120 were completed and returned, giving a response rate of 74.7%. This response rate is discussed in Section 5.3. It should be noted that each local authority area in Saudi Arabia has two separate LEAs, one for males and the other for females; as the researcher is male; all participants in the current study were also male.

The demographic characteristics and other details of the sample, according to the categories on the questionnaire, are shown in Table 5.1.

Table 5.1 Demographic characteristics of the sample

Variables	Participants' characteristics	N	Percentage
Working with Deaf or HH	Deaf	68	56.7
	Hard of hearing	52	43.3
Qualifications	BEd in Deaf Education	41	34.2
	BEd in Education	43	35.8
	BEd in Education with SEN diploma	22	18.3
	Master in SEN	2	1.7
	Other	12	10.0
In-service training	In-service training obtained	80	66.7
	No in-service training	40	33.3
Experience	5 years or less	49	40.8
	6 to 10 years	32	26.6
	11 to 15 years	21	17.5
	16 to 20 years	14	11.7
	More than 20 years	2	1.7
	<i>Missing values</i>	2	1.7
Education Stage (Ladder)	Primary	52	43.3
	Intermediate	38	31.7
	Secondary	30	25.0
School type/Placement	Al-Amal Institute for the Deaf	44	36.7
	Mainstream self-contained classrooms for the Deaf	22	18.3
	Mainstream self-contained classrooms for HH	52	43.3
	<i>Missing Values</i>	2	1.7
Age	22 to 30	36	30.0
	31 to 40	41	34.2
	41 to 50	40	33.3
	Over 50	3	2.5
Total		120	100%

Four of the variables investigated (qualifications, training, experience and age) refer to the educators themselves, while the other three refer to their students: education stage, placement type and degree of hearing loss. The last of these distinguishes between Deaf students, with profound hearing loss of 70 dBHL and greater, and those who were hard of hearing or deaf, with hearing loss between 26 and 69 dBHL. This is the first of the seven variables discussed in the following subsections.

5.2.1 Degree of students' hearing loss

The first demographic variable looked at which students the responding teachers taught, students' D/deafness as profound or mild hearing loss. The distribution of participating educators by this variable is reproduced in Table 5.2.

Table 5.2 Distribution of educators by type of hearing loss of their students

<i>Deafness type</i>	<i>Number of educators</i>	<i>Percentage of educators</i>
Teach Deaf/severe hearing loss	68	56.7
Teach hard of hearing/deaf	52	43.3

It is relevant to the first variable that, at the time of the survey, 94 Deaf students and 183 hard of hearing were studying at mainstream schools, out of a total of 277 DHH students in Jeddah. Table 5.2 shows that of the 120 educators who completed and returned questionnaires, 68 taught Deaf and 52 taught hard of hearing students.

5.2.2 Educators' qualifications

Table 5.1, above, shows that, in terms of qualifications, the sample was initially divided into five groups, the first three of which represented almost 90% of participants, all of whom held a bachelor degree in education: 41 educators, representing 34.2% of the sample, were certified in D/deaf education, while 43 (35.8%) were certified in general education and 22 (18.3%) had an SEN diploma. Only two educators (1.7%) had a Master's degree in SEN. Both had recently gained this qualification and been appointed as DHH educational supervisors, having previously worked at mainstream schools for a long time. The final group of 12 educators (10.0%) had other qualifications. After discussion with my supervisor, it was agreed that because of their small size, these last two groups should be collapsed to form a new fourth group of 14, representing 11.7% of the sample. Thus, for purposes of analysis, the four groups by qualification were as shown in Table 5.3.

Table 5.3 Distribution by qualification

Qualification	Frequency	Percent
BEd in Deaf Education	41	34.2
BEd in Education	43	35.8
BEd in Education with SEN Diploma	22	18.3
Others	14	11.7
Total	120	100.0

5.2.3 In-service training

For the purposes of the third variable, in-service training, the respondents were simply divided into two groups, the first comprising 80 educators (exactly two-thirds of the sample) who had obtained in-service training relevant to DHH education and Arabic Sign Language (ASL) and the second being the remaining 40 educators who had received no relevant in-service training at all. This distribution is shown in Table 5.4.

Table 5.4 Distribution by in-service training

<i>In-service Training Obtained</i>	<i>Frequency</i>	<i>Percent</i>
Yes	80	66.7
No	40	33.3

5.2.4 Experience

Table 5.1 shows that respondents were initially divided into five groups by length of experience, the largest being the 49 novice educators with five to ten years of experience (40.9%), followed by 32 educators (26.7%) with six to ten years of experience, 21 (17.5%) with eleven to fifteen years, 14 (11.7%) with 16 to 20 years and finally two (1.7%) who had more than twenty-one years of experience. Because this last group was very small, it was merged with the original fourth group to form a new fourth group of 16 educators, representing 13.4% of the sample, with more than 15 years of experience. These four groups are shown in Table 5.5.

Table 5.5 Distribution by years of experience

<i>Length of experience</i>	<i>Frequency</i>	<i>Percent</i>
Less than five years	49	40.8
From 6 to 10 years	32	26.7
From 11 to 15 years	21	17.5
More than 15 years	16	13.3
<i>Missing Values</i>	2	1.7

Table 5.1 and Table 5.5 also show that two participants failed to report their level of experience. It may be relevant that neither of these had received in-service training.

5.2.5 Education stage

The next variable to be considered is education stage (called ‘education ladder’ by the Saudi Ministry of Education and its official subordinate agencies) in which these respondents worked. The sample is thus divided into three groups, of educators working at the primary, intermediate and secondary school stages. Those serving the primary stage students (aged from 6 to 12 years) formed the largest group (52 educators, representing 43.3% of the sample). A smaller group of 38 educators (31.7%) worked at the intermediate school stage (ages 13 to 15), while 30 educators (a quarter of the sample) worked at the secondary stage (16 to 18 years), as shown in Table 5.6.

Table 5.6 Distribution by school stage

School Type	Frequency	Percent
Primary stage	52	43.3
Intermediate stage	38	31.7
Secondary stage	30	25.0

5.2.6 School type/placement

In terms of education placement, respondents were again divided into three groups, the first consisting of 44 educators (36.7%) who worked basically within Al-Amal Institute for the Deaf special schools, the second of 22 educators (18.3%) teaching Deaf students within mainstream self-contained classrooms, and the third of 52 educators of HH students within mainstream self-contained classrooms. This last group was the largest, representing 43.3% of respondents. Two participants did not report their school type, as shown in Table 5.1 and Table 5.7.

Table 5.7 Distribution by school type/placement

School Type	Frequency	Percent
Al-Amal Institute for the Deaf/ Special School	44	36.7
Deaf classrooms in mainstream schools	22	18.3
HH/d classrooms in mainstream schools	52	43.3
Missing values	2	1.7

5.2.7 Participants’ age

The seventh and final variable which was examined to determine whether it had a significant influence upon attitudes was the age of the educators. Table 5.1 shows that there were originally four groups, the first consisting of 36 educators (30.0%) aged

between twenty-two and thirty years, the second of those aged thirty-one to forty years (41 educators; 34.2%), the third of 40 educators (33.3%) aged between forty-one and fifty years and a final group of only three, aged fifty-one years or older. As the main goal was to observe general trends without disturbance caused by extreme cases, it was decided to collapse the last two groups, forming the third group shown in Table 5.8 of 43 educators aged over 40 years. This group was the largest by a small margin, representing 35.8% of the total.

Table 5.8 Distribution by age

Age group	Frequency	Percent
22 to 30 years	36	30.0
31 to 40 years	41	34.2
Over 40 years	43	35.8

5.3 Return rates

As reported above, 159 questionnaires were distributed and 120 were completed and returned. This means that 39 educators (25.3%) did not wish to participate or had taken copies of the survey but did not answer it completely. Tables 5.9, 5.10 and 5.11 show the return rates for each of the schools to which questionnaires were distributed, showing the primary, intermediate and secondary schools respectively.

Table 5.9 Return rates of questionnaires from primary schools

School/Programme's code	Questionnaires' distributed	Questionnaires' returned	Return rate %
APSD1	17	15	88
SSC4/AMPS	19	15	79
SCC5/SAPS	11	8	73
SCC6/AAAPS	18	15	83
Totals (4schools)	65	53	82

Table 5.10 Return rates of questionnaires from intermediate schools

School/Programme's code	Questionnaires' distributed	Questionnaires' returned	Return rate %
AISD2	17	14	82
SCC7/AIS	15	10	67
SCC8/ASS	16	13	81
Totals (3 schools)	48	37	77

Table 5.11 Return rates of questionnaire from Secondary schools

School/Programme's code	Questionnaires' distributed	Questionnaires' returned	Return rate %
ASSD3	20	14	70
SCC9/IHSS	12	6	50
SCC10/RSS	14	10	71
Total (3 schools)	46	30	65

*SCC = Self-Contained Classrooms (special classes delivering mainstream programmes at mainstream schools)

The overall response rate was 74.7%; in other words, three-quarters of the targeted sample completed the questionnaire and participated in the survey. This is an acceptably high response rate and large enough to allow for good point estimates. The response rates were below 70% for two schools only. Response rates declined from primary to intermediate to secondary.

5.4 Data analysis methodology

The questionnaire was designed to assess participants' attitudes towards inclusion of Deaf and hard of hearing students within mainstream classrooms. The multi-component model of attitude was used in this study because it embraces the potential of revealing different facets of attitude, in contrast to the single component model of attitude. This model is discussed in the Literature Review (Chapter 3.6) where the definitions and justification for the three component model were presented. To recap, the cognitive component encompassed educators' beliefs and information about inclusion, the affective component encompassed their feelings about inclusion, and the behavioural component reflected the actions reportedly taken by the educators to facilitate successful inclusion in their classes. The affective component was divided into two subscales: an affective component regarding inclusion of profoundly Deaf students (affective_D), and an affective component regarding inclusion of mildly deaf and hard of hearing students (affective_HH).

In the first stage of analysis, all data were input to a Microsoft Excel 2011 file. Once all the figures had been double checked, they were imported into the latest version (19) of the IBM SPSS software package, which was used to conduct various types of analysis, i.e. descriptive and inferential statistics. The methods of descriptive data analysis included means, standard deviations, frequencies and percentages, while the inferential analysis

methods comprised the T-test, one-way analysis of variance (ANOVA), post hoc Tukey HSD and the Pearson correlation coefficient.

As explained in Chapter 4, Sections 4.6.3 and 4.7.1, the three components of attitude were measured on scales with ranges of 1 to 5, with 5 representing the most positive attitude towards inclusion and 1 the most negative attitude. On the cognitive scale, therefore, respondents with higher scores tended to have beliefs and information which supported the effectiveness of inclusion of DHH students in mainstream schools. On the affective scales, the higher the scores the more comfortable, optimistic and happy the respondents were with including Deaf or hard of hearing students in their classes. Finally, on the behaviour scale, high scores meant respondents had a stronger predisposition to take actions that facilitated DHH inclusion in their class.

5.5 Reliability Results

In order to ensure that the reliabilities of the attitude scales were high enough to give confidence in the measurements, Cronbach's alpha reliability coefficient was computed for each attitude component. Wilcox (1992) shows that standard Cronbach's alpha is sensitive to even minor deviations from normality. This sensitivity is due to a heavy tail effect that greatly influences the estimation of the variance. The Wilcox method demonstrates that heavy tails are a common occurrence in psychometric measurement. Thus, Wilcox derives a robust version of alpha which estimates reliability more closely when deviations from normality are present. Central response tendency affects the normality of the response distribution by inducing a higher peak in the centre of the distribution. Hence, Wilcox's method may prove valuable in estimating alpha when faced with a central response tendency, as well as for a heavy tail effect.

The value of Cronbach's alpha for the original cognitive items came to .594, which was less than the acceptable value (.70). Therefore, to improve the reliability coefficient of the cognitive component, exploratory factor analysis was conducted using the principal component method and varimax rotation to see if it was possible to identify inter-correlated items to form a more reliable cognitive scale (see Chapter 4, Table 4.10 of varimax rotated component Matrix). The results of the exploratory factor analysis revealed that seven items loaded on the first factor with factor loadings greater than .30

and, when these items were tested for their internal reliability, the coefficient was .79. Consequently, only these seven items were used to measure the cognitive component, and the rest were discarded. The numbers of these seven items are 11, 14, 16, 17, 18, 21, and 24. A detailed account of the five themes embedded within the cognitive component was reported in the previous chapter (4.4.3).

The reliability coefficients of the two affective components were .91 for Affective_D and .92 for Affective_HH; both acceptably high levels of reliability.

The reliability coefficient of the 14 items of the behavioural component was .79; the results also indicated that deleting item 9 would increase reliability coefficient from .79 to .81. Therefore, item 9 was deleted. Table 5.12 shows the values of Cronbach's alpha, indicating that reliability ranged from high (Affective_HH=0.92) to medium (Cognitive=0.79), while the value for behaviour was moderate (0.80).

Table 5.12 Reliability coefficients for the components of attitude

Component	Cognitive	Affective_D	Affective_HH	Behaviour
Cronbach's alpha	0.79	0.91	.92	0.80

Having selected sets of items with a sufficiently high internal reliability, the scores on the items within each component were averaged to arrive at a measure of component of attitude for each educator.

5.6 Linear correlation results

The Pearson correlation coefficient was computed to measure the degree of linear relationship between the components of attitude, in order to see the strength of the association between them. Table 5.13 displays the results.

Table 5.13 Correlation coefficients between components of the attitude scale

Attitude component		Cognitive_Dim	Affective_D	Affective_HH	Behavior_Dim
Cognitive_Dim	Pearson Correlation	1	-.06-	-.03-	.00
	Sig. (2-tailed)		.50	.79	.97
	N	120	120	120	120
Affective_D	Pearson Correlation		1	.63**	-.02-
	Sig. (2-tailed)			.00	.83
	N		120	120	120
Affective_HH	Pearson Correlation			1	.03
	Sig. (2-tailed)				.71
	N			120	120
Behavior_Dim	Pearson Correlation				1
	Sig. (2-tailed)				
	N				120

As shown in Table 5.13, there were no statistically significant relationships between the cognitive and the other components of the attitude scale, which indicates that the three components were independent of each other. Similarly, as the significance level is greater than 0.05, there were no statistically significant relationships between the behaviour domain and the affective_D and affective_HH domains. The findings show that the three components were independent of each other. The only statistically significant positive moderate relationship was found between the two components of the affective domain.

The results indicated that educators' beliefs about inclusion, as reflected by the cognitive component, were not correlated with either the affective or behavioural components. Whether educators had positive or negative beliefs towards DHH inclusion was not associated with positive or negative feelings toward Deaf and HH inclusion. Similarly, educators' beliefs about the merits of DHH inclusion were not associated with any increase or decrease in the levels of practice of the appropriate behaviours to improve the inclusion experience. Finally, the relationship between educators' feelings regarding Deaf or HH student inclusion was not associated with their practice of the proper behaviours associated with inclusion. Teachers who felt happier or more optimistic regarding Deaf or HH student inclusion did not report that they would practise more positive behaviours towards inclusion. However, the two different aspects of attitude were closely associated

with each other; that is, teachers with positive feelings regarding Deaf inclusion also tended to have positive feelings towards HH inclusion.

5.7 Results for each variable and Differences between components of attitude

Table 5.14, below, gives the means and standard deviations on the four attitude sub-scales:

Table 5.14 Whole sample attitude means and standard deviations

Attitude Components	Mean	SD
Cognitive	2.83	0.87
Affective _D	3.42	1.23
Affective _HH	3.76	1.09
Behaviour	4.60	0.46

The last two columns in Table 5.14 give the means and standard deviations on the four sub-scales of components of attitude towards inclusion for the whole sample, not broken down by setting. The mean scores on the cognitive scale was slightly below the mid-point ($M = 2.83$ compared to the mid-point of 3.00), which indicated relatively less than positive belief in the cognitive component of attitude (relates to Chapter 6, Figure 6.4 at section 6.5.3; 6.5; Figure 6.2 at section 6.4.2). Thus, participants' beliefs and knowledge of DHH inclusion tended to be less than positive as opposed to teaching DHH students in specialist institutes (relates to Chapter 7, section 7.4.1, 7.4.2, 7.4.3, and 7.5.2). The mean ($M = 3.42$) for Affective_D was slightly above the mid-point of the scale, indicating that participants felt somewhat positive about inclusion of Deaf students in mainstream classes. For Affective_HH ($M=3.76$), the mean was higher than for Affective_D, showing that the participants had rather more positive feelings (section 6.9) about inclusion of HH than of Deaf students (relates to Chapter 6, section, 6.4.2; Chapter 7, section 7.3.1.1, 7.4.3, and 7.5.1). Finally, the mean for the behavioural component of attitude ($M = 4.60$) was near the top of the scale (5.00), meaning that the educators claimed that they would adopt very inclusive practices if they had a DHH student in their mainstream class. More discussion on the attitude scale findings is reported at Chapter 7 (relates to Table 6.5, ST5 at section 6.5; 6.4.4, 6.5.5; Chapter 7, 7.4.5, and 7.5.2).

5.7.1 Difference in attitudes by Deafness type/teaching setting

These four components of attitude were then broken down by the setting in which the teachers taught, either the special school (Al-Amal Institute), self-contained classrooms for the Deaf in mainstream schools, or self-contained classrooms for the hard of hearing in mainstream schools. This variable therefore encompassed both school type and deafness type. The mean scores for each group are given in Table 5.15 and illustrated in the bar chart Figure 5.1.

Table 5.15 Mean attitude scores by teaching setting/Deafness type

Attitude Components	DHH and School Type/placement	N	Mean	SD
Cognitive_Dim1	Deaf at Al-Amal Institute/Special School	44	3.07	0.72
	Deaf at mainstream schools/self-contained classrooms	22	2.73	1.01
	Hard of Hearing at mainstream self-contained classrooms	52	2.65	0.90
Affective_D	Deaf at Al-Amal Institute/Special School	44	3.06	1.19
	Deaf at mainstream schools/self-contained classrooms	22	3.48	1.32
	Hard of Hearing at mainstream self-contained classrooms	52	3.69	1.17
Affective_HH	Deaf at Al-Amal Institute/Special School	44	3.59	1.10
	Deaf at mainstream schools/self-contained classrooms	22	3.20	1.22
	Hard of Hearing at mainstream self-contained classrooms	52	4.17	0.84
Behavior_Dim3	Deaf at Al-Amal Institute/Special School	44	4.60	0.43
	Deaf at mainstream schools/self-contained classrooms	22	4.50	0.48
	Hard of Hearing at mainstream self-contained classrooms	52	4.64	0.48

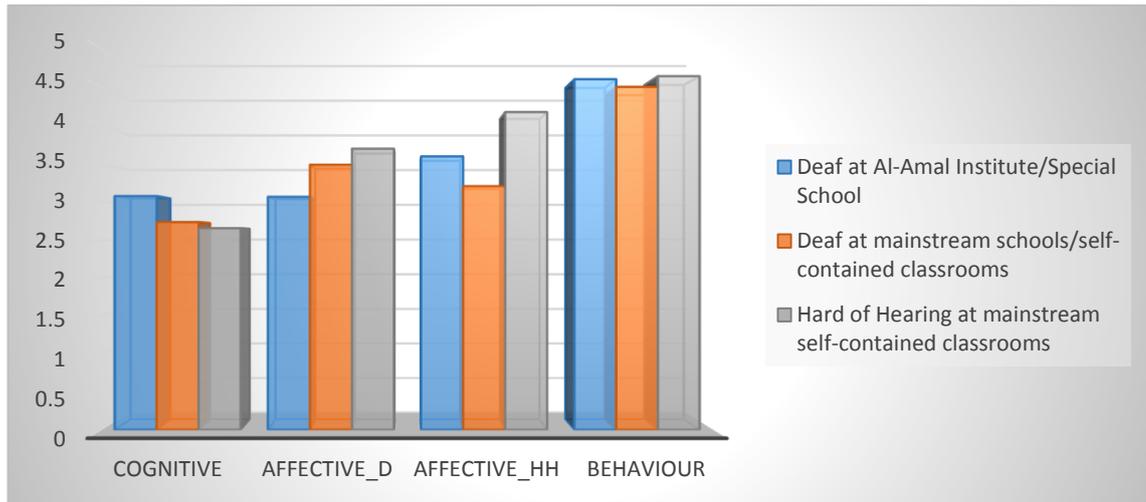


Figure 5.1 Bar chart of mean attitude scores by teaching setting/Deafness type

It is apparent from Table 5.15 and Figure 5.1 that the mean scores across settings were fairly similar for the cognitive component, and also for the behaviour component, but with rather more variation between settings for the affective components. To test the first theme of the first research question about the relationship between attitudes and setting/Deafness type, it was necessary to test whether any of these differences by setting were statistically significant. Before this could be done, it was necessary to ascertain whether the attitude scores were normally distributed; a normal distribution would indicate that parametric tests could be applied, whereas a non-normal distribution would indicate that non-parametric tests would have to be used.

The normality assumption was tested using the Kolmogorov-Smirnov test. The results indicated that the three components of attitude towards inclusion met the normality assumption: Cognitive (K-S statistic = 0.98, df = 120, $p > .05$), Affective (K-S statistic = 0.99, df = 120, $p > 0.05$) and Behaviour (K-S statistic = 0.98, df = 120, $p > 0.05$). The Kolmogorov-Smirnov test is a test for normality which assesses the normality of the distribution of scores (i.e. the degree of freedom of equal sample sizes) and which differs from the F test (measuring the degree of freedom of equal sample sizes minus the number of groups). Consequently, parametric tests could be used, in this case a one-way analysis of variance (ANOVA) because there were three independent variables corresponding to the three teaching settings. Table 5.16 displays the one-way ANOVA results for the three components of the attitude scale by teaching setting/Deafness type.

Table 5.16 One-way ANOVA results for teaching setting/Deafness type

Attitude Components	Groups	Sum of Squares	Df	Mean Square	F	Sig
Cognitive_Dim1	Between groups	4.41	2	2.2	2.97	0.055
	Within groups	85.28	115	2.2		
	Total	89.68	117			
Affective_D	Between groups	9.67	2	4.84	3.32	0.04
	Within groups	167.66	115	4.84		
	Total	177.33	117			
Affective_HH	Between groups	16.85	2	8.42	8.1	0.001
	Within groups	119.55	115	8.42		
	Total	136.39	117			
Behavior_Dim3	Between groups	0.33	2	0.17	0.79	0.456
	Within groups	24.33	115	0.17		
	Total	24.66	117			

From Table 5.15, for the component Cognitive_Dim1 the means for the three settings were 3.07, 2.73 and 2.65, respectively, which did not differ significantly from each other $F = 2.97(2, 115)$, $p = .055$. Nevertheless, the fact that the value of p was not $.05$ shows that the differences on the cognitive component were not statistically significant and could be only a suggestive one and that future research may want to follow up on this. Thus, the slightly positive beliefs and knowledge about DHH inclusion held by the teachers at the Al-Amal Institute towards inclusion could not be considered as a significant difference from those of the teachers at the mainstream schools (discussed further at Chapter 7, sections 7.3.1 and 7.5.2).

On component Affective_D, teachers of the Deaf in Al-Amal Institute scored lower on average ($M = 3.06$) than did teachers of the Deaf at mainstream schools ($M = 3.48$) who, in turn, scored lower than teachers of the hard of hearing at mainstream schools ($M = 3.69$). Table 5.16 displays the results of the ANOVA test which shows that there were statistically significant differences among these mean scores on this affective component between teaching settings $F(2, 115)$, $= 3.32$, $p < .05$.

Carrying out the same procedure for Affective_HH, teachers of the Deaf in Al-Amal Institute had a middling score ($M = 3.59$), teachers of the Deaf at mainstream schools the

lowest score ($M = 3.20$), and teachers of the hard of hearing at mainstream schools the highest score ($M = 4.17$). Again, there were statistically significant differences here $F(2, 115) = 8.10, p < .01$. In contrast, on the component Behavior_Dim3, the means for the three settings were 4.60, 4.50 and 4.64 respectively and there were no significant differences ($F(2,115) = 0.79, p > .05$).

The next stage was to use a post hoc test to identify where the significant differences between the means on the affective components lay. The most commonly used post-hoc comparison test is Tukey's Honestly Significant Difference (HSD) test (Pallant, 2007), as shown in Table 5.17.

Table 5.17 Tukey's Post Hoc test

Attitude Components	Groups (Mean)	Comparative Group (Mean)	Mean Difference	Sig
Affective_D	Deaf at APSD (3.06)	D in SCC (3.48)	0.42	0.38
		HH in SCC (3.69)	0.63	0.03
	D in SCC (3.48)	HH in SCC (3.69)	0.21	0.77
Affective_HH	D at APSD (3.59)	D in SCC (3.20)	-0.39	0.31
		HH in SCC (4.17)	0.58	0.02
	D in SCC (3.14)	HH in SCC (4.17)	0.97	0.01

This test indicated that the statistically significant difference ($p < .05$) between the means on Affective_D lay between teachers at Al-Amal schools and teachers of hard of hearing students in mainstream self-contained classrooms. The latter scored higher than the former, showing that teachers of hard of hearing students in mainstream self-contained classrooms had a more positive attitude on Affective_D than did teachers at Al-Amal schools.

For Affective_HH, there were two significant differences in mean scores between teaching settings. Teachers at Al-Amal Institute had a lower mean than did teachers of hard of hearing students in mainstream self-contained classrooms, which was statistically significant ($p < .05$), showing that the former teachers had a more negative attitude on Affective_HH than did mainstream teachers. In addition, teachers of the Deaf in mainstream schools had a statistically significant lower score on Affective_HH than did teachers of HH students in mainstream schools ($p < .05$), indicating that the former group had the more negative attitudes.

Overall, comparing by settings showed that teachers in all the school settings shared a similar level of knowledge about the inclusion of DHH students and a similar level of confidence in the practical aspects of teaching them (i.e. behavioural intentions). Where they differed was in their feelings towards inclusion of hard of hearing or Deaf students, with teachers at the Al-Amal Institute having a less positive attitude towards inclusion of Deaf children in mainstream schools than did the teachers of the hard of hearing in special classrooms in mainstream schools. As for teachers' attitudes to inclusion of hard of hearing students in mainstream classrooms, teachers at Al-Amal Institute and teachers of the Deaf in mainstream schools held less positive attitudes than did teachers of the hard of hearing in mainstream schools.

5.7.2 Differences in attitude by experience

To test the second theme of the first question, about the relationship between attitudes and length of experience/age, the means and standard deviations were computed for the various experience groups of teachers, and a one-way ANOVA was used to test for any differences between these means, with the results shown in Table 5.18 and 5.19.

Table 5.18 Mean attitude scores by level of experience

Attitude Components	Years of Experience	N	Mean	SD
Cognitive	Less than five years	49	2.47	0.73
	From 6 to 10 years	32	3.08	0.86
	From 11 to 15	21	3.10	0.96
	More than 16 years	16	3.12	0.80
Affective_D	Less than five years	49	3.45	1.27
	From 6 to 10 years	32	3.71	1.09
	From 11 to 15	21	2.90	1.27
	More than 16 years	16	3.35	1.17
Affective_HH	Less than five years	49	3.75	1.05
	From 6 to 10 years	32	4.16	0.80
	From 11 to 15	21	3.30	1.27
	More than 16 years	16	3.69	1.20
Behaviour	Less than five years	49	4.62	0.53
	From 6 to 10 years	32	4.61	0.35
	From 11 to 15	21	4.56	0.48
	More than 16 years	16	4.59	0.37

Table 5.19 ANOVA results for attitude scores by level of experience

Attitude Components	Groups	Sum of Squares	Df.	Mean Square	F	Sig.
Cognitive_Dim1	Between groups	11.27	3	3.76	5.57	0.001
	Within groups	76.86	114	3.76		
	Total	88.13	117			
Affective_D	Between groups	8.44	3	2.81	1.92	0.131
	Within groups	167.35	114	2.81		
	Total	175.78	117			
Affective_HH	Between groups	9.45	3	3.15	2.84	0.041
	Within groups	126.49	114	3.15		
	Total	135.94	117			
Behavior_Dim3	Between groups	0.07	3	0.02	0.11	0.955
	Within groups	24.14	114	0.02		
	Total	24.21	117			

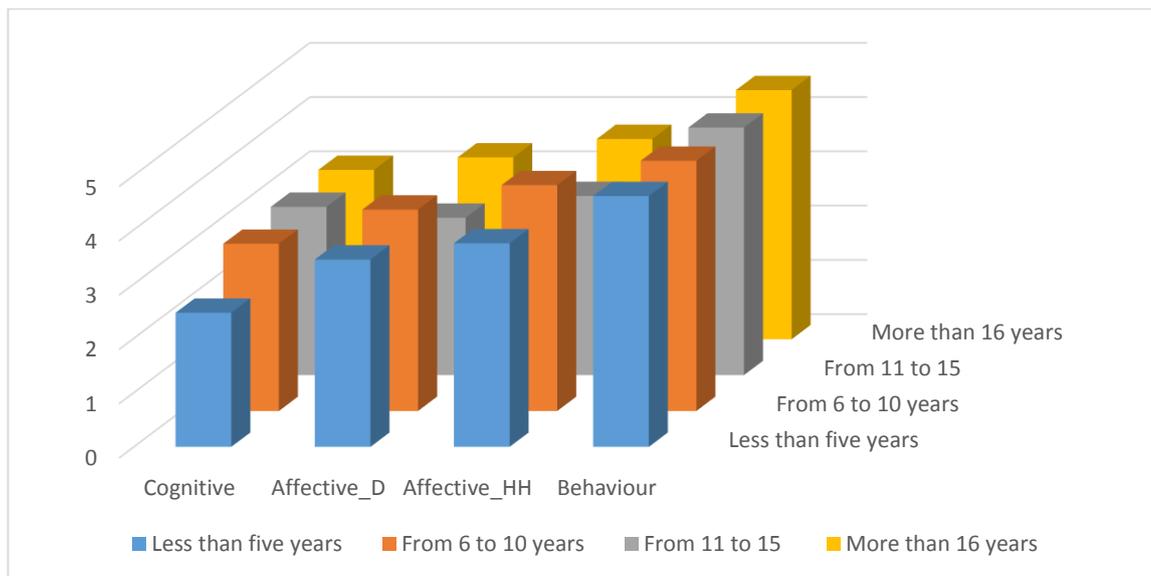


Figure 5.2 Bar chart of attitude means by level of experience

The influence of level of experience upon attitudes is demonstrated in Table 5.18 and 5.19, and in Figure 5.2. The results indicate that both the cognitive component and Affective_HH component differed by level of experience, whereas the behavioural and affective_D components did not. The F-values of the cognitive ($F(3,114) = 5.57, p < .01$) and affective_HH ($F(3,114) = 2.84, p < .05$) components were statistically significant, whereas those of the affective_D component ($F(3,114) = 1.92, p > .05$) and behavioural

component ($F(3,114) = 0.188, p > .05$) were not. To determine the source of the differences within the cognitive and affective_HH components, Tukey's method was used to compare the attitude means by levels of experience, with the results displayed in Table 5.20.

Table 5.20 Tukey's Post Hoc test for experience

Attitude Components	Group (Mean)	Comparative Group (Mean)	Mean Difference	Sig
Cognitive_Dim1	Less than five years (2.47)	From 6 to 10 years (3.08)	0.61	0.01
		From 11 to 15 (3.10)	0.63	0.02
		More than 15 years (3.12)	0.65	0.03
	From 6 to 10 years (3.08)	From 11 to 15 (3.10)	0.02	.99
		More than 15 years (3.12)	0.04	.99
	From 11 to 15 (3.10)	More than 15 years (3.12)	0.02	.99
Affective_HH	Less than five years (3.75)	From 6 to 10 years (4.16)	0.41	0.32
		From 11 to 15 (3.30)	-0.44	0.38
		More than 15 years (3.69)	-0.06	.99
	From 6 to 10 years (4.16)	From 11 to 15 (3.30)	-0.86	0.02
		More than 15 years (3.69)	-0.47	0.47
	From 11 to 15 (3.30)	More than 15 years (3.69)	0.39	0.69

As shown in Table 5.20, there were statistically significant differences between the mean scores of the cognitive component for educators with less than five years of experience and those with more years of experience. Those with less than five years of experience had lower mean scores ($M = 2.47$) on the cognitive component than did experienced teachers ($M = 3.10$), indicating that experienced educators tended to have more knowledge and to hold more positive beliefs about DHH inclusion than did inexperienced teachers.

It should be noted here that the experience factor is necessarily closely related to the age factor, which means that the results with respect to one are likely to be similar to the findings regarding the other. In order not to replicate inferences, the age factor will therefore not be considered. As age and experience are highly correlated, there will be no need to discuss both.

5.7.3 Differences in attitude by qualification

The third theme of the first question, on the relationship between attitudes and qualifications, was investigated by comparing the means on each sub-scale of attitude, with the results shown in Table 5.21 and 5.22 and in Figure 5.3. Table 5.22 reveals no statistically significant differences on the cognitive component: $F(3, 116) = 2.16, p > .05$. Similarly, there were no statistically significant differences in the means of the two affective sub-scales or the behavioural sub-scale. Affective_D: $F(3, 116) = 0.28, p > .05$; Affective_HH: $F(3, 116) = 0.12, p > .05$; Behaviour: $F(3, 116) = 0.36, p > .05$. Thus, qualifications had no effect on any of the attitude components.

Table 5.21 Mean attitude scores by qualification

Attitude	Qualification	N	Mean	SD	SE
Cognitive_Dim1	BEd in Deaf Education	41	2.55	0.68	41
	BEd in Education	43	2.92	1.03	43
	BEd in Education with SEN Diploma	22	3.07	0.79	22
	Others	14	2.88	0.86	14
Affective_D	BEd in Deaf Education	41	3.35	1.37	41
	BEd in Education	43	3.35	1.17	43
	BEd in Education with SEN Diploma	22	3.60	1.12	22
	Others	14	3.53	1.24	14
Affective_HH	BEd in Deaf Education	41	3.84	1.10	41
	BEd in Education	43	3.73	1.16	43
	BEd in Education with SEN Diploma	22	3.69	1.05	22
	Others	14	3.74	1.03	14
Behavior_Dim3	BEd in Deaf Education	41	4.64	0.54	41
	BEd in Education	43	4.62	0.39	43
	BEd in Education with SEN Diploma	22	4.55	0.42	22
	Others	14	4.52	0.48	14

Table 5.22 ANOVA results for attitude scores by qualification

Attitude Components	Groups	Sum of Squares	Df.	Mean Square	F	Sig.
Cognitive_Dim1	Between groups	4.77	3	1.59	2.16	0.096
	Within groups	85.23	116	1.59		
	Total	90	119			
Affective_D	Between groups	1.32	3	0.44	0.28	0.836
	Within groups	178.46	116	0.44		
	Total	179.77	119			
Affective_HH	Between groups	0.43	3	0.14	0.12	0.949
	Within groups	141.72	116	0.14		
	Total	142.16	119			
Behavior_Dim3	Between groups	0.23	3	0.08	0.36	0.785
	Within groups	24.51	116	0.08		
	Total	24.73	119			

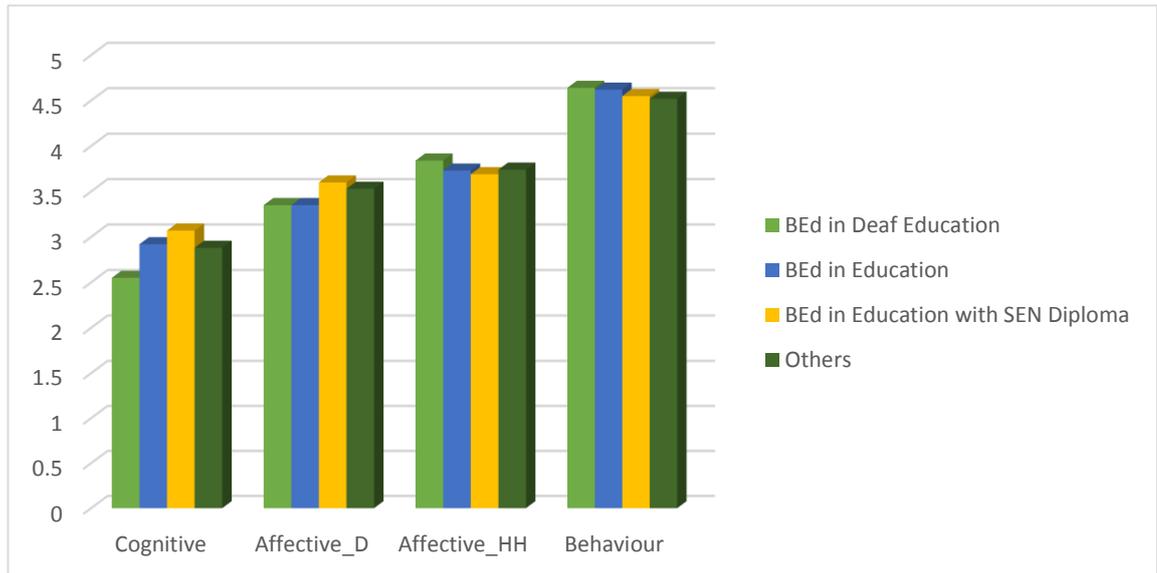


Figure 5.3 Bar chart of attitude scores by qualification

As shown in Figure 5.3, the means were very similar by qualification within each component of attitude. The greatest differences were evident among the cognitive scores but, as the ANOVA test showed, these differences were not statistically significant.

5.7.4 Differences in attitude by school stage

The fourth theme of the first question, relating to differences in attitudes by the school stage at which the teacher worked, was investigated by comparing the means on each component of attitude by education stage. The results are shown in Tables 5.23 and 5.24.

Table 5.23 Mean attitude scores by school stage

Attitude components	School Stages	N	Mean	SD
Cognitive_Dim1	Primary	52	2.50	0.74
	Intermediate	38	3.08	0.66
	Secondary	30	3.03	1.13
Affective_D	Primary	52	3.35	1.36
	Intermediate	38	3.71	0.99
	Secondary	30	3.15	1.23
Affective_HH	Primary	52	3.75	1.17
	Intermediate	38	4.01	0.72
	Secondary	30	3.48	1.29
Behavior_Dim3	Primary	52	4.66	0.48
	Intermediate	38	4.55	0.43
	Secondary	30	4.57	0.44

Table 5.24 ANOVA results for attitude scores by school stage

Attitude Components	Groups	Sum Squares	Df	Mean Square	F	Sig
Cognitive_Dim1	Between groups	9.31	2	4.66	6.75	0.002
	Within groups	80.69	117	4.66		
	Total	90	119			
Affective_D	Between groups	5.45	2	2.73	1.83	0.165
	Within groups	174.32	117	2.73		
	Total	179.77	119			
Affective_HH	Between groups	4.75	2	2.37	2.02	0.137
	Within groups	137.41	117	2.37		
	Total	142.16	119			
Behavior_Dim3	Between groups	0.28	2	0.14	0.67	0.515
	Within groups	24.45	117	0.14		
	Total	24.73	119			

Table 5.24 shows that there were statistically significant differences between the three stages in the means of the cognitive component, where $F(2, 117) = 6.75, p < .05$. However, there were no statistically significant differences among the mean scores of the affective or behavioural components according to school stage. However, in line with the results for the previous two themes, there were no statistically significant differences among the three groups of educators on the two subscales of the affective component (Affective_D: $F(2, 117) = 1.3, p > .05$; Affective_HH: $F(2, 117) = 2.02, p > .05$) or the behavioural component ($F(2, 117) = 0.67, p > .05$). Tukey's post-hoc comparison was used to determine the source of the differences among the three school stages on the mean scores of the cognitive component. Table 5.24 shows the results.

Table 5.25 Tukey’s post hoc test for cognitive component by school stage

Attitude Component	Groups	Comparative Group	Mean Difference	Sig
Cognitive_Dim1	Primary (2.50)	Intermediate (3.08)	0.58	0.01
		Secondary (3.03)	0.53	0.02
	Intermediate (3.08)	Secondary (3.03)	-0.05	0.97

Table 5.24 indicates that there were statistically significant differences in the mean scores on the cognitive component of the attitudes towards DHH inclusion between primary school educators (M = 2.50) and both intermediate (M = 3.08) and secondary educators (M = 3.03). This lower mean for primary school educators indicates a lower level of knowledge and less positive beliefs about DHH inclusion than for those of intermediate and secondary school educators. On the other hand, there were no statistically significant differences between mean scores on this component between educators at intermediate and secondary schools.

These mean attitude scores by school stage are illustrated in Figure 5.4.

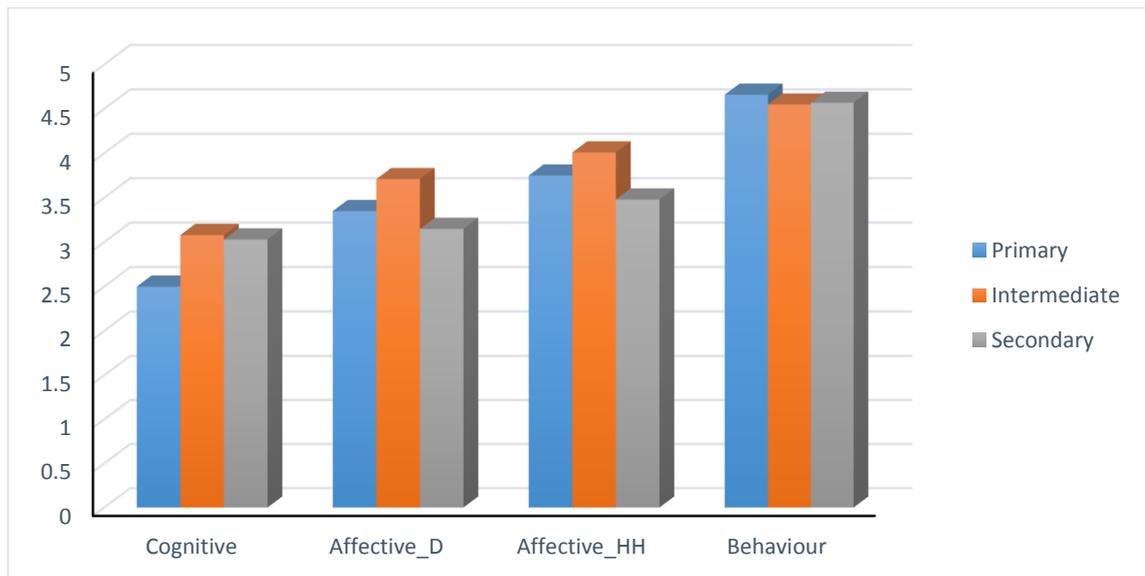


Figure 5.4 Bar chart of mean attitude scores by school stage

5.7.5 Differences in attitude towards placement

The fifth theme of the first question concerned placement in special vs. mainstream schools and was examined at the end of Section B of the questionnaire (Appendix B). To investigate respondents’ opinions on appropriate placements, they were asked to tick boxes indicating whether, for each of five alternative placements, they believed it was

appropriate for Deaf and/or for hard of hearing students. The alternatives were: residential institute, Al-Amal day school, special self-contained classes within mainstream school, partial inclusion in mainstream school with resource-room and speech and language therapy unit, or full inclusion with all necessary support. The researcher computed frequencies and percentages of respondents making each choice, then carried out a chi-square test to ascertain whether the distribution of choices was significantly different from a random one. The results are presented in Tables 5.25, 5.26, 5.27, 5.28 and 5.29 taking each option in turn, and illustrated all together in Figure 5.5.

Table 5.26 Appropriateness of Al-Amal Institutes with residential facilities

	Appropriate for	Frequency	Percent	Chi-Square	df	P value
Valid	Deaf only	99	82.5	175.54	2	<0.001
	HH/d only	3	2.5			
	Both	3	2.5			
	Total	105	87.5			
Missing	System	15	12.5			
Total		120	100.0			

As shown in Table 5.25 and Figure 5.5, a large majority of the sample (82.5%) believed that Al-Amal Institutes with internal residence provided an appropriate placement for profoundly Deaf students, compared to only 2.5% who thought it appropriate for hard of hearing students. This result is statistically significant ($\chi^2 = 175.54, p < .001$). A further 2.5% ticked both boxes, indicating that they thought Al-Amal Institutes appropriate for both Deaf and hard of hearing students.

Table 5.27 Appropriateness of Al-Amal Institutes as day schools

	Appropriate for	Frequency	Percent	Chi-Square	df	P value
Valid	Deaf only	75	62.5	53.08	2	<0.001
	HH/d only	23	19.2			
	Both	17	14.2			
	Total	115	95.8			
Missing	System	5	4.2			
Total		120	100.0			

Table 5.26 and Figure 5.5 show that almost two-thirds (62.55%) of respondents also considered Al-Amal Institutes functioning as day schools to be appropriate placements for Deaf students, whereas only 19.2% believed these to be appropriate for the education

of hard of hearing students, and just 14.2% considered them appropriate for both Deaf and hard of hearing students. The result is statistically significant ($\chi^2 = 53.08$, $p < .001$).

Table 5.28 Appropriateness of self-contained classrooms in mainstream schools

	Appropriate for	Frequency	Percent	Chi-Square	df	P value
Valid	Deaf only	14	11.7	86.76	2	<0.001
	HH/d only	87	72.5			
	Both	17	14.2			
	Total	118	98.3			
Missing	System	2	1.7			
Total		120	100.0			

As to the use of special/self-contained classrooms (SCCs) within mainstream schools, Table 5.27 shows that almost three-quarters of the sample believed that these were appropriate settings for the education of hard of hearing students, as opposed to only 11.7% who believed that SCCs within mainstream schools were appropriate for Deaf students. The result is statistically significant (72.5%; $\chi^2 = 86.76$, $p < .001$). This is predictable, one reason being that hard of hearing students have residual hearing and can therefore benefit considerably from oral methods by using hearing aids both in and out of the classroom (although they are dualistic in communication), whereas this is not the case for Deaf pupils, for whom manual methods of instruction are dominant.

Table 5.29 Appropriateness of partial inclusion in normal classrooms with resource room services

	Appropriate for	Frequency	Percent	Chi-Square	df	P value
Valid	Deaf only	11	9.2	118.78	2	<0.001
	HH/d only	94	78.3			
	Both	11	9.2			
	Total	116	96.7			
Missing	System	4	3.3			
Total		120	100.0			

Similarly, 78.3% of the sample believed that partial inclusion was an appropriate setting for hard of hearing students, compared to the only 9.2% who believed that it was suitable for Deaf students; an identical percentage (9.2%) believed that it was suitable for both Deaf and hard of hearing students; again a statistically significant result ($\chi^2 = 118.78$, $p < .001$).

Table 5.30 Appropriateness of full inclusion in regular classrooms

	Appropriate for	Frequency	Percent	Chi-Square	df	P value
Valid	Deaf only	13	10.8	42.25	2	<0.001
	HH/d only	65	54.2			
	Both	26	21.7			
	Total	104	86.7			
Missing	System	16	13.3			
Total		120	100.0			

Finally, as Table 5.29 demonstrates, 54.2% of participants believed that full inclusion was a suitable setting for hard of hearing students, as opposed to only 10.8% of the participants who considered this option suitable for Deaf students and 21.7% who deemed it appropriate for both groups. This result was statistically significant ($\chi^2 = 42.25, p < .001$).

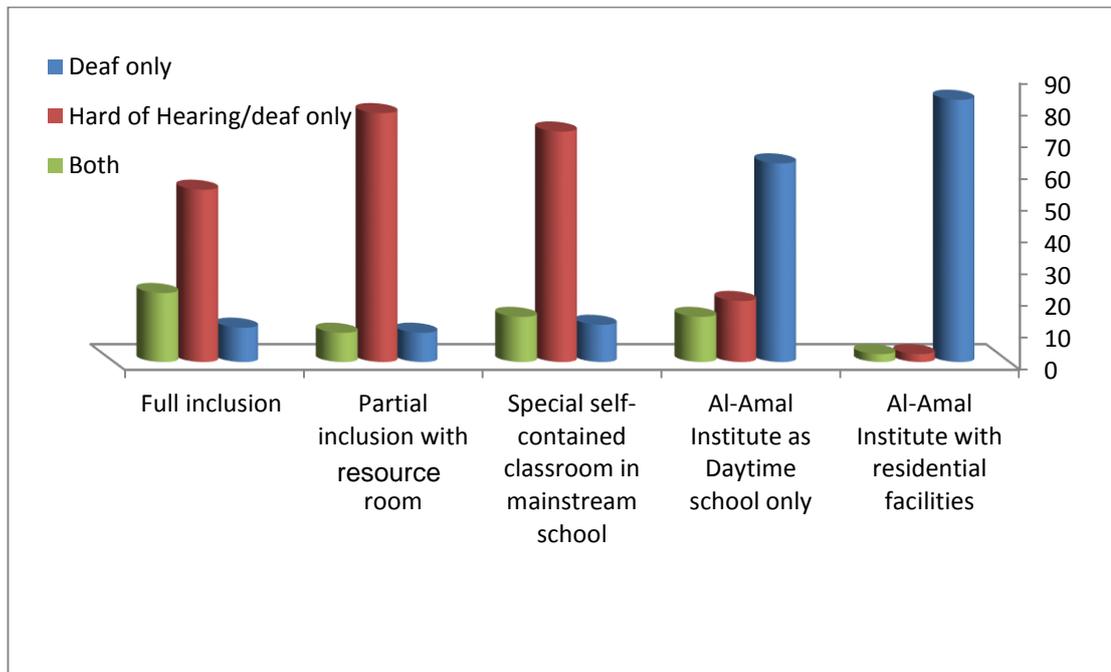


Figure 5.5 Appropriate placement for DHH students (percentages)

As Figure 5.5 clearly illustrates, there was a strong tendency to believe that partial or full inclusion was more suitable for hard of hearing students, rather than for Deaf ones, for whom Al-Amal Institutes were seen as more appropriate.

5.7.6 Differences in attitude by in-service training

The sixth theme of the first question was about specialised in-service training and its relation to Saudi educators' attitudes. The results are shown in Table 5.31.

Table 5.31 Mean attitude scores by in-service training

	In-service training obtained	N	Mean	SD	df	T value	Sig
Cognitive_Dim1	Yes	80	2.86	0.85	118	0.76	0.45
	No	40	2.73	0.91			
Affective_D	Yes	80	3.49	1.26	118	0.98	0.33
	No	40	3.26	1.17			
Affective_HH	Yes	80	3.75	1.1	118	-0.19	0.85
	No	40	3.79	1.1			
Behavior_Dim3	Yes	80	4.58	0.47	118	-0.83	0.41
	No	40	4.65	0.43			

The table demonstrates that there were no statistically significant differences between educators with and without in-service DHH training on the means of their responses to the four components of attitudes towards DHH inclusion. T values were not significant for any component. Cognitive: $t(118) = 0.76, p > .05$; affective_D: $t(118) = 0.9, p > 0.05$; affective_HH: $t(118) = 0.19, p > .05$; behavioural: $t(118) = 0.83, p > .05$.

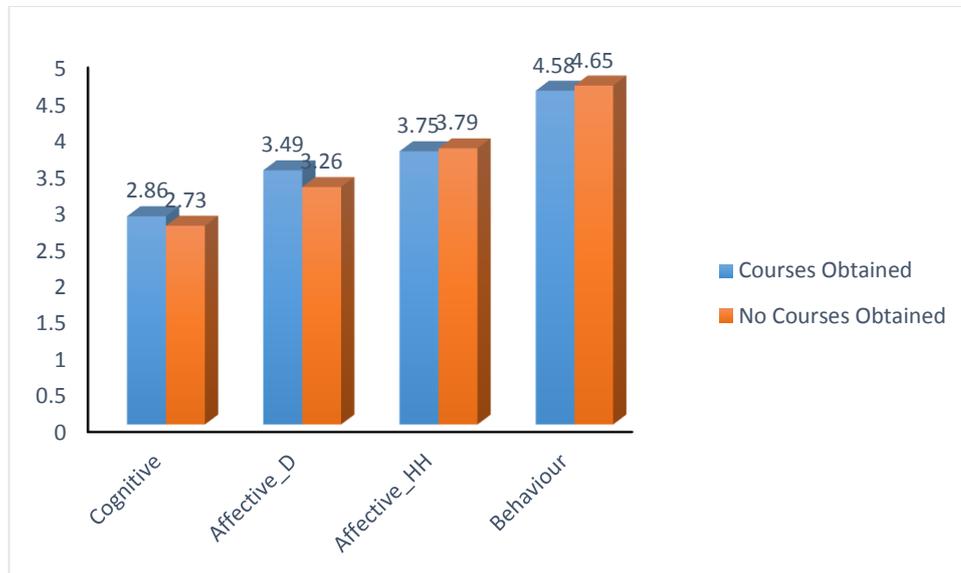


Figure 5.6 Bar chart of attitude means by in-service training

As shown in Figure 5.6, the means of the educators with in-service training were slightly higher in the cognitive and affective_D domains than the scores of those without, whereas the reverse was true for the affective_HH and behavioural components. However, these

differences were not statistically significant. After all, I would have thought that training would make a difference.

5.8 Chapter Summary

In this chapter, I have analysed the data from the first phase of the study, gathered by means of a quantitative questionnaire. The chapter first examined the demographic characteristics of the sample and the return rate, then described the data analysis procedures. Short sections on the internal reliability of the data and the linear correlation results were followed by a detailed account of the findings obtained from analysing the data by means of the SPSS19 package. Overall, the results of this quantitative phase show: a) Saudi educators hold positive feelings towards the inclusion of hard of hearing students, but b) less favourable attitudes to the inclusion of Deaf students (at the feeling component). This is consistent with previous research which indicates that educators tend to hold more positive attitudes towards students with mild special needs (hard of hearing in this case) than towards those with profound special needs, such as Deaf students. In particular, the present findings indicate that c) participants considered Al-Amal Institutes for the Deaf to be one of the best educational alternative for Deaf students but varying degrees of inclusion in mainstream classes to be preferable for hard of hearing students. Finally, d) educators working at the intermediate and secondary level, and e) highly experienced teachers scored relatively highly on the cognitive component, which means that they tended to hold more positive beliefs than other educators about DHH inclusion. However, the questionnaire could not determine why participants' responses were primarily positive towards inclusion for the hard of hearing while they were less positive towards profoundly Deaf students. Hence, the next, qualitative, phase aimed to ascertain educators' understanding of and attitudes towards DHH inclusion so that sensible explanations behind their responses can be better understood.

In conclusion, it is noteworthy to state that my endeavour to give voice to Saudi educators cannot capture all of their conceptions about DHH inclusion through the questionnaire. Even though the use of the questionnaire provided a quantitative approach for probing various inclusion beliefs, this method did not fully evaluate the complexity and understanding of the multifaceted nature of attitudes to inclusion. The questionnaire operated as a master key to educators' lives and to establish a good relationship with

them, particularly in light of the fact that the educational research context in Saudi is fundamentally objectivist and survey-based. Thus, it was advantageous to begin with the familiar (i.e. quantitative method) and move towards the unfamiliar (i.e. qualitative method) (Elshabrawy, 2010), to which I will turn next.

CHAPTER SIX

Second Phase Findings: Qualitative Interviews

6 Second Phase Findings: Qualitative Interviews

6.1 Introduction

This chapter reports the findings of the second phase of the research, where eleven teachers and administrators (listed in Chapter 4, Table 4.6) were interviewed on seven base-themes. Among the teachers, K6a and A7s worked in Al-Amal special schools, as did three of the administrators: M1t, M2m and M11s. The other three teachers (I5m, Ss3, and A8o) and three administrators (S3h, G10a and M9b) worked in mainstream schools, in special classrooms in the case of the teachers. After a brief note on transcription, translation and the presentation of the analysis, the report begins with interviewees' perceptions of Deaf and HH (or partially deaf) students, then considers responses regarding integration/inclusion, the inclusion process (in-service training, teaching skills and ASL), the requirements of inclusion (additional support, resource rooms, TAs), barriers to inclusion and changes needed. Each base-theme and its sub-themes were analysed qualitatively (Braun and Clarke, 2006) and the findings presented (Miles and Huberman, 1994). Table 6.1 lists the seven themes against the five research questions to which they correspond and Table 6.2 details the coding framework for the thematic analysis.

Table 6.1 Phase two research questions and themes

Research questions	Themes
1. What are Saudi educators' perceptions of the concepts 'Deaf' and 'hard of hearing'?	- Deaf concept - HH concept
2. What are Saudi educators' attitudes towards Deaf and hard of hearing inclusion in mainstream schools?	- Inclusion/integration
3. What are Saudi educators' perceptions of DHH teaching skills, in-service training, ASL, additional support, resource rooms and TAs?	- Inclusion process - Inclusion requirements
4. What are the main barriers to attaining successful DHH inclusion?	- Barriers to successful DHH inclusion
5. What are the major changes that need to be made for successful DHH inclusion?	- Changes needed to achieve successful DHH inclusion

Table 6.2 Coding Framework for Thematic Analysis

	Themes	Subthemes	Coding Framework	Coding label
T 1 & 2	D/deafness or DHH concept	D concept	1- Concept model	Con. Mod.
			2- Terminology preferences	Ter. Pre.
		HH Concept	3- Integration or Inclusion	Integ. Or Incl.
			4- DHH better placements	DHH Plac.
T 3	Integration/ Inclusion concept	Inclusion philosophy	1- Meaning of inclusion	Mean. Incl.
			2- Feelings towards inclusion	Att. Incl.
			3- Mainstream school specifications	Main. Sch. Spec.
			4- Future of Al-Amal special schools	Fut. Al-Am.
T 4 & 5	Inclusion process and requirement	Teaching skills and ASL	1- Obtaining in-service training and related skills	Obti. In-ser.
			2- Evaluation of DHH teaching experience	Eval. DHH Teac.
			3- In-service training impact on inclusion success	In-ser. Impac.
			4- ASL proficiency	ASL Prof.
			5- DHH behavioural intentions towards managing future inclusive classroom	DHH Incl. Man.
		Additional supporting services	1- School appropriateness for DHH inclusion	Scho. App. DHH Integ.
			2- School and classroom availability of visual teaching aids	Class. Aval. Visu.
			3- Importance of TA for the future of DHH inclusive education	TA and Incl. Fut.
T 6	Barriers	Barriers	1- The major obstacles to better DHH inclusion	Maj. Obst. Of DHH Integ.
			2- Priority of barriers list: teacher-related factors, environment-related factors and child-related factors	List; Teac., Env., and Ch.
			3- How to eliminate these barriers	Elim. Barr.
T 7	Change	Change	1- What must be changed first	Fir. Chan.
			2- Classroom adjustment	Class. Adj.
			3- Differentiation of the national curriculum	Curr. Diff.
			4- Change in assessment and exams	Eval. Ass. Modi.
			5- Teaching styles and homework alteration	Teac. Sty. Hom. Alter.

6.2 Transcription, translation and analysis

Each interview was transcribed immediately after it ended. This process was difficult because participants had thorough perceptions and sentiments about all seven themes and the many sub-themes, producing copious rich data. Because Arabic was the mother tongue of all participants and because of the richness of the findings and the complexity of the way in which attitudes, values, beliefs, ideas and sentiments are constructed, all analyses were systematically processed in Arabic.

6.3 Perceptions of the Deafness and hard-of-hearing concepts

The first two base-themes were interviewees' perceptions of the concepts 'Deaf' and 'hard of hearing' respectively, but since many participants, both teachers and administrators, seemed to make little or no clear distinction between these two groups, referring to 'Deaf and hard of hearing' (DHH) students as a combined group, responses concerning the two themes are analysed jointly in what follows. However, where a participant made a clear distinction between these two themes, this will be reflected in the analysis. As with each of the other themes, the analysis is presented first in the form of a table, followed by illustrative excerpts from the interview data and textual explanation. In this case, as two base-themes are combined, the summary analysis is presented in two tables: 6.3 and 6.4.

Table 6.3 Summary of interviewees’ responses on the concept of Deafness

	T1: Deaf students
Teachers	<p>ST1: Teachers differed on their conceptualizations of Deafness:</p> <ul style="list-style-type: none"> • two teachers perceived it as social, • two perceived it as an integrated medical and social concept • one perceived it as a medical issue. <p>This reflects the complexity of this construct.</p> <p>ST2: Teachers all agreed that ‘SEN’ is appropriate, not ‘disability’ or ‘Deafness’.</p> <p>ST3: There was almost complete agreement that:</p> <ul style="list-style-type: none"> • all HH students should be integrated into mainstream schools, • most Deaf students should remain at Al-Amal Institute, • but three teachers said Deaf students should be invited to join mainstream schools. <p>ST4: About Al-Amal as a placement, it was agreed that:</p> <ul style="list-style-type: none"> • All teachers saw it as the best educational alternative for the Deaf students who wished to remain in a day school, • those who perceived Deafness as a linguistic minority and related to it as their second home, • but not for HH students, who could easily be integrated.
Administrators	<p>ST1: Five of the six administrators favoured a new, integrated medical/social understanding of Deafness.</p> <p>ST2: There was partial agreement on SEN as the most suitable term to represent Deaf students.</p> <p>ST3: Opinions differed on inclusion:</p> <ul style="list-style-type: none"> • Al-Amal Administrators believed that the Deaf should be taught in special day schools. • The other three agreed on the mainstream special classroom as a move towards integration, not inclusion for the time being, because Deaf isolation should end. • Special classrooms should be the first choice for all Deaf students; only if a Deaf student and his/her parents insisted on remaining at Al-Amal Institute would he/she be permitted to do so, based on a multi-professional team decision. • This reflects the complexity of this construct. <p>ST4: Opinions varied on feelings towards placement:</p> <ul style="list-style-type: none"> • Three administrators believed that Al-Amal schools should continue as the first option for the Deaf, because of signing and support for Deaf culture. • The other three argued that mainstream schools should come first, with minimal exceptions.

Key to all summary tables: T = Theme; ST= Subtheme

Table 6.4 Summary of interviewees’ responses on the HH theme

	T2: HH/Partially deaf students
Teachers	<p>ST1: Three teachers expressed an integrative understanding of HH rather than a single conceptual model.</p> <p>ST2: All five teachers preferred the term ‘SEN’ over ‘disability’, ‘HI’ or ‘Deafness’.</p> <p>ST3: Four teachers saw special mainstream classrooms as ideal settings for all HH students.</p> <p>ST4: Three teachers believed that classrooms in Jeddah were currently far from inclusive and that mainstream special classes were the best educational setting for the time being.</p>
Administrators	<p>ST1: Five of the six administrators believed in HH as an integrated construct to which medical, social and educational perspectives contributed equally.</p> <p>ST2: Views varied:</p> <ul style="list-style-type: none"> • three participants preferred ‘SEN’ and • three supported ‘deafness’ as the most suitable term for this group of students. <p>ST3: A majority agreed that HH students should be included within special classrooms, with relevant additional support.</p> <p>ST4: Four administrators argued that HH students, particularly with mild hearing loss, should have access to normal classrooms to socialize and attain better academically and socially, at least for a three-year trial period.</p>

6.3.1 Perceptions of DHH students

Relevant to the first theme, coded Con. Mod., there were two descriptive codes for the ways in which participants perceived DHH students. The first dimension concerned whether DHH was regarded as a disability (the medical view), as defining a social group or linguistic minority, or in an integrated way, combining the medical and social perspectives. One teacher (K6a) supported a perception which coincided with the early development of this concept in the medical domain and as arising from a disease or injury that might have caused Deafness before, during or after birth. This medical/deficit perspective, looking at DHH students via cause-and-effect relationships, had some support from S3h: “...hearing loss is mainly a medical concept...”, but I5m reflected the view that social and educational concepts should not be completely ignored: “DHH is a complex construct involving medical and educational elements... but in general DHH is more of a medical status rather than a social one”. Conversely, two teachers saw no major role for the medical view of DHH. They rather understood it as: “a social construct where DHH students feel proud of belonging to the Deaf community and have their own language of cued signs and share collective values and hopes” (A8o). They saw Deafness as a divine predestination from “Allah the Almighty” and that one should accept this reality as it is: “Deafness is a predestined status” (A7s). On this social view, a DHH person would be educated throughout childhood and adolescence and could easily

communicate with other people via ASL or writing. The real problem would be in how the community sees Deafness and its role, not in Deaf or HH students themselves, who were to be seen as simply having a different language or communication style: “A Deaf person is a normal human with hearing loss” (A8o).

The remainder of the administrators and one mainstream teacher showed an integrated and holistic understanding of DHH, seeing no contradiction between the medical and social models of understanding deafness: “Deafness could be looked at in both ways, as a medical and social issue” (S4s). For them, the medical, social and educational understandings interact in harmony: “...a complementary rather than contradictory relationship” (M9b); “...we should integrate both the social and medical concepts, because the medical helps the educational-social view in the way of auditory training and cochlear implants” (G10a).

Thus, the analysis of this sub-theme indicates that most educators’ responses cannot be labelled as reflecting solely the deficit model or the social model. Rather, they reflect a holistic or interactive way of understanding D/deafness which recognizes the deficit/medical and socio-cultural models equally. There might be more emphasis on the medical in very young Deaf children for the purpose of early intervention provision and speech and language therapy, but at a later stage, there might be more emphasis on the socio-cultural aspects for the purpose of achieving equal opportunity, access to mainstream education and social belonging, because it is the school’s responsibility to accommodate their needs. This finding is consistent with an interactive approach to conceptualizing D/deafness. This approach views the level of need as the result of a complex interaction between the child’s strengths and weaknesses, the level of support available and the appropriateness of the education being provided. Hence, to comprehend D/deafness, one needs to focus not on the deaf student per se but on his or her socio-cultural environment in order to fully understand his/her special educational needs.

6.3.2 Terminological preferences

The second sub-theme, coded Ter. Pre., concerns educators’ preferences for the terms ‘disability’, ‘hearing impairment’, ‘special educational needs’ or ‘DHH’. It seemed that descriptive codes could be integrated easily with the interpretive codes (Joseph et al,

2004) because they give more than a superficial meaning (see Chapter 4, Table 4.8). They also give an indication of why they have positioned themselves in a certain way in what seems to be a general consensus. All five teachers and three administrators showed a strong belief in avoiding stigma, preferring to abandon the outdated use of ‘disability’ in favour of the relatively new, moderate and implicitly positive concept of SEN, which has recently been accepted by the majority of Saudi educators: “There is no doubt that the best terminology to describe DHH is ‘special educational needs’” (A7s). “I personally prefer ‘special needs’ because ‘disability’ has such strong negative associations” (S3h). They saw DHH students as having practically nothing in common with disabled people, differing only in their preferred way of communication, whereas ‘special needs’ focuses on differences, potentials and preferences: “DHH ... should be called a ‘special need’ as it emphasize students’ ability, not a disability” (K6a).

This conceptualization of special needs, avoiding labels and stigma, while embracing equality and social belonging, are wholly consistent with traditional Arab cultural mores and the Islamic religious values manifested in the Holy Quran (Surat Al-Ĥujurāt, 49:11):

“...Nor defame one another, nor insult one another by nicknames. How bad is it to insult one’s brother...”

I find these perspectives to reflect something controversial here as they use the term disability in its non-social model sense and so do not like it compared to SEN which is seen as positive in the UK. This is how SEN was regarded when introduced in the 1970s (Norwich, 2001), but over time it has accumulated negative meanings and people from the social model perspective do not like it as they seen SEN as a deficit term. This shows cultural differences that need to be identified and discussed in the final chapter (Sections 7.4, 7.5, 7.6, and 7.7).

The Arab-Islamic cultural setting of Saudi Arabia is characterised by showing respect and helping those in need. Special needs and equality are complicated issues and are culturally based to the extent that these terms might be misleading if used out of context. The Islamic ideology of equality should be seen as the basis for interviewees’ views in this sub-theme.

Alternative views were nevertheless expressed. One administrator considered ‘Deaf’ and ‘Deafness’ as the right terms to describe this linguistic minority group: “I know Deaf

people and they are proud of themselves and prefer to be called Deaf. Why should I use something different?” (M1t). He would hear Deaf students saying “we the Deaf” with a sense of pride and confidence, so there was no need for hearing people as outsiders to impose something different on the Deaf community, who never felt ashamed or inferior to other students. This position is consistent with that of the International Federation of Hard of Hearing People (IFHOH) and the World Federation of the Deaf (WFD) that ‘Hard of Hearing’ means “all people who have a hearing loss and whose usual means of communication is by speech. It includes those who have become totally deaf after acquisition of speech”. In a joint declaration (Tokyo, 1991) the IFHOH and WFD agree that ‘Hearing Impaired’ covers DHH individuals within a single category, while announcing their opposition to it.

Finally, two administrators perceived DHH people as disabled, noting that “Deafness, which includes Deaf and hard of hearing, is considered widely as a disability” (G10a); this categorisation enabled them to receive additional government support through the Ministry of Education and the Ministry of Social Affairs in the Saudi context, including social benefits, hearing aids, auditory training and travel discounts. As major world organizations such as the WHO (ICIDH-2) and UNESCO consider Deafness a disability, these two interviewees saw no need for complicated legal administrative and terminological changes which might result in a loss of privileges and support, when the Deaf “really need more support” (M11s). This shows the tension between not wanting to see D/deafness as a disability and wanting to receive additional provision which depends on recognising D/deafness as a disability. This also relates to the literature (e.g. Skelton, and Valentine, 2003) and is discussed in the third chapter (Sections 3.3, 3.7, and 3.8), and in further details at the final chapter (7.4.1, and 7.4.2).

6.3.3 Attitudes towards DHH integration/inclusion

It is important to report that the third and fourth sub-themes were jointly analysed because participants perceived them as intercorrelated. The third sub-theme is attitudes towards integration/inclusion, and the fourth sub-theme is DHH better placement. Contrary to the previous theme, teachers distinguished between Deaf and HH integration: “Deaf students should continue to study at Al-Amal Institute because it is the best place for them” (K6a); “Hard of Hearing students should remain partially integrated in their special classrooms”

(I5m). Similarly, all administrators agreed upon integrating HH students in special classrooms after confirming a hearing loss threshold between 40 and 69 dB.

There was general consensus that the current environment of Jeddah schools—in terms of human resources, training, environmental facilities, teaching aids and financial resources—was insufficient for such an advanced practice as inclusive education. This may have worked well in the West, but would not necessarily do so in the Middle East, where collective cultural change, motivation and awareness needed to develop and progress: “For the time being, I prefer the special classrooms” (S3h). “Looking at the current school circumstances, I do not believe in inclusion at all” (I5m). Although advocates of inclusion value students’ rights to equal access and opportunities in general education, full participation in all school activities and respect for their diversity, this cautious view was typical: “Inclusion needs more school resources, better preparation for all school workers, active involvement between school and families, which is not there, at least in our school...” (I5m). Thus, while two administrators (M9b and M2m) and one teacher (A8o) did show more or less positive attitudes towards moving HH students into inclusive classrooms with hearing students in the future, as HH students have no major difficulty in communicating effectively in dual mode, this would depend on the necessary conditions being met. This process should be gradual and educators should first study, understand, legislate, discuss and agree on what is needed in Saudi Arabia, then apply the practice most compatible with the Saudi educational system, school ethos, Islamic faith, local traditions, customs and social structure. Meanwhile, given that 90% or more of DHH children are born to hearing parents (Rawlings and Jensema, 1977; Mitchell and Karchmer, 2004), meaning that spoken language is dominant at home, M9b suggested that HH inclusion should be given “at least a two to three-year trial period and then evaluate its effectiveness”, adding that if it achieved all its aims and objectives, a multi-professional ministerial committee should decide when and how to expand inclusion to all Saudi LEAs. Indeed, the partial or so-called ‘locational’ integration currently operated by Jeddah LEA has some features of inclusion, taking the form of including HH students in “...art and painting lessons, physical education lessons, lunchtime, family assembly, drama, after-school clubs and outside trips” (S3h).

As to Deaf integration, however, to avoid the negative attitudes of teachers and hearing students respectively, only HH students should be integrated in special classrooms within mainstream schools, at least for the time being. The three Al-Amal administrators showed tentatively negative attitudes towards the overall Deaf integration mechanisms operating in Jeddah at the level of placement (i.e. gaining access to mainstream education as it functions at present). Their views resulted from the shortages of human and physical resources explained earlier. Attitudes were more negative in the case of students with severe HL: “Regarding Deaf students with more than 70dB hearing loss, I have no doubt that Al-Amal is the best placement” (M1t). Three teachers (two Al-Amal and one mainstream) agreed that Deaf students should continue to learn in Al-Amal schools, which are well prepared and designed for Deaf education, in contrast with the shortage of resources and funding at mainstream schools (I5m), to avoid teachers’ lack of fluency in ASL (A7s) and more importantly, to eliminate bullying, isolation and unwelcome feelings (K6a). M1t added that throughout his career, he had found that “the Deaf seemed to dislike any other concept than Deafness, sign language and Al-Amal schools, as these truly represent their identity of being a linguistic minority sharing the same hopes and beliefs”.

Another factor is that the GDSE promotes the oral method to teach HH students in order to enhance their language development, along with providing free hearing aids. Thus, some schools are appointed to register HH students only, where the oral approach is the sole medium of teaching, while other schools, where cued sign language is applied, are for Deaf students only. The GDSE (2001) and Jeddah LEA justify their decision by stating that they would like HH students with residual hearing to develop their language abilities to their utmost, through constant auditory training and the oral method, to create the best environment for language development. Mainstream schools should integrate only Deaf students for whom ASL is the sole medium of instruction, as there is no point in these students attempting to use the oral approach. It is notable here that teachers certified in DHH education (e.g. A8o) were more positive towards the inclusion of both Deaf and HH students, while teachers of the Deaf at special schools were against Deaf inclusion, while not objecting to HH students being partially included: “Deaf students should remain taught at Al-Amal Institute as they have a collective culture which does not exist anywhere but Al-Amal” (K6a).

The three Al-Amal administrators in particular had considerable reservations about the operation of integration and transferral mechanisms in Jeddah LEA, especially concerning the lack of proper resources and logistical preparation of mainstream schools, weakness in diagnosis and transfer decision-making, and the failure to base the transfer of teachers from general to Deaf education on robust and systematic professional teamwork. First, among the school buildings in Jeddah, even those which were designed as schools, built and owned by the MoE, and which meet the minimum standards for an educational environment, do not fulfil the SEN criteria of access for special needs students, location, equipment and resources. Interviewees claimed that when the mainstreaming programme began, there was inadequate preparation in terms of in-service training, provision of hearing aids, auditory training and high-tech visual teaching aids. In addition, some participants raised the issue of teaching the national curriculum to Deaf students, who lagged by three to four years in literacy and mathematics (Powers, 1998).

As to administrators' second reservation, they often saw students who were diagnosed as partially deaf/HH (35-69dB HL), but teaching them on a daily basis showed that they could not hear any instructions during lessons despite wearing behind-the-ear hearing aids. Thus, the referral procedure might be based on "inaccurate and biased diagnoses" (M1t). This could lead to Deaf students being transferred into HH mainstream special classrooms and vice versa. Thirdly, the transfer procedure was not based on robust, systematic, multi-professional teamwork decisions, such that if an educational supervisor at the local authority decided to transfer a Deaf or HH student to a mainstream school, the father would be informed, but not necessarily the pupil himself.

Thus, Al-Amal administrators believed that Deaf students should remain in special education (albeit in day schools, not residential ones), because of fluency in signing and to enjoy the Deaf culture. The other three administrators, however, agreed on mainstream special classrooms as a move towards inclusion practice, although not an inclusive one, for the time being. They believed that isolation should end, that special classrooms should be the first choice for all DHH students, and that only if a Deaf student and his parents insisted on remaining at an Al-Amal school should they be permitted to do so, based on a multi-professional team decision. It can be concluded that inclusion is not yet the first option for administrators, which indicates a subtle difference and shade of perceived

meaning of inclusion between participants. However, participants' perceptions are not necessarily representative of administrators generally.

6.4 Perceptions of and feelings towards DHH integration/inclusion

Thomas et al. (1998) and Avramidis (2001) have noted some overlap in the way authors make use of 'integration' and 'inclusion', sometimes using these terms interchangeably and without due recognition of their different core meanings. This overlap is important for the way in which the present analysis was conducted and also indicates the shift from special education to responding to the diversity within a common school for all students (Vislie, 2003). Fredrickson and Cline (2002) show that usage may depend on date of publication and that writers in different disciplines embrace diverse terms when talking about the same educational practice. With reference to DHH students, Ainscow (1995) identifies two major differences in conceptualizing integration and inclusion. Firstly, mainstream schools make some changes and provide additional support to accommodate any special needs for Deaf or HH students. Secondly, the main objective of integration is to improve academic, social and other developmental aspects for each special needs individual, whereas inclusion means to make all possible changes to the school structure to match the various needs of Deaf and HH students. However, all students should benefit from school services and facilities, which should not be restricted to SEN students. Chapter Three deals with this distinction in detail. Here, it is important to note that Arabic does not clearly distinguish between mainstreaming, integration and inclusion, which are covered by two terms, translated as 'partial mainstreaming' and 'full mainstreaming' (Al-Musa, 2007) or 'partial mixing' and 'full mixing' (Elshabrawy, 2010). Additionally, the idea of full inclusion is not widespread among Saudi educators, whose concerns are the practical meaning and implications of partial mainstreaming related to DHH students (Al-Musa et al., 2007). It may also be that the presence of a strong moral framework to guide the implementation of inclusion reduces the need for a more academic debate, with attention focused on the practicalities. Thus, there is a need to raise practitioners' and policymakers' awareness of the variation of these terms, of how to distinguish between them and of their implications, as discussed in Chapter 7. Meanwhile, the following subsections analyse interview responses regarding integration, inclusion, mainstream and special schools. The summary analysis is presented in Table 6.5.

Table 6.5 Summary of interviewees’ responses on the inclusion concept

	T3: Integration/Inclusion
Teachers	<p>ST1: Views of integration/inclusion:</p> <ul style="list-style-type: none"> • All teachers agreed that integration meant to them the process of giving equal access to all DHH students to be taught at the nearest ordinary school • These mainstream schools should also provide DHH with additional support. <p>ST2: Positions on DHH inclusion in general:</p> <ul style="list-style-type: none"> • Four teachers agreed upon hard of hearing inclusion in special classrooms. • This position did not extend to inclusion in mainstream classrooms for all lessons, which indicates the complexity of inclusion. <p>ST3: Opinions of the physical and human environment:</p> <ul style="list-style-type: none"> • All teachers agreed that schools needed considerable basic provision of physical and human resources. • Physical resources: teaching aids and related requirements, logistics, and teaching and hearing aids. • Human resources: specialized in-service training in DHH education and intensive courses in ASL. <p>ST4: The future of Al-Amal: Al-Amal Institute for the Deaf must remain functioning as usual.</p> <ul style="list-style-type: none"> • Some new roles would be added to its job as a training centre and a day school for Deaf who wish to remain at Al-Amal and as a helping and counselling centre.
Administrators	<p>ST1: Views of integration/inclusion,:</p> <ul style="list-style-type: none"> • For five administrators, integration meant gaining equal access to the nearest ordinary school • These schools should provide additional supporting services related to DHH. <p>ST2: Positions on DHH inclusion in general:</p> <ul style="list-style-type: none"> • Complete agreement was reached about the importance of hard of hearing inclusion. • However, all three administrators working at Al-Amal Institutes believed that Deaf students should be taught as usual at Al-Amal, except if they wished to be transferred to mainstream schools. <p>ST3: Opinion of the physical and human environment:</p> <ul style="list-style-type: none"> • All participants agreed that more official provision should be given to new mainstream programmes, including all equipment and teaching aids • Three administrators emphasised human resources—training and diplomas in sign language and Deaf education—as prerequisites to transfer into Deaf education. <p>ST4: The future of Al-Amal:</p> <ul style="list-style-type: none"> • Al-Amal Institute should remain doing its job. • No contradiction between Al-Amal and mainstream schools, as both should work in harmony by robust multi-professional referral decision making.

6.4.1 Perceptions of integration/inclusion generally

While it is the purpose of this section to analyse educators’ views of inclusion, all the definitions they gave described integration rather than inclusion. The term ‘integration’ is therefore used in reporting and analysing their answers, because the Arabic words they used had a meaning closer to integration than inclusion. “Integration to me means to educate hard of hearing students in special classrooms at the nearest ordinary school but

not in the ordinary classroom” (K6a). This would provide the essential specialized education with some additional support services related to DHH students. It seems that DHH integration was perceived in terms of students’ need and right to gain access to local mainstream schools, rather than the right of all students, regardless of disability, to enjoy equal opportunities, fully engaged and taught in the same classroom in all lessons. Thus, educators were concerned with the first level of integration, gaining access to mainstream education. This was illustrated by the suggestion that the transfer of HH students into mainstream schools should depend on students’ and parents’ agreement. Consent was seen not simply as an ethical issue, but more importantly a social/emotional one: “...the social relationships among students, between students and teachers, and with their administrators at Al-Amal Institute is a satisfactory, rewarding, and comfortable one compared with mainstream schools...” (A7s). A7s added that the unsatisfactory relationships at mainstream schools derived from the absence of a direct communication channel: “...there is no direct contact between hard of hearing and ordinary teachers, with hearing students, or with their mainstream school administrators, but through a moderator who is not always available”.

Teachers seemed not to be equally interested in the philosophical principle of inclusion, whereby all SEN pupils have the right to gain access, be respected and valued, and to fully participate in all school activities, which would imply improving Saudi mainstream school standards and ethos. As to the administrators, they generally agreed on the philosophical goals and objectives of integration/inclusion. The major divide arose when discussing how it should move from theory to practice. One head-teacher at a mainstream school, S3h, along with two educational supervisors, G10a and M9b, recently promoted after a decade as mainstream teachers, all supported the practice of integration, while noting the need for gradual qualitative improvements, whereas the other three administrators (M1t, M2m and M11s), who had worked in various positions at Al-Amal Institutes, were against the current practices of integration for Deaf students.

S3h noted that “this term [integration] is quite broad, problematic and unclear”. M1t and M11s made similar remarks, which could be represented by an interpretive code, because it goes beyond a description of the data and makes use of analytical thinking about why what is occurring in the data might be happening (Taylor and Gibbs, 2010). Additionally,

there was emphasis on the socializing benefits to DHH students rather than on the equality issue of help and support for all students (G10a, M9b, M11s and S3h). S3h agreed on the academic and socializing advantage of inclusion, but for HH students' more than Deaf students, since the former have residual hearing and could easily communicate with their peers in a dual mode. Therefore, although inclusion was seen as a complex construct, there seemed to be agreement on the importance of inclusion and its overall goals and objectives as the ideal philosophical stance, while interviewees differed on implementation. Moreover, only one teacher, A8o, tentatively mentioned the importance of DHH inclusion in the future through active participation in all school activities. However, he acknowledged some prerequisites before moving towards inclusive practice: "mainstream schools should be ready to provide all necessary services to DHH students. They should feel loved and belonging to the new school. New schools should realize the particular needs of this group of students and provide effective means to facilitate communication and integration with other students and with school administration too". Although A8o showed positive attitudes towards inclusion, his acceptance was not unconditional. Other teachers seemed not to oppose the inclusion philosophy itself, but were concerned about its implications, especially in light of the current challenges and practical obstacles in the Saudi educational system. Their concerns about the current state of schools are discussed in Section 6.4.3.

6.4.2 Feelings for or against integration/inclusion

Only one teacher, I5m, opposed the current process of integration in Jeddah, because of the local authority's flawed implementation of mainstream programmes: "In our programme, there should be only hard of hearing with 25 to 70 dB, but we receive students who cannot hear instructions even when wearing hearing aids... The reason is either failure in diagnosis, or the personal desire of the guardian to obtain the SEN monthly allowance". This position against integration had four elements. First, the programme was launched with very limited teaching aids and human and logistical resources. Secondly, the DGSE regulations stated that only HH students with mild hearing loss should be included, but at I5m's school, many students had a hearing loss greater than this. The third problem was a long-term one of diagnosis, which is a recurring theme emerging from the analysis and shared at the cross-case level. This diagnostic

failure had a significant impact on the way that students would proceed within the same programme until the end of primary school, as there were no rigorous annual evaluations. The fourth problem, also raised by A7s, was that the choice to remain at either special or mainstream school was not the students' own but that of their parents or educational supervisors, both 'hearing people'. This raised the ethical issue of failure to obtain consent from the student, while as noted above, eligibility for the SEN allowance and disability benefits might be the implicit motive behind parents' decision to keep their DHH child at Al-Amal.

It is notable that I5m worked at a mainstream school, while among the administrators, those working at mainstream schools expressed general support for inclusion and it was the Al-Amal administrators who expressed negative attitudes towards Deaf integration, identifying "social integration" as the crucial element to judge the success or failure of integration. For them, the problem was that integration seemed to function as an unscrutinized practice that implied major transfer of Deaf students into mainstream schools despite the absence of practical signs of successful coexistence. M1t argued that there was no point in simply locating Deaf students in mainstream schools and claiming thereby to have accomplished successful integration. Applying integration without thorough academic and educational open discussion and evidence-based practice would benefit neither schools, DHH students nor families. M2m, agreeing that the problem was not in the integration philosophy per se, but rather in the approach to it, lamented the lack of a "national survey to evaluate Deaf integration in Saudi Arabia". This was seen to make it impossible to assess any resulting academic or social progress for the Deaf. However, he insisted that any possibility of successful integration in the future "would be limited to hard of hearing students and certainly not the Deaf", who already had their linguistic and signing culture.

The three mainstream administrators, by contrast, agreed on six major benefits of inclusion: avoiding negative labels and social stigma, avoiding the educational and social segregation characteristic of special schools, greater social normalization, opportunities for exposure and adaptation to Saudi customs and traditions, academic competition within the same chronological age group, and investing students' residual hearing in building up their linguistic culture, especially those with partial deafness (Figure 6.1). There is similar

analysis of disadvantages of DHH inclusion from teachers' views to contrast with this (Figure 6.2).

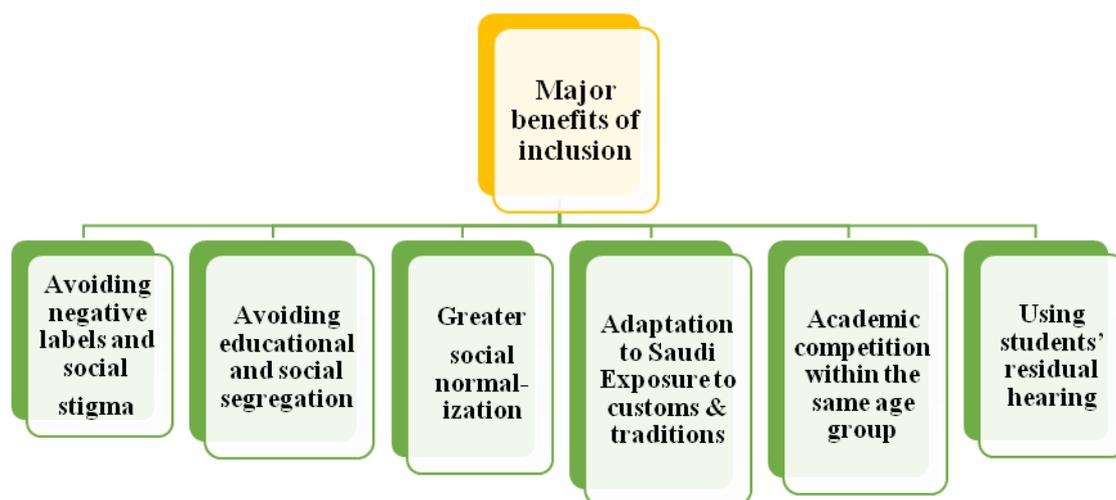


Figure 6.1 Major benefits of inclusion perceived by mainstream administrators

Four of the teachers also felt positive and comfortable with both the philosophy of DHH inclusion and its practical implementation in Jeddah. Their positions ranged from full support for integration and the expansion of mainstream programmes (A8o and S4s) to accepting the gradual move towards inclusive practice but with some conditions (A7s and K6a). Additionally, all teachers emphasized the importance of ‘socializing’ HH students with their hearing counterparts, but also that the student should give his/her consent to transfer as a first legal/ethical step towards inclusion, otherwise the move could backfire: “D or HH should accept this move into mainstream school”. They meant that students should receive an explanation of what would happen at the new school and should give their consent to this transition. Their views indicate that DHH students should be consulted and give their consent in the first place as it reflects a rights issue in this context (discussed further at Chapter 3, section 3.7, Figure 3.1, and the final chapter Section 7.4.3).

Two teachers (K6a and A7s) insisted that mainstream school settings should be available to a greater extent for HH students, and less for Deaf ones, asserting that Deaf people would be likely to prefer Al-Amal: “Deaf people have their own culture associated with sign language ... they are a completely different minority from hard of hearing” (K6a). The other two teachers, by contrast, felt that Deaf students should enjoy the three main

benefits of integration: “its academic, social and emotional development”, its importance in bringing about “normalization with Saudi customs and traditions and good behaviour”, and common values.

Teachers and administrators alike seemed to be anxious about losing their positions at special schools as a result of the expansion of mainstreaming programmes: “With this rapid expansion, some may fear that their institute will be closed down eventually” (A8o). Interviewees were aware of earlier cases such as that of the Aseer LEA, which in 2001/02 had transferred all students at its Al-Amal intermediate and secondary schools in Abha to mainstream schools and dispersed all of the Al-Amal teachers and administrators to other positions. The interviewees did not want this to happen to them. They explained the risk of not retaining their jobs so that head teacher and deputy head teacher would have to go back to teaching.

Despite this concern, it can be concluded that four teachers had positive feelings towards HH inclusion, while two of these had tentative reservations about mainstream schools’ appropriateness for Deaf inclusion but not for the notion of inclusion per se. The fifth teacher was concerned about the way the local authority was rushing to put inclusion into practice; nevertheless, he did not oppose its theoretical underpinning. Figure 6.2 illustrates educators’ views of current DHH inclusion problems. Al-Amal administrators also had negative feelings towards Deaf integration because of the risk of students losing full communication and therefore failing to establish sustainable friendships.

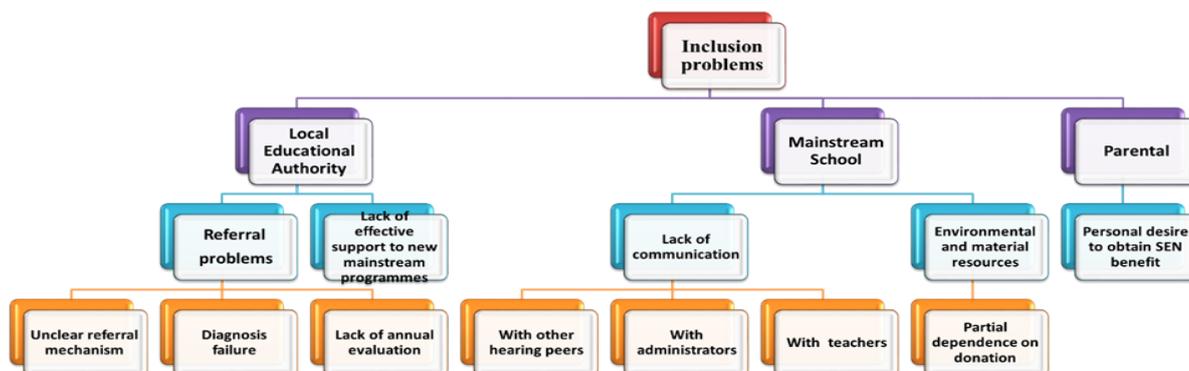


Figure 6.2 Educators’ views of inclusion problems at DHH mainstream schools

6.4.3 Perceptions of proposed mainstream school specifications

The third sub-theme is educators’ views of proposed mainstream school specifications, which can be divided into two emergent codes: logistical/material supplies (log. sup.) and human requirements (hum. req.). It is important to distinguish between codes under this sub-theme, as some have semantic content, while others have hidden or latent content, where it is necessary to read between the lines. A code is “the most basic segment, or element, of the raw data or information that can be assessed in a meaningful way regarding the phenomenon” (Boyatzis, 1998: 63). ‘Material supplies’ could be perceived as a descriptive code (Miles and Huberman, 1994), because it gives a precise description of the current status of mainstream schools and what needs to be added, modified and/or improved in terms of resources at the level of LEA provision. Conversely, ‘human requirements’ could be considered an interpretive code (Miles and Huberman, 1994), since it goes beyond describing a shortage of material resources or equipment, to portray interpersonal relationships and reveal hidden problems in terms of how Deaf and HH students have been transferred, received, accepted, socialized, participated and engaged with hearing students and with mainstream administrators and teachers.

All participants mentioned material supplies. For example, I5m referred to the need to create a special classroom that represented “a second home for hard of hearing students”. He added that it should be provided with “modern teaching aids like TV, pedagogical videos and DVDs, modern projectors, data shows, soundproofing carpet underlay, central air-conditioning, individual and group auditory training equipment, adequate lighting, educational posters with signs ... and internal FM radio with headphones”, so that students could benefit from morning broadcasts, translated as appropriate into signs for the Deaf. The administrators also focused on logistical, locational and other relevant requirements, rather than the importance of full involvement and participation in all school activities, manifesting more commonalities than differences. All six administrators, particularly those in mainstream schools, saw the need for an SEN support unit and teaching aids, including “...lessons, pedagogical textbooks burned into DVDs, educational video instructions, new projectors, data-shows...”.

On the second dimension, four administrators (M9b, M11s, M2m and M1t) shared the view of human resources needs expressed by G10a, who called for “in-service training and continuing professional development for all mainstream school staff members, and more importantly consistent help and support for new and ordinary teachers transferred into Deaf education”. This included ordinary teachers who wished to transfer to Deaf education and educators who were not specialized but worked closely with Deaf and HH students, including physical education and art teachers, head teachers and deputies, clinical psychologists and all other administrators entitled to the SEN bonus of 20 to 30 percent. Two participants (M2m and M1t) indicated that some administrators’ enthusiasm might be partially understood as “not because of their belief in the virtue of DHH integration but rather for this additional income because of the new programme attached to their school”. This accusation of eagerness inspired by financial interest can be seen as related to the comments reported in Section 6.4.2 about mainstream schools rushing to implement new programmes without appropriate preparation, and to other evidence throughout this chapter that some educators were suspected of seeking personal gain from mainstream programmes.

Three teachers (I5m, S4s and A8o) pointed out the lack of acceptance because Deaf students had inadequate channels of communication with hearing students and with

mainstream teachers and administrators. This caused substantial misunderstanding and confusion between students and teachers, while bullying was used to change unwanted behaviours of Deaf students. Moreover, this confused interaction or lack of communication led some teachers to think erroneously that Deaf students were lazy or disliked the mainstream school's routines. Ordinary teachers and administrators at mainstream schools who are not proficient in sign language "sometimes interpret some signs wrongly and respond accordingly without fully comprehending what the Deaf student [is trying to convey]" (I5m). This is one reason why they had some reservations about Deaf integration. The same three teachers raised the issue of engagement and participation between HH or Deaf students and hearing peers as a mean of 'socializing'. They mentioned that there was only occasional and informal involvement of HH or Deaf students in mainstream school activities. These activities include break time, family assembly activities, and sport and art lessons. This is relevant to the broader issues of special classes and risks of perpetuating separation as in special schools and is discussed further in the final chapter (Sections 7.4.7, 7.7.1, 7.7.2, and 7.5).

Another important point raised by five of the administrators concerned in-service specialized training courses, which should encompass "intensive ASL courses, Deaf and hard of hearing social and emotional development, DHH language development and SEN developmental psychology" (M1t). Participants from mainstream schools mentioned the need for better locational and human resources, whereas Al-Amal administrators seemed to have fewer concerns, because the Al-Amal Institutes had specialized in teaching Deaf and HH students for more than five decades. By contrast, DHH mainstream programmes began in 1997 (Al-Musa, 2006), often without full preparation to accommodate DHH students.

The two types of school and their classes also differed greatly in size, some mainstream schools having "more than eight hundred ordinary students with forty to forty-two students per classroom and thirty-six to forty members of staff" (G10a). G10a added that HH students would represent less than five percent of the 800, but their integration would entail a great deal of additional paperwork and supervisory responsibilities. This contrasted sharply with the sixty-two profoundly Deaf students and thirty-five staff members at the Al-Amal Primary Institute for the Deaf. He noted that this equated to a

student/staff ratio of two to one, compared with twenty to one at the mainstream school, so “the workload is clearly not the same”, and this tenfold difference should be taken into consideration when comparing the duties and responsibilities of educators in the two cases. This issues arises from the qualitative analysis is quite important and it might be that inclusion of Deaf students requires smaller and well equipped mainstream schools which might be a position that should be adopted by local authority and educational supervisors in the process of selecting new inclusive programmes (discussed further at the final chapter in Section 7.4.3). These considerations were also raised by G10a, S3h and M9b, and should be understood holistically in order to contextualise the mainstream educators’ responses.

Another logistical issue raised by M1t, M11s, S3h and G10a was that most teaching aids were paid for by donations from parents and teachers, which were inadequate to match the increased requirements of mainstream programmes and did not help sustainable improvement or the initiation of new programmes. I mean by this that these aids would not all be available in mainstream schools. This was a recurring sub-theme shared among most administrators. M1t, M11s, M2m and S3h also argued that the decision to transfer Deaf or HH students from special to mainstream schools or vice versa should not be taken by an individual but by a professional team including the Deaf student and his parents. Thus, ‘transferral procedures’ is another recurring sub-theme and is problematic in two ways: transferring ordinary teachers from general to Deaf education is not standardized and the transfer of students is not based on multi-professional teamwork. Another point that is represented by this interpretive code is that mainstream administrators who possess positive attitudes towards inclusion are essential for its success.

All teachers agreed that there was a shortage of human and material resources and inadequate social engagement, so that four of them believed that inclusion at the current time should be allowed only for HH students. Thus, there was consensus that the current status of mainstream schools required substantial improvement to make the whole inclusive enterprise more progressive and successful. It can be concluded that general agreement was reached on this sub-theme, as most administrators believed there to be a shortage of specialized teachers and of officially provided resources to support mainstream schools, which should not have to rely on donations.

6.4.4 Perceptions of the future of Al-Amal schools

The last sub-theme concerns whether the number of DHH students registered at Al-Amal schools should be gradually reduced and the schools eventually closed as mainstream school programmes expand. One administrator, M9b, argued that there would be “no place for special schools in the near future after all the success that was accomplished by various mainstream programmes”, adding that some of the Al-Amal Institutes around the country: “had closed already and yet more will be shut down in the future”, causing many administrators to fear losing their longstanding privileges. Although this was the opinion of only one participant, it gives some indication of the strong sentiment against the closure of Al-Amal schools. Indeed, the other five administrators rejected the idea and saw no contradiction in the coexistence of special and mainstream schools, while all teachers agreed that the Al-Amal Institutes should not be closed while any Deaf students wished to continue studying there: “I truly prefer Al-Amal to continue working as usual, because it constitute a special community for all Deaf students” (A7s).

Teachers expressed various reasons for believing in Al-Amal and its vital role, including Deaf students’ preferences (K6a), the failure of some mainstream programmes where Deaf students returned to Al-Amal Institutes (I5m), mainstream schools’ poor awareness of the academic and socialization advantages of integration (S4s and I5m), poor fluency in communicating with Deaf students, weak integration procedures (A8o and A7s) and the absence of a secure knowledge base of Deaf academic, cognitive, social and emotional development (I5m and K6a). There is a pattern of similarities among their justifications, which can be summarized by five descriptive codes under the emergent sub-theme of ‘Justification’. Levels of support for the survival of Al-Amal Institutes ranged from strong (I5m, S4s, K6a and A7s) to moderate (A8o). Some teachers proposed alternative roles for these Institutes under which they could advance, improve and differentiate their functions: “There are plenty of specialized counselling and other supporting services that could be provided via the Institute” (S4s). Thus, ‘new Institute roles’ constitutes another emergent sub-theme.

As to the administrators, G10a explained that the MoE had declared that the major functional role of Al-Amal Institutes was “to be consulting centres for helping students with profound disability, double, multiple and severe special needs and in-service training

centres for new and recently transferred teachers”. S3h added: “When mainstreaming started, it was only for hard of hearing students and then some special classrooms were opened for the Deaf”. Thus, there was no role conflict, because the priority would be for investing in all residual hearing of the partially deaf/HH. If Deaf students asked to be returned to Al-Amal, it should be their right to do so. Thus, a mainstream administrator was admitting that some Deaf students preferred to return to the Al-Amal system. Why should a Deaf student ask for such a move if everything was prepared and Deaf-friendly? This supports the claim made by I5m and M1t that some Deaf students returned to Al-Amal because they could not cope in the mainstream school environment, which calls into question the efficacy of transfer decision-making.

M2m highlighted the differences between Deafness and other special needs: “It has an unbreakable link to sign language and being a linguistic minority, attached to and proud of being educated at Al-Amal” made it hard for Deaf students to abandon their “second home”. He added: “Mainstreaming has to leverage Saudi local cultural patterns to achieve its objective and it cannot be simply transplanted from one country to another”. He meant that Al-Amal is not only an educational institution, but a second home whose occupants share the same interests, hopes, dreams, language, culture and common issues.

M11s demonstrated the importance of having experienced supervisors to modify pedagogy and amend the curriculum, with the skills needed to reactivate IEPs. Furthermore, they could provide in-service training courses to educate newly transferred teachers in ASL at basic and advanced levels. M1t agreed with M2m and M11s in opposing the closure of Al-Amal Institutes, noting that DHH students in mainstream settings visit the Deaf club attached to Al-Amal for sport and entertainment.

Interviewees felt that Al-Amal Institutes could play a major role as centres of in-service training for new teachers, those transferred from general education, and administrators. These specialized training courses should include the most needed topics, such as ASL, particularly cued signs, teaching styles for profoundly Deaf students who wish to remain at Al-Amal, counselling skills, and speech and language therapy. They should cover the teaching of students with multiple needs, have a centre for diagnosis and a specialized unit for designing hard and soft ear-moulds and other types of hearing aid maintenance. In addition, these teachers noted that the Institutes had extensive facilities, large buildings

and five decades of experience, believing that they would not be closed simply because of the recently launched mainstream programmes: “This slogan [Al-Amal closure] was raised several times before, but at the end of the day this Institute will carry on working” (I5m). However, they believed that the role of Al-Amal Institutes could be improved, advanced and modified with the establishment of multiple support services to maintain their vital role in educating and supporting Deaf people along with their teachers. Besides, I5m mentioned that two mainstream programmes had been closed and the DHH students returned to Al-Amal Institutes because they could not cope within the mainstream system.

A common sub-theme emerging clearly from these participants is that the expansion of mainstream programmes in Jeddah need not mean closing Al-Amal schools, because each institution has its own role, which could be modified to avoid contradiction with other schools (as it should keep working as a parallel system). This proposal for newly diversified roles is shown in Figure 6.3.

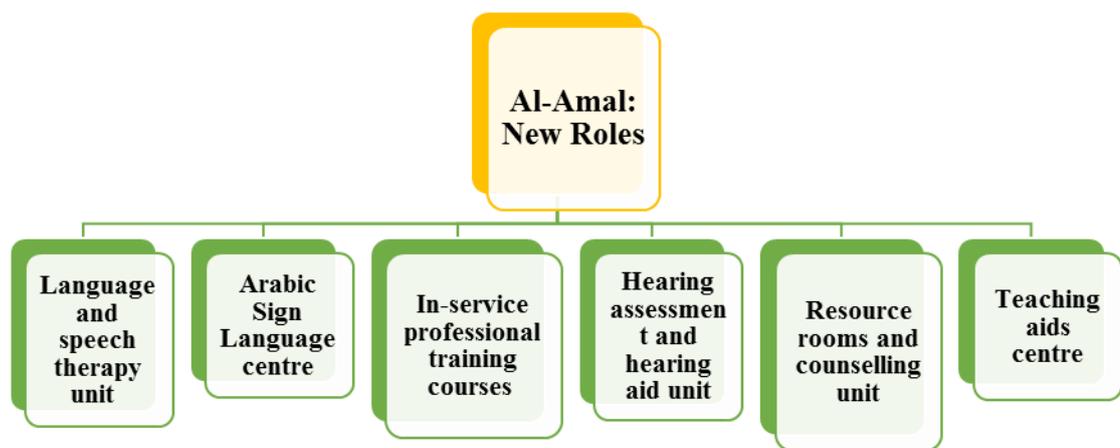


Figure 6.3 New proposed roles of Al-Amal Institute

6.5 Perceptions of the inclusion process

Because of the richness of data on the inclusion process and its requirements, the theme covered in this section addresses the first part of research question 3: What are Saudi educators’ perceptions of DHH teaching skills, in-service training and ASL? The second

part of the question, concerning additional support, resource rooms and teaching assistants, is covered in Section 6.6. Since mainstream participants sometimes gave one set of responses and those working at Al-Amal schools another, each of these subgroups is dealt with separately as appropriate.

There are two surface or descriptive codes (Miles and Huberman, 1994) with semantic content (Boyatzis, 1998) in this theme, related to social/educational issues, as discussed in Section (6.8.3, 6.7.1, and 6.8.1), and to legislative issues (section 6.6.3). As this theme is connected directly to teachers' skills and competences in mainstream self-contained classrooms; Table 6.6 sets out the regulations on transferring teachers from general to SEN/DHH education.

Table 6.6 DGSE regulations for transfer of teachers from mainstream to SEN/Deaf education

The teacher should have a bachelor degree in Maths, Arabic Language, Science or Kindergarten in addition to a higher diploma in SEN/DHH education to work at the primary stage. Teachers who wish to work at intermediate or secondary stage should be specialized in Islamic Education, English Language and Computer Science in addition to the four majors.
Teachers must hold a higher diploma either in SEN in general or in Deaf education for at least a year and a half, with not less than 45 credits.
Overseas qualifications have to be accredited and officially registered at the Ministry of Higher Education before transfer can commence.
The LEA must agree upon this transfer from the beginning.
Transfer from general to special education shall be restricted to highly demanded majors such as Maths, Science etc.
Teachers must pass written exams.
Teachers must pass a personal interview.
Teacher must have a clear record and not have any type of convictions in the last three years.
The first year shall be a trial period in which his/her eligibility shall be examined, then a decision will be made either to carry on at SEN or go back to the original major.

Source: DGSE (2012)

Many interviewees remarked that the first regulation does not specify definitively the level of ASL proficiency to be included in the SEN diploma, which indicated for them a lack of rigour and detail. This discrepancy between written regulations and participants' views indicates a gap between the official criteria for transfer into SEN education and the real-world practice, which has led to problems in transferring teachers into DHH education. It is hoped that a clear analysis of this issue will provide findings that will help Saudi stakeholders, curriculum designers and policymakers at the DGSE and local

authorities to amend or/and improve DHH integration policy and practice. The summary analysis is presented in Table 6.7.

Table 6.7 Summary of interviewees’ responses on the inclusion process

T4: Inclusion process: In-service training, teaching skills and ASL	
Teachers	<p>ST1: Teachers’ opinions of their skills and competences relevant to DHH: Three teachers believed that they had the skills/competences to teach DHH students.</p> <p>ST2: Participants’ evaluation of their experience in DHH education:</p> <ul style="list-style-type: none"> • All participants had good experiences of teaching DHH students, but one raised two points: • The issue of improving diagnosis, and • Improving referral procedures to make a clear distinction between Deaf and hard of hearing, to know precisely who is eligible to be moved into mainstream programmes. <p>ST3: Their views of pre and in-service training relevant to DHH inclusion:</p> <ul style="list-style-type: none"> • Four participants felt that in-service training was inadequate and that most courses were generally: • Too short, 2) outdated, and 3) provided by inexperienced teachers • They should have been given by experts in the field of ASL (cued and alphabetical) and in Deaf education and pedagogy. <p>ST4: Participants’ mastery of ASL:</p> <ul style="list-style-type: none"> • Three teachers believed their sign fluency was good enough, because: • They were certified teachers in Deaf education or • They had a university degree and were Deaf themselves, whereas • The other two only had a diploma and short courses in Deafness. <p>ST5: Behavioural intentions in managing future inclusive classroom of DHH students:</p> <ul style="list-style-type: none"> • They had not been trained to do so, or • Mainstream school status and standards were not suitable for inclusion and they believed it would be a source of disturbance, or • Poor school preparation. • Thus, full inclusion at the same classroom at all times was not an option for these Saudi teachers. • No agreement on this complex issue: three teachers showed no behavioural intentions in managing inclusive classroom where Deaf and hearing students were taught together.
Administrators	<p>ST1: Administrators’ opinion of their skills and competences relevant to DHH:</p>

	<ul style="list-style-type: none"> • Three specialized administrators believed that they had acquired teaching skills and competences relevant to DHH education, • The other two, unspecialized administrators, said that they had not acquired adequate competences in Deaf education and sign language, but had practical experience acquired through practice. <p>ST2: Participants' evaluation of their experience in DHH education</p> <ul style="list-style-type: none"> • Four participants from both schools had enough experience in teaching DHH students, which indicates some agreement. <p>ST3: Participants' views of pre and in-service training relevant to DHH inclusion:</p> <ul style="list-style-type: none"> • All participants believed there was a shortage of professional in-service training courses, which was vital to enhance the skills of both: • Newly recruited teachers and those who transferred from ordinary to DHH education. <p>ST4: Participants' mastery of ASL:</p> <p>Four administrators believed that their fluency in ASL was very good and adequate for teaching DHH students (on a scale of ten they positioned their cued sign fluency 7/8).</p> <p>ST5: Behavioural intentions in managing future inclusive classroom of DHH students:</p> <ul style="list-style-type: none"> • Three administrators believed they could manage future inclusive classrooms • The other three opposed it. • This reflects the complexity of this construct
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6.5.1 Educators' views of skills related to DHH education

Teachers' responses regarding teaching skills/competencies were of three general types. First, A8o argued that he and other certified teachers holding a bachelor degree in Deaf education had "all the required cognitive competencies and relevant skills to teach Deaf and hard of hearing students". The reason for including them in mainstream classrooms was to have a model of how specialized teachers viewed training, teaching skills and proficiency in ASL. Secondly, Deaf teachers holding a bachelor degree in education, or any other major, believed that their proficiency in sign language was "derived from being one of the Deaf community", which allowed them to be highly skilled in teaching Deaf students, particularly via sign language, and outweighed the disadvantage of not having a degree in Deaf education (K6a and A7s). These two Deaf teachers were included in the second phase of interviews because they were members of the Deaf community and thus well placed to comment on Deaf culture and beliefs from within, as well as being fluent in sign language. Thirdly, Im6 and S4s were teachers who had transferred from general to Deaf education and believed that they had relatively satisfactory competencies which allowed them to teach HH rather than Deaf students, but clearly not like certified teachers. These transferred teachers were included because of the many indicators that they lacked fluency in cued sign language and minimal knowledge of DHH education. Unlike certified teachers, they held diplomas with only one module in sign language, so were not

fluent in ASL. A8o, as a certified DHH teacher, believed that the bachelor degree from the Department of Special Needs at King Saud University was well recognized in Deaf education: “the bachelor in Deaf education contains 128 accredited hours that are designated for different aspects of Deafness”. Thus, he had no doubt that all certified teachers in DHH education were competent to teach DHH students.

The Deaf teachers, K6a and A7s, had a similar view to A8o, arguing that a bachelor degree in general education was sufficient to teach DHH students at the primary stage, which did not require a subject speciality: “Being a member of the Deaf community implies fluency in sign language, which is the key point at the primary stage”. They believed strongly that their competencies and teaching skills in DHH education were adequate. The transferred teachers had mixed and rather vague views about their skills and competencies related to DHH education. For instance, S4s explained that although he had a diploma in Deaf education, “it is very important to hold a degree in DHH education, but I think that I have relatively satisfactory skills to teach hard of hearing students, but not Deaf”. Although he had already obtained a diploma in DHH education, he recognized his lack of competence in teaching Deaf students. A similar pattern is evident in the response of I5m: “I am not specialized in DHH education but have a diploma in Deaf education. Specializing in Deafness is very important, but there was a high demand for Arabic teachers who could teach Deaf at a higher stage”. It is possible that this high demand and the additional financial benefits may together help to explain the decision to move from the ‘comfort zone’ of teaching Arabic to ordinary students to an entirely new arena.

A7s raised an important point related to this sub-theme that certified teachers who had a degree in DHH education were more suitable for teaching at the primary stage because they had no subject specialization. Primary teachers were not required to have another major, whereas teachers who transferred from general education with a diploma in Deaf education did specialize in a subject and were more suitable for intermediate or secondary teaching. But A7s clarified his special circumstances as a Deaf person, but also as a teacher of the Deaf: “I have a degree in Geography, and being Deaf is the deciding factor for the local authority accepting me as an Al-Amal teacher”. Thus, notwithstanding his diploma in Deaf education, the central point of his job satisfaction was that he was a

member of the Deaf community with ASL as his first language. K6a shared this perspective with A7s, having similar qualifications and being Deaf. He raised another important point on the subject of skills and competences: “The weakest point in the Deaf diploma is that it has only one module in sign language”. This clarifies the problem of newly transferred teachers into mainstream inclusive programmes who always preferred teaching HH instead of Deaf students, because of their lack of confidence in Deaf inclusive education and their poor fluency in ASL.

To sum up, both Al-Amal teachers believed that they possessed all the required skills and competencies related to DHH education, while among teachers at mainstream schools, three believed their skills and level of competency in DHH education to be adequate and two believed that their diplomas qualified them to teach HH students but not Deaf students. This showed how complex this sub-theme was and indicates that teachers of DHH students need continuing, modern, systematic, and intensive professionalized training that includes research-based practices in inclusive schools in order to be always updated. Relevant to the latter group, their position might indicate that neither diplomas in Deaf education nor most teacher training programmes require any minimum competency in sign language in order to teach this group of students. Some hearing teachers of Deaf students claim that they learned how to sign from their students (Marschark et al., 2006).

It was important to focus on in-service training and teaching skills from the administrators’ perspectives, because these elements could turn the integration experience into successful practice. Interestingly enough, all three Al-Amal administrators were against integration for Deaf students, citing the high skills and competences of people working at Al-Amal. On the other hand, they supported integration for HH students. Their position may be partially explained by a fear of losing their long-lasting superior position, by their never having visited a mainstream school to form an evidence-based judgment and by a belief in the special minority status of Deaf people: the distinctive language and culture of the Deaf should remain special, not mainstreamed, and ordinary people in contact with Deaf people should learn sign language as they learn any other language and not vice versa.

Since this sub-theme concerns skills and competencies, it may be instructive to compare the views of the four administrators specialized in DHH education (G10a, M9b, M2m and M1t) with those of the two unspecialized administrators, M11s and S3h. The first group believed that they had acquired most of their skills and competencies while studying for their bachelor's degree in Deaf education, and they were satisfied with it in general. However, only half of this four-year full-time course comprising more than 128 credits was assigned to DHH education, of which only one course module (3 credit-hours) was for oral communication method, one course module (3 credit-hours) was for ASL and Total Communication method, and two course module (6 credit-hours) was for introduction to hearing impairment & language development of DHH students (see Appendix J for detailed course descriptions). G10a said: "There should be more emphasis on adding more modules to improve the practical skills of D/deaf teachers, specially cued sign language and finger spelling". This opinion suggests that there should be two or more course modules to enhance educators' proficiency in sign language such as ASL level 1 and ASL level 2. Interviewees also referred to the dialectal variation in ASL discussed in Section 6.5.4. Studying in Riyadh, then working in other provinces, meant that teachers would face difficulty in communicating with Deaf people there. Hence, they gained more from their first year of everyday communication at school and at the Deaf club than from any courses. Overall, these specialized administrators agreed they had acquired a knowledge base relevant to Deaf education, although they believed that their skills in sign language needed more "advanced courses on new cued signs" (M9b).

As to the unspecialized administrators, neither felt that they had acquired adequate skills and competencies in Deaf education or sign language, particularly cued signs. S3h stated that he was for many years the head-teacher of a MoE primary school, which was required to establish a limited number of special classes for HH students, with four to five students in each. He acknowledged the importance of obtaining a diploma, or at least of taking an intensive one-term professional course, "to gain a basic knowledge of Deaf education and sign language". However, there was only a short course available in sign language, so that he "acquired most of my basic knowledge and signs through personal learning and everyday communication with Deaf teachers". In the same vein, M11s reported that his job as clinical psychologist did not prepare him for dealing with the Deaf or HH. He stated that no courses were available, either in Deaf education or in sign language. While

“everyday practice with Deaf students and Deaf teachers gave me some primary understanding of Deafness”, he felt that in counselling sessions there should be an interpreter to facilitate communication between himself and his student.

Thus, both specialized and unspecialized administrators saw a need for more and professionalized courses at the appropriate level to improve their signing skills, which they recognized as critical for success in DHH inclusion. The discussion of whether this fluency in ASL issue connects with inclusion of Deaf students from special institutes into mainstream schools or even units in them were tackled in the final chapter (sections 7.4, and 7.3.1.1).

6.5.2 Educators’ evaluation of their experience

On the second sub-theme, both Al-Amal and mainstream administrators were generally positive about their experience of working within their respective regimes, in common with the teachers. Describing his very good experience of working with Deaf students at the Al-Amal Institute, M2m raised the interesting point that “the Deaf express gratitude towards their teachers and visit the Institute even after graduation”. This opinion was echoed by M1t and M11s. Deaf students, in the eyes of the Al-Amal administrators, should be allowed to study at special schools as a preferred alternative, while mainstream schooling should be for those with partial deafness. They argued that each placement type had its strengths and weaknesses and that decisions on where particular students study should be taken by a multi-professional team, not an individual. Overall, they evaluated their work at Al-Amal, where most teachers were specialists and their needs were met, as comfortable and rewarding.

For their part, administrators at mainstream schools mentioned many benefits of mainstream and inclusive education, such as: “elimination of stigma, socializing with their counterparts at the same age level near home, getting rid of a long history of isolation, participation in most school activities hand in hand with hearing peers, and last but not least, normalization with customs and traditions like all other Saudi students” (G10a), which echoed their feelings towards inclusion (Section 6.4.2). They agreed that Deaf and HH students and their parents should be allowed to choose where they would prefer to be taught. These three evaluated their experience at mainstream schools as

‘satisfactory’, while noting that they needed more ongoing support from the local authority.

When asked about their experiences of teaching at mainstream schools, A8o, I5m and S4s expressed some reservations and unresolved conflicts about the environment and teaching/learning practices. For instance, although I5m reported good experiences in general, he mentioned some problems that needed to be addressed, beginning with “diagnoses which are not rigorous”, a recurring sub-theme raised by various participants across all categories. He also referred to “transfer decisions”, particularly for the marginal category with uncertain hearing thresholds, i.e. “those in the broad area between mild and severe hearing loss who were diagnosed at a later age”. I5m explained that some students were transferred from Al-Amal to mainstream schools despite having practically no hearing, even with hearing aids. Another point was that even HH students had not developed sufficient vocabulary, because intervention had occurred at a late developmental stage and thus it was difficult for them to be successfully integrated into ‘designated HH mainstream classrooms’, not to mention inclusion. Furthermore, transfer procedures were not systematic but based on the wishes of hearing people, i.e. parents of DHH students or educational supervisors. I5m gave a practical example: “When I started at this mainstream school in 2004 and I asked about some students who had no residual hearing, I was told this was only a one-year trial, but it turned out that there were no annual reviews of these newly transferred cases and they continued from the first to the sixth grade in the same mainstream primary school”. I5m also reported that mainstream schools had temporary teachers who came to teach for only a few days a week. Because every teacher had to teach eighteen lessons a week, they could not give each individual case sufficient attention. S4s gave a similar response with fewer details.

A8o offered a tentatively positive evaluation of his experience of DHH mainstream education, making four points similar to those raised by I5m, “in order to make mainstream teachers’ experience more successful”. Teaching aids for DHH students at mainstream schools had to be improved and “elaborated with extensive Arabic signs”. He also felt that imposing a national curriculum and pedagogy was problematic. It was issued in 2003 for DHH students at the primary stage and in 2009 for students at the intermediate stage (see Appendix C), but had a negative effect on DHH academic achievement: “It

should be modified to match DHH needs in terms of linguistic development and learning/teaching styles”. As this is partly a developmental issue, it will be addressed further in the discussion chapter. A8o’s third point was that the mainstream school environment and equipment should be enhanced to accommodate DHH integration. Finally, “there should be ASL short courses for all mainstream staff to make schools more DHH friendly and to establish effective means of communication”.

The two Al-Amal teachers seemed more comfortable and stable in terms of job satisfaction and were content with their educational environment and teaching experience. “All Institute classrooms and corridors were full of sign posters and signing teaching aids. More importantly, all school staff were fluent in ASL” (K6a). A7s offered a similar opinion, while criticizing current integration practices: “I would give mainstream schools seventy percent of success if we are talking about hard of hearing integration, but not for Deaf”. He explained that “as a Deaf person and teacher at the same time, communication is very important for teaching through sign language, which is indeed the preferable channel for instruction for DHH students”. He reported that his experience of teaching Deaf students at Al-Amal had been quite rewarding, as he had taught them for a long time and knew how to communicate effectively. He seemed confident, comfortable and a consistent source of information, as he was one of the Deaf community, had constant contact with the Deaf at school, at Deaf club and elsewhere, and had taught students who had returned from mainstream schools. He then explained that Al-Amal was well grounded and equipped to accommodate all needs of DHH students, so there was no point of comparison between the two types of school.

The other Deaf teacher gave a similar evaluation of DHH integration: “More than two decades of working with Deaf students and being one of them myself and taking into consideration all the problems that have occurred at mainstream schools, all these allow me to say that Al-Amal Institute is and will remain the second home for all Deaf” (K6a). ‘Second home’ is an interpretive code, as it goes beyond merely describing what is on the surface of the data. It is interpretive or analytical in the way that it reflects a traditional Arabic proverb which means that Al-Amal Institute with its attached Club holds a valued position in the heart and minds of all Deaf people, making it similar to their own homes. This is crucial to the challenge to conventional ideas of inclusion which was supported

by various participants in the analysis. This view of support for the continued role of Al-Amal Institute as an alternative placement along a continuum of provision is discussed in detail at the final chapter (Sections 7.4.1, 7.4.3, and 7.5).

Thus, educators generally offered positive evaluations of teaching DHH students. However, they raised six emergent sub-themes, which showed complexity, and ought to be improved to enhance DHH teaching experience, as presented in Figure 6.4.

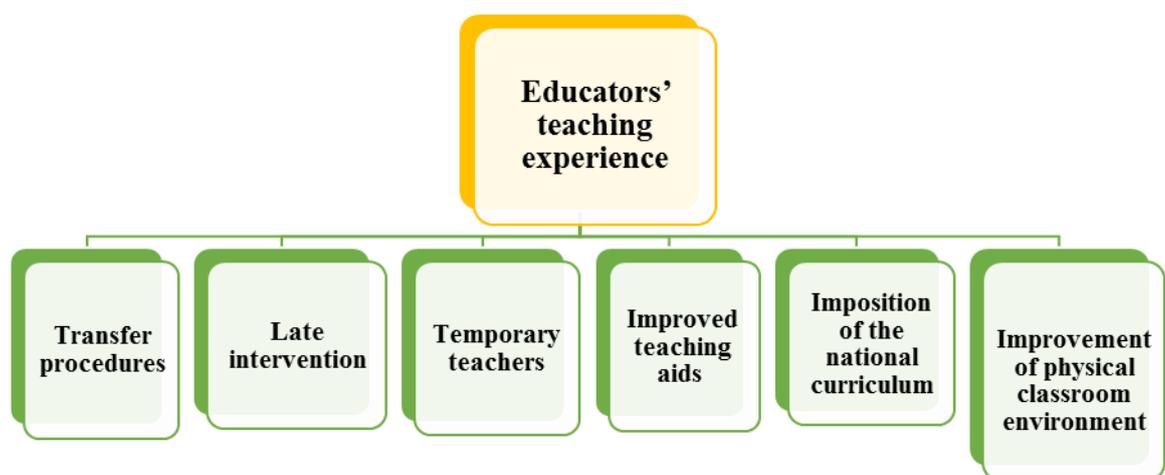


Figure 6.4 Educators' teaching experience

6.5.3 Educators' views of in-service training

Regarding in-service training, while individual schools were found to vary in their ethos, the teachers interviewed were in broad agreement. Among the mainstream teachers, I5m was quite dissatisfied with the duration and quality of professional training provision, which was not yet adequate to “achieve the basic requirements of skilful teachers”. He felt that it was “pointless to make teachers attend a one-week course presented by another ‘experienced’ teacher”. A week was not enough to give a mainstream teacher intensive and up-to-date knowledge of Deaf education and sign language: “a three-month course should be provided to all teachers, with more emphasis on new and transferred teachers”. Such courses should include advanced training in cued sign language addressing abstract meanings, up-to-date teaching methods and educational aids relevant to DHH default

criteria. They should be delivered by experts in Deaf education and professionals in cued signs, whether Saudis or recruited from Jordan or Egypt. S4s agreed upon the need for more in-service training for all teachers relevant to their needs, which must be “practical not theoretical”, as most DHH teachers had enough theoretical knowledge about Deafness but lacked practical advice from professional experts. These courses should also cover neglected areas which all new and transferred teachers truly need, such as: “DHH teaching methods, preferred learning styles, and advanced level of cued sign language”.

In the same vein, A8o said that current training was more or less sufficient but that the local authority and school administrators should “attract experienced teachers with professional diplomas and fluency in sign language”. These highly experienced teachers would boost DHH education at their mainstream schools and show their colleagues how to diversify and individualize teaching methods, especially in light of the small number of students in each special classroom. In addition, “all teachers should be aware of all new trends in DHH education and technologies, because this is the only way to progress” in a rapidly changing high-tech world.

The older of the Al-Amal teachers, K6a, asserted that existing courses provided only basic requirements and were “not professionally designed for long-experienced teachers” such as himself. These courses ought to benefit all teachers equally and cover advanced areas of teaching/learning competences and a high level of abstract sign language. A7s disagreed on one point, arguing that there was: “no immediate need for in-service training for certified teachers in Deaf education with long years of experience”. Like his mainstream counterparts, he felt that these courses should target “newly employed and transferred teachers who had not obtained a higher diploma in Deaf education”. He argued that the problem lay with these two groups of teachers who had acquired their knowledge of cued sign language from unregulated and quick courses and from their colleagues at mainstream schools. Obviously, these two sources of knowledge were not adequate in providing a standard and systematic educational knowledge base to qualify these teachers to teach DHH students. Thus, A7s proposed that a mature Deaf teacher who had a degree could provide this type of course, because the old cued sign language had recently changed to new signs and Deaf people were the only ones who were fully aware of these changes. He added that these courses should cover: “a period of one academic term to

one year in order to facilitate high fluency in sign language for new and recently transferred teachers”.

Thus, while there was a difference of emphasis in one case regarding length of experience, both specialist and mainstream teachers believed in the importance of ongoing specialized and intensive in-service training, with particular emphasis on new and transferred teachers.

The views of administrators on whether they were receiving sufficient in-service training to facilitate successful DHH integration were unsurprisingly aligned with those of the teachers on training and with those of the administrators themselves on skills and competences (Section 6.5.1). The four administrators holding degrees in Deaf education were convinced of the importance of this qualification as a basic criterion that should be adopted by the local authority in accepting teachers into Deaf education. For instance, G10a said there was a lack of professional in-service training, particularly “for general teachers recently transferred to Deaf education and educational supervisors, in areas like learning styles, teaching methods and sign language”. The other three specialized administrators agreed that training needed to reflect the fact that DHH students were visual learners in general and needed substantial effort to make their transitions smooth and comfortable. They criticized existing courses in general as ‘short and theoretical’, arguing that they should be more practical and focused on important issues such as creative and critical thinking, problem solving skills and sign language fluency. The two unspecialized administrators also felt that it was essential for them to obtain in-service training. For example, S3h complained that “courses recently are not highly professional or specialized. Instead, they give a general introduction to Deaf education, which is not helping”. He suggested that one causal factor was the intensive workload at mainstream schools, which made it difficult to attend such courses, adding that educational supervisors lacked expertise as training providers and that the number of supervisors was insufficient for the number of DHH programmes, students and their teachers. He concluded that these difficulties might be reduced when the Saudi scholarship students returned to help advance inclusive educational practices.

6.5.4 Educators' views of fluency in ASL

The question of signing fluency is particularly significant, because it distinguishes proficient teachers from the recently transferred, whom some interviewees suspected of being subject to financial or other unworthy motives, such as wishing to escape the large classes and heavy workload of mainstream teaching. Mainstream and Al-Amal teachers, while differing in fluency, were in broad agreement on this sub-theme.

To begin with the mainstream teachers, I5m assessed his own fluency in Arabic cued sign language at “three out of ten”. Although he had attended courses in Standardized Arabic Sign Language Dictionary (SASLD), he felt that he had gained little, because “any language needs constant daily practice, otherwise it will be forgotten”. As most of his students were hard of hearing and it was not permitted to sign with them, he felt that his proficiency in ASL was not as it should have been. Similarly, S4s said that he had a diploma in Deaf education and had enrolled on a one-week course that gave basic knowledge of SASLD and a two-week course in SEN. Although relevant to Deaf education, these were “short and mostly theoretical”. I5m insisted that the training should be more practical, professional, longer and involve direct communication with Deaf people, to provide immediate practice of the theory. A8o differed from his mainstream colleagues in assessing his level of fluency in ASL as “more than eight out of ten”. He stated that he had obtained all the required qualifications to master sign language, had taught Deaf students for many years and had worked at a time when sign language was the dominant mode of instruction. “All these factors helped me to get good fluency in sign language”.

The two Al-Amal teachers also rated themselves as fluent signers. K6a confidently described his fluency as excellent, because he was pre-lingual Deaf. Thus, sign language was his first language and he was used to socializing with Deaf people, such as at the Jeddah Deaf Club, and communicating via sign language. He therefore personally saw “no need for courses in sign language at Al-Amal”, but recognised that not all teachers were fluent. He was particularly concerned that those working at mainstream schools had not acquired adequate proficiency in sign language, as Deaf students had told him on many occasions. Similarly, A7s rated his fluency in cued Arabic sign language as eight on a scale of ten. He appeared quite fluent at the interview and the interpreter confirmed

his high level of skill in sign language. He had long experience of using sign language as the only means of instruction and it had always been his dominant means of communication because he was hard of hearing from an early age. While he did not think he required any type of sign language course himself, he pointed out that efforts should target those “lacking proficiency in sign language”.

A critical problem raised in the interviews was that while SASLD was standardised, Deaf people used dialect cued signs that sometimes differed across the thirteen local authorities in the Kingdom and were therefore sometimes different to what was taught in Riyadh. As SASLD was launched in Qatar in 2006 and comprised signs from across the Arab world, Deaf people in Saudi Arabia tended to perceive it as rather peculiar and imposed from outside. In the same way that dialect and colloquial Arabic varied, interviewees felt that the same should be applied to sign language. Furthermore, Deaf people are proud of their linguistic minority culture and would reject any attempt to force them to use a sign language that was unfamiliar or alien.

Overall, teachers agreed upon the importance of improving teachers’ level of mastery of cued sign language, which has many differences from the formal system of sign language (see Chapter Three, Section 3.4.1). Direct contact with mature Deaf people, at the Deaf Club or elsewhere, would be useful in order for teachers to appreciate the similarities and differences between SASLD and the cued sign language actually used by Deaf students in a given LEA area. In conclusion the interviews indicated that sign language standards were higher among Al-Amal teachers than at mainstream schools, where most new and transferred teachers work. Teachers also pointed to the need to distinguish between official (SASLD) and dialectal cued signs in signing courses for non-certified, new and transferred teachers. This would imply that teachers who work in the southern province, for instance, should learn the synonyms of each vocabulary item in the curriculum to be more familiar with their students’ dialect. Overall, there was agreement that such courses were particularly important for mainstream teachers’ professional development, as will be discussed in more detail in Chapter Seven.

For their part, the four specialized administrators stated that they had acquired adequate knowledge and skills while studying Deaf education at King Saud University, Riyadh, and had been updated through short courses in SASLD. However, as noted in Section

6.5.1, they felt that more fluency and proficiency were acquired during teaching and communicating with Deaf students than on these courses. M2m assessed his ASL proficiency as scoring seven out of ten, while M1t, G10a and M9b rated themselves at eight or more, indicating a high level of confidence in their signing fluency. As to the two unspecialized administrators, it was unsurprising in light of their comments reported in Section 6.5.1 that they felt a strong need for “specialized courses in ASL proficiency”, having had no courses to “initiate a basic knowledge of ASL”. For M11s, this was because it was his first year working with Deaf students and no course had been offered. What was surprising was that S3h, who had not attended any courses in ASL, assessed his fluency as seven out of ten, in contrast to the more realistic 4/10 of M11s. This suggests that the responses of S3h should be scrutinized in order to explain his belief that there is no direct relationship between fluency in ASL and attending specialized courses or receiving in-service training in signing. This matter is revisited in Section 6.6.1. Meanwhile, these responses reinforce the need for educators to receive further continuing professionalized training in ASL at an appropriate level.

6.5.5 Educators’ behavioural intentions on inclusive classrooms teaching

The fifth sub-theme concerns behavioural intentions toward teaching in future inclusive classrooms where Deaf or HH and hearing students would learn together. To begin with mainstream teachers, I5m believed that he would be able to control and teach inclusive classes, but “only if all necessary conditions had been fulfilled”. The requirements which he believed should be met before moving on from integration to inclusion included material needs as well as DHH students’ social and emotional wellbeing. A8o was similarly conditional in his response, stating that he could work in an inclusive classroom where Deaf or HH students were taught together with hearing students in an accessible, respectful, participatory and engaging environment. As a certified teacher in Deaf education, he had studied “all teaching methods and all other relevant modules on how to manage inclusive classes”. He thought that there should be a focus on “preparing schools, families, local authority and policymakers to accept and understand the inclusion concept and its implications”.

By contrast, S4s had some reservations about inclusion. Firstly, there would be “a desperate need for an interpreter”, whose presence might be distracting for hearing

students, particularly in the lower years of the primary stage. Secondly, Deaf education sometimes required an IEP, with concentration upon one or two low-achieving students. This could not be accomplished in large mainstream classrooms where thirty to forty students were taught together without consideration for individual differences, whereas SCCs usually had between five and nine students, which allowed more individual instruction to take place. Thus, S4s saw no prospect for inclusion, believing that mainstream schools needed “massive changes at all levels”. The two Al-Amal teachers also foresaw great difficulties. A7s said: “I could teach only Deaf students, either in special classes at a mainstream school or at Al-Amal, but not hearing students”. K6a explained that all of his experience had been with Deaf students at Al-Amal and as a Deaf person, “I do not think that I would be able to teach inclusive classes, because I cannot speak at all”. He also stressed his “loyalty and belonging” to the Deaf community and would not consider teaching at any other school. Furthermore, he felt that inclusion could not function properly under existing conditions. This is a strong argument in favour of limited inclusion in mainstream special classrooms which is discussed in further detail in the final chapter (7.2.1.5, 7.6.1, and 7.9).

Thus, only two of the five teachers were optimistic about the prospects for full-time inclusive classes all the time and their own ability to teach D or HH and hearing students together in the same class. There was a good measure of agreement on the need for a range of practical and conceptual conditions to be met by schools, teachers, families, policymakers and others before inclusion could be expected to succeed.

The behavioural intentions of administrators towards managing future inclusive classrooms broadly mirrored those of the teachers, with the mainstream educators supporting the development and their Al-Amal colleagues opposing it. Among the first subgroup, M9b showed enthusiasm for having Deaf and hearing students in one class, with HH and hearing students in another. While M11s and S3h agreed on this ambition, they raised two conditions: “the crucial need for a teaching assistant who has specialized in sign language” and making a gradual move towards inclusion by “beginning with hard of hearing and hearing students and seeing how it goes” (M11s). They rationalized this caution by expressing their anxiety that “having Deaf and hearing students together might cause disturbance for both parties by the fact they have two different teaching styles”.

This result is not surprising, because the three mainstream administrators were almost always supportive of DHH practices, agreeing on their willingness to manage any future inclusive class and indicating that educators' training was the key to DHH inclusion, along with recruiting TAs to facilitate effective communication. This is consistent with the finding of Avramidis (2001) that educators showed resistance to inclusion at first but took more positive attitudes over time as they gained the essential experience of inclusion and saw the success of their efforts (discussed further in the next chapter).

Like their teaching counterparts, the Al-Amal administrators were wary of any "hasty and uncalculated move" towards DHH inclusion, in view of the poor condition of mainstream programmes. One opined that "mainstream schools are mainly dominated by one-way conventional teaching methods, information flow and pace is different from hearing and DHH, differentiation in teaching/learning styles is far away, and linguistic development is different in terms of reading and writing". Another point of precaution was that HH students needed to hear sounds at relatively high volume compared with hearing students, while Deaf students preferred sign language. Inclusion could not be accomplished with the current "poor facilities and lack of hearing aid maintenance". Besides, "additional support might lead to disruption". Low proficiency in ASL would inevitably lead the majority of teachers transferred from general education to "prefer to teach hard of hearing students rather than severely deaf ones", enjoying the financial and workload benefits of HH education without the difficulties associated with mastering new language to teach the Deaf. Another Al-Amal administrator emphasized that "ASL has a totally different word order and grammar system compared with Arabic, which makes it very difficult to combine them".

Finally, the current diplomas in DHH education and other available courses were outdated and theoretical, which limited their relevance. These courses should be practical and deliver up-to-date knowledge of DHH education in terms of "new strategies of DHH teaching styles, advanced level of proficiency courses in sign language, ways of differentiating the national curriculum in favour of DHH, how to build an effective IEP, and practical techniques of managing inclusive classrooms", in order to bring inclusion from theory to practice in Jeddah.

The wide range of views elicited from all interviewees on this sub-theme make it clear how much work would be needed for the transition from integrative to inclusive practices in Saudi schools.

6.6 Perceptions of inclusion requirements

As signalled in sections 6.4 and 6.5, the following three sub-sections complete the consideration of research question 3 by dealing with teachers' and administrators' views of school specifications and facilities, visual teaching aids and the role of teaching assistants, following the summary analysis presented in Table 6.8.

Table 6.8 Summary of responses on inclusion requirements

	T5: Inclusion requirements: Additional support, resource rooms & teaching assistants
Teachers	<p>ST1: Teachers' opinions of their school's physical environment:</p> <ul style="list-style-type: none"> • Three teachers believed that their school needed a considerable amount of teaching aids, auditory training labs, hearing aids and much more. • They also emphasized that all logistics should be provided directly by Jeddah LEA not by teachers' and parents' donations. <p>ST2: Teachers' opinions of the availability of visual aids:</p> <ul style="list-style-type: none"> • Although DHH visual aids made teaching more visible and improved recall, • Three teachers noted a shortage of modern visual aids at their schools. <p>ST3: Teachers' opinions of the use of teaching assistants:</p> <ul style="list-style-type: none"> • Four teachers felt that TAs would be a very useful solution to bring about successful future DHH inclusion, • If Deaf and hearing students or HH and hearing students were to be included together in the same classroom all the time.
Administrators	<p>ST1: Administrators' opinions of their schools' physical environment:</p> <ul style="list-style-type: none"> • Four administrators stated that their schools needed: • a significant amount of teaching and educational logistics to ease DHH inclusion, and • well trained and certified teachers, highly skilled in sign language. <p>ST2: Participants' opinion of their school's visual aids availability:</p> <ul style="list-style-type: none"> • The Al-Amal administrators believed they had all necessary teaching aids to make teaching more visible, but • The mainstream administrators disagreed. <p>ST3: Administrators' opinions of the use of TAs:</p> <ul style="list-style-type: none"> • Five administrators that teaching assistants were useful. • Their use would make inclusive classrooms a realistic ambition.

6.6.1 Educators' views of school specifications/facilities

The Al-Amal teachers agreed that their schools had excellent facilities: "Surely it has all relevant facilities for Deaf and HH. Not only this, but we have thirty teachers, which is more than enough compared with the total number of students registered and among them

three Deaf teachers with a bachelor degree” (A7s). “All facilities are indeed available here for the simple reason that the whole building was designed, constructed and facilitated for the sole purpose of teaching DHH students, which is not the case for mainstream schools” (K6a). They also noted that the Institute, which had provided specialized education for Deaf and HH students for five decades, had members of staff who could sign fluently, an auditory training specialist, a social worker and a clinical psychologist to conduct counselling sessions, and a unit for speech and language therapy. These strongly positive responses are confirmed by the researcher’s direct observation. Al-Amal Primary Institute is housed in a building of 41000 m2 and all facilities relevant to DHH education are apparent. There is a Deaf Club offering many sport and leisure activities after school.

By contrast, mainstream teachers complained that in their schools, “teaching aids and other support facilities related to DHH students are not enough at all” (I5m). S4s raised a point mentioned in section 6.4.3: “parents’ and teachers’ donations are not the appropriate financial source to rely on for purchasing Deaf teaching aids”. Interviewees insisted that Jeddah LEA or the GDSE should look at these programmes and their urgent educational requirements more carefully and provide all the help, human and physical resources and teaching facilities needed. For instance, I5m estimated with evident distress that the school had less than half of the necessary equipment and other teaching aids, “and all were paid for by parents’ or teachers’ donations. How can a country with massive wealth not support its SEN students?” All mainstream teachers expressed this major criticism of the inadequacy of provision and the unfairness of relying on donations. For example, A8o, for his part, said: “The school environment is not appropriate, educational aids, students’ and teachers’ preparation are not enough” to achieve real and solid success for DHH integration. He argued strongly that “intensive preparation must be made to modify the school environment, provide training for teachers and administrators, and maintain a high awareness of Deaf and signing issues within mainstream schools”.

Among mainstream administrators, G10a was very critical of the provision of facilities and resources at mainstream schools, in particular a “lack of additional supporting services, shortage of professional in-service training in relevant subjects, and absence of standardized DHH teaching competence exams to make our transfer decisions are based

on scientific measures”. This clearly implies criticism of current transfer procedures. Due to the advantages mentioned earlier for teachers working in SEN, it is very attractive for ordinary teachers to work in Deaf education, and in mainstream programmes for blind students and those with learning difficulties or dyslexia. This is why G10a, a mainstream teacher recently promoted to educational supervisor, insisted upon immediate implementation of standardized DHH teaching competence exams like the one in the USA, instead of: “depending on personal interviews and acquiring an outdated diploma”.

S3h, a mainstream headteacher, expressed different views about this sub-theme. To understand these, one should consider what psychoanalytic theory calls a ‘defence mechanism’, of a denial thought or an attempt to manipulate reality that may be shown in fear of losing the additional 30% SEN incentives. Interestingly enough, he had previously mentioned the lack of facilities, but not this time, which indicates repeated inconsistency in his responses (as mentioned in Section 6.5.4). In addition, when outsiders come to their schools asking about Deaf mainstreaming and their views on it, headteachers may fear that this could result in a suggestion that the programme should be transferred to another school which could provide better facilities or more welcoming and active engagement, leading to a loss of their SEN privileges. This may shed light on the discrepancy in the philosophical standpoint of S3h, who said: “Recently an auditory training lab was installed for our hard of hearing students with a computer and CDs covering some subject lessons”. Then he was about to initiate a resource room with teaching aids, some of which were provided through donations. However, there was a major problem: “A specialized teacher comes to work here only two days a week and completes his schedule at another school”. He did not mention the lack of local authority responsibility for providing all relevant teaching aids and resource room equipment, which emphasises the denied assumptions mentioned earlier.

The third mainstream administrator, M9b, took a view closer to that of G10a. He said that some facilities were provided, “but there is certainly a need for more modern equipment to enhance Deaf and hard of hearing students’ learning”.

The Al-Amal administrators, in line with their teaching colleagues, believed that “most, if not all, requirements were provided for the Deaf”, although M2m thought that environmental resources were well constructed, while human resources training in new

technologies was not quite adequate. Al-Amal Institute had a long heritage of providing specialized education for Deaf students and was built for this sole purpose; banners, teaching aids and other relevant teaching equipment had been accumulated over five decades for this reason. Thus, he believed that most or all the material resources were adequate. M1t took a similar perspective on this sub-theme, insisting that Al-Amal had a long experience and therefore possessed all the relevant equipment for Deaf students. M1s expressed almost the same view.

Thus, Al-Amal educators were generally satisfied with their schools' facilities for educating Deaf students, whereas mainstream administrators had major concerns.

6.6.2 Educators' views of visual teaching aids

Teachers' responses on the provision of visual aids were wholly consistent with those discussed in the previous subsection: the Al-Amal interviewees agreed that the GDSE and the LEA made all necessary provisions, while the mainstream teachers were dissatisfied: "There is some visual equipment, like an overhead projector, sign banners, computers and data-show, but not enough". For a large school running a Deaf or HH mainstream programme, one device of each type was insufficient: "There should be full teaching equipment installed for each classroom", for which schools should not have to seek donations. Teachers saw visual aids as particularly important for DHH students, who respond more actively to visual stimuli.

Among mainstream administrators, G10a again decried the school's dependence on donations and personal efforts. Similarly, S3h said: "Some visual aids such as videotapes, hand-outs and transparencies are provided by the LEA but they are outdated", while the most modern visual aids were mainly donated by parents, teachers or headteachers. Only one administrator, M9b, was moderately positive.

Consistently with responses reported in earlier sections, administrators at Al-Amal expressed somewhat greater satisfaction about the provision of visual aids. However, M2m would like to see every classroom at his Institute "with complete facilities of its own". M1t reported that his Institute's visual aids were provided "mainly through the LEA". However, M1s recounted that most of the modern technology at his Institute, such as fourteen data show devices and a speech and language measuring room, were

provided through donations from all types of employees of the Institute. This meant that two thirds of this sub-group were irritated by the fact that they had to pay a large sum from their salary in order to purchase the necessary equipment, when it should be provided by the LEA.

Overall, while Al-Amal administrators described a more satisfactory situation than their mainstream counterparts, there was a general concern that donations should not be the main source of financing the provision of educational aids.

6.6.3 Educators' views of the role of teaching assistants

The third sub-theme concerned the significance of implementing the new role of teaching assistant in all mainstream classrooms where Deaf or HH students were taught, in order to overcome the complex problems of general teachers newly transferred to teach Deaf students. A considerable amount of evidence exists to support the role of TAs in various countries. The social/educational issue referred to in Section 6.5 is whether the presence of a TA with the certified DHH teacher could lead to embarrassment because of the feeling that the latter is more professional and could teach better than the assistant. Another point raised was that the TA might be critical of how the main teacher approached his students. This point could be coded as having hidden or latent content (Boyatzis, 1998), as it reveals their sentiments, which may give a clearer insight into their responses and deepen our understanding of what is really happening in both settings. Also relevant to objections to the employment of TAs is that teachers do not like to be observed or inspected with critical attention to details of classroom organization and management. A final issue is a legislative one: the regulations governing schools (DGSE, 2002) do not allow the use of sign language in HH mainstream programmes, as this might risk the residual hearing of the students.

This sub-theme is vital, as it represents two ideas at the same time: the new role aims to help achieve future inclusive classrooms where a TA works in harmony with the main teacher; and accepting this new role implicitly means accepting more inclusive practices or, at least, shifting Saudi mainstreaming towards a new era of inclusion rather than integration. For instance, G10a believed strongly that “teaching assistants play a significant role in favour of future successful DHH inclusion”. He insisted that it would

be impossible for a teacher to deal with Deaf and hearing students at the same time without having additional help from a TA, adding: “Some modifications need to be applied in the classroom beforehand in order to guarantee DHH inclusion success”. M9b agreed strongly upon the crucial role of the TA, but stated that it needed to be trialled in some schools before being generally implemented “if the evaluation said so”. S3h agreed that it was a good educational practice, but that it would benefit from a trial period and “it has to be implemented with awareness of whether hearing students are being disturbed in any way”. This is quite understandable, as he worked in an administrative position at a mainstream school. He said that it might not be useful for a mainstream programme exclusively for HH students, where it is forbidden to use sign language at all to improve language or expand Arabic vocabulary.

Among the Al-Amal administrators, M2m welcomed the idea of TAs fluent in sign language in mainstream programmes, but only for Deaf students, not HH ones, who need to develop their residual language and speech potential. However, he raised two major obstacles to this idea: “incompetent diagnosis and weakness in referral and transfer procedures”. The TA would obviously have a vital role to play, but first it would be necessary to assess, evaluate and resolve all shortcomings of current integrative practices before recruiting additional teachers. M1t expressed a similar view: TAs could be “very useful in Deaf inclusive classrooms with hearing students”, but there was no need for a TA at Al-Amal schools, with fewer students and more specialized teachers.

Unlike his colleagues, M11s had a negative perception of the role of TAs, warning that “most Deaf and hard of hearing students lose attention very easily and having two teachers at the same time in one classroom might cause unwanted disruption and disturbance”. He added, as a psychologist: “I do not favour this idea, particularly with the current status of mainstream programmes”. Notwithstanding this objection, there was clear support among both teachers and administrators for the deployment in mainstream classes containing Deaf and hearing students of TAs, whose major role would be: “to interpret every lesson into ASL fluently and to support Deaf students”. This was seen as a good way of easing the transition towards future DHH inclusion.

Two of the mainstream teachers supported the idea of a TA to “work as interpreter and at the same time helper to assist Deaf and HH students in a special/self-contained

classroom” (I5m). A8o suggested “a two or three year trial period in nominated mainstream schools to systematically evaluate its pros and cons and see whether to expand it to cover all thirteen LEAs”. By contrast, the third mainstream teacher, S4s, was reluctant to accept the idea of two teachers in the same classroom, fearing that “it might cause some sort of disturbance between Deaf and hearing or HH and hearing students”. He argued that the significant problems of mainstream programmes would be better resolved by training, proper resources, provision of modern equipment in special classrooms and better sign language fluency, before looking at recruiting more human resources. The Al-Amal teachers also opposed the use of TAs, at least in their own classes of only seven or eight Deaf students, claiming that they were specialized in their subjects and fluent in ASL, so there was no immediate need for a TA or interpreter. Interestingly enough, they both had friends teaching in mainstream schools and supported recruiting TAs there, where poor skills in ASL were prevalent. There was thus general support among teachers, except S4s, for the use of TAs in mainstream schools.

6.7 Educators’ views of barriers to successful DHH inclusion

It is apparent from responses analysed under earlier themes that interviewees saw teacher-related and environmental factors as most likely to hinder or ease Deaf and HH students’ integration. These factors are dependent on participants’ views and emerged from interview data. It was found that responses varied with placement to a lesser extent than for many other themes, so the analysis below is not presented with Al-Amal data separate from mainstream data. Additionally, it should be remembered that the original first and second sub-themes were integrated into one sub-theme for analysis, as teachers did not distinguish between macro- and micro-level barriers. The analysis is summarized in Table 6.9.

Table 6.9 Summary of responses on barriers to DHH inclusion

T6: Barriers to DHH successful inclusion	
Teachers	<p>ST1: Teachers' views of barriers in general:</p> <ul style="list-style-type: none"> • Three participants believed that teacher factors associated with training and skills/competences in sign language were the most important factors to be tackled. • This was followed by school and classroom environment-related factors. <p>ST2: Teachers' views of specific barriers to successful DHH inclusion:</p> <ul style="list-style-type: none"> • Three believed that new and recently transferred teachers needed to obtain a specialized diploma in ASL and deaf education specifically. • Two argued that mainstream self-contained classrooms needed significant changes in order to facilitate DHH inclusion. • Schools lacked teaching aids and other related DHH special logistics. <p>ST3: Ways of overcoming these barriers:</p> <ul style="list-style-type: none"> • Three teachers emphasized the vital importance of teacher training, particularly those who had recently moved into DHH education, and • Adequate preparation of mainstream SCCs to welcome and accept DHH students.
Administrators	<p>ST1: Administrators' views of barriers in general:</p> <ul style="list-style-type: none"> • Three participants demonstrated that factors associated with human resources were the first barrier against better DHH inclusion. • Lack of full awareness of DHH education, culture, signs and pedagogy along with mainstream schools-related factors were the second main barrier indicated by two participants. <p>ST2: Participants' views of specific barriers to successful DHH inclusion:</p> <ul style="list-style-type: none"> • Two administrators believed that the most difficult factor to change was administrators' skills and competences, • Two said teachers were the most difficult, and • Two said school ecology. • This indicates a complex set of views. <p>ST3: Ways of overcoming these barriers:</p> <ul style="list-style-type: none"> • Four administrators indicated that training for all mainstream school staff members should form a large proportion of any CPD enhancement programme, which indicates some agreement on the importance of this sub-theme.

6.7.1 Educators' perceptions of barriers to DHH inclusion

Three teachers (A7s, K6a and S4s) expressed broadly similar views, identifying teacher-related factors as generally the most influential. A7s specified in-service training as the most important barrier to successful integration. "This training should be provided primarily and more importantly for unspecialized teachers who work with either Deaf or hard of hearing students". He differentiated a diploma in basic sign language (equivalent to BSL level one) and a diploma in Deaf education for the non-specialized from teaching strategies and advanced sign language for specialized teachers. He meant that specialized teachers working at Al-Amal should be given more advanced courses in IEP, teaching styles and new technologies for DHH students, because they were already grounded in this field and did not want general or outdated courses. K6a identified three problems

facing any mainstream programme: "...ordinary teachers accepting Deaf or hard of hearing students. In-service training in sign language for newly transferred teachers is critical to reach success. And complete engagement between Deaf students and their teachers along with hearing students in all school activities". In the same vein, S4s offered a broad hierarchical classification of barriers to successful Deaf inclusion: "teacher-related factors, school environment and additional equipment, and student-centred factors". This may be derived from his position as a senior teacher with some responsibility for supervising others. He had a smaller teaching load, of nine lessons a week. His consistent interaction with teachers as a supervisor meant that his focus would be directed to their performance and achievement during any inclusion movement. He added that "accepting Deaf and hard of hearing students at mainstream schools is quite fundamental".

The other two teachers had a different view, putting environmental factors first. A8o argued that "school ecology and all its facilities is the most important aspect to look at before moving Deaf or hard of hearing students into mainstream schools". He complained that his school had "inadequate facilities to enhance and ease Deaf integration". For him, teaching aids constituted the second barrier. He noted the importance of training teachers of Deaf and HH students, particularly for ordinary teachers who lacked fluency in sign language, adding that "hearing students should be prepared to welcome their new classmates by raising their awareness of Deafness and sign language". This student-related factor thus came low on A8o's list. I5m agreed that school ecology/environment was the main barrier if all prerequisites were not considered from the beginning. Apart from the school environment, he listed five potential barriers: "mainstream school administrations, absence of professional training for mainstream administrators in sign language and Deaf educational issues, absence of Deaf or HH informed consent before transferring them – rather it seems like a parents-school issue – lack of mainstream school preparation to accept, welcome, respect and engage them fully in all school activities, and shortage of additional support services, like a full-time clinical psychologist".

Thus, teachers tended to see teacher-related factors, including training and sign language proficiency, as major obstacles to better DHH inclusion practice, followed by

environmental factors, including the classroom environment and inadequate teaching aids. Barriers as perceived by educators are shown in Figure 6.5.

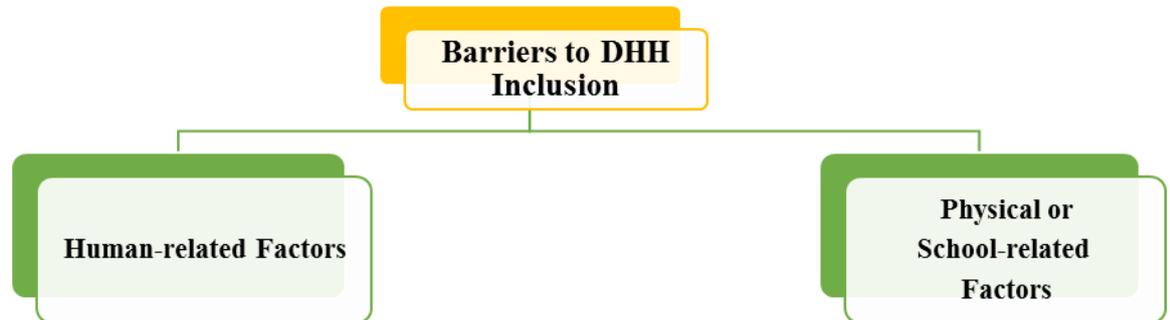


Figure 6.5 Barriers to inclusion as perceived by Saudi educators

Administrators seemed to give a little more weight than teachers did to school environment-related barriers, particularly at mainstream schools. This is quite predictable from their tendency to talk about one’s own experience. For example, S3h argued that “lack of resources and facilities at mainstream schools is indeed a major difficulty in DHH integration”. He identified failings in “the LEA’s financial support for SEN, students’ transportation and Deaf signing teaching aids. Hearing aids are provided only once at the primary stage”. Again, he complained of consistent pressure on teachers and parents to donate in order for schools to provide resources for DHH students. It might be reasonable to ask them to support a new programme to some extent, but it would be irrational to expect them to do so forever. The LEA should initiate an educational aid scheme designed for DHH and other SEN pupils. Similarly, M1t said: “After preparing mainstream schools properly, the creation of positive thoughts among mainstream school’s administration and teachers towards Deafness and integration is the most vital problem to better DHH integration”. Thus, careful preparation was his priority as a barrier encountered by mainstream teachers, followed by administrators’ awareness. M2m had a similar viewpoint, identifying four main barriers to DHH inclusion: “...school ecology, financial resources, shortage of certified teachers, clinical psychologists, speech and language therapists, a resident or consultant supervisor who has a low workload, and more training and consultancy for parents, and ordinary teachers who trained to work with DHH students”.

On the other hand, M9b believed that “lack of awareness and knowledge among ordinary school members such as teachers, students and administrators ...is indeed a major problem”. He added that there should be promotion of inclusive education in the wider society, to “elevate people’s understanding”. He insisted that this should take place with teachers first, as they were the ones who had consistent and direct contact with DHH students. In the same line, G10a listed nine barriers to successful integration in mainstream programmes, beginning with teachers’ factors: “...training of teachers at mainstream schools, ordinary teachers’ negative or reserved attitudes towards DHH integration, administrative bureaucracy in decision-making, lack of new teaching facilities for DHH students, and donations. Ordinary school pedagogy and national curriculum are difficult to cope with, school equipment and teaching aids are inadequate, lack of progressive collaboration between school and DHH parents”.

M11s offered a rather different vision, of mainstream school administrators as the greatest barrier to DHH inclusion: “They don’t have an updated or adequate amount of knowledge about DHH students, their communication approaches, developmental needs and additional supporting teaching aids”. After administrators, he put teacher-related factors, with school/environment-related factors last. He mentioned school ecology as a barrier, especially as most mainstream schools did not have all necessary facilities to receive D or HH students.

When administrators were asked what the most difficult barriers to overcome were, their answers predictably complemented those discussed above. Thus, S3h pointed out that environment-related factors were the most difficult to change because: “ordinary schools generally were not designed or facilitated for DHH integration”. In other words, the LEA should finance the improvement of the mainstream school environment: “...not on the shoulders of our teachers and DHH parents but instead official direct investment should be sought via Jeddah LEA, which should include noise-free air conditioning, insulated flooring, double-glazed windows, signing banners and teaching aids, auditory training equipment, modern teaching facilities such as computers and data displays, textbooks enhanced with alphabet and cued signings and, more importantly, full maintenance cover by the local authority”. Therefore, there should be some modifications in order to overcome these problems because, for instance, HH students sometimes need instruction

at a high speech volume, which might cause interruption to nearby classrooms, so there should be insulated flooring. Central air conditioning should also be provided because in June, July and August temperatures in Jeddah can reach 55 °C. Maintenance and teaching aids also needed “considerable attention and resources that we are short of”, according to S3h, who again complained of a reliance on donations. He identified student-related factors as the second most difficult to change, as DHH students had their own characteristics and developmental needs, quite distinct from those of hearing students. M2m and M1t shared this perspective, where school factors were the most difficult barriers to change.

Predictably, given his mainstream background, G10a saw teacher-related factors as the most difficult to change, noting that generalist teachers who had recently moved had real difficulty in teaching DHH students and needed consistent support to make them fluent in cued sign language. M9b agreed that teacher-related factors were the most difficult to change, for four reasons: “the massive amount of paperwork, teachers’ enormous workload of lessons during the weekly schedule, and other extra-curricular activities”.

Consistent with his response reported in section 6.7.1, M11s believed that “mainstream school administration would be the most difficult variable to improve, [because] most administrators don’t prepare their schools, teachers and hearing students to welcome, involve and completely engage with DHH students. The educational process requires certain qualities to receive special needs students but, as far as I am aware, most mainstream schools don’t have these qualities”. He saw administrative factors as the most difficult to change, because for instance, a head-teacher or his deputy might make a decision about a mainstreamed Deaf or HH student that was not in the student’s best interest, to avoid unwanted complications.

Thus, administrators in this category tended to see school/environment-related factors as the most significant barriers to DHH inclusion and the most difficult to overcome, resulting from poor coordination with the LEA and therefore inadequate funding.

6.7.2 Suggestions to overcome barriers to DHH inclusion

Consistently with their responses discussed above, A7s, K6a and S4s believed that human resources development should be the top priority for policymakers, leading to greater

investment in training and continuing professional development (CPD). One suggestion was that “transferred mainstream teachers should obtain DHH education diploma plus specialized courses in proficiency in cued sign language”. Secondly, specialized teachers should “be provided with up-to-date training in teaching techniques, teaching styles, special courses for any new signs, and training provided by experts in educational technologies in how to improve our pedagogy”.

The other two teachers, I5m and A8o, putting the environment first, emphasized the importance of “preparing the mainstream school environment before sending any Deaf or HH students and, more importantly, modifying and providing all facilities to accommodate DHH students’ needs”.

Among the administrators, M11s argued that “mainstream schools should be obliged to provide access to updated training in Deafness and sign language, and it should be compulsory for all who get the SEN benefit”. In other words, ongoing in-service programmes should be made compulsory at mainstream schools, to provide knowledge of basic sign language for all school members. He added that the full support of the local authority to prepare all mainstream schools before launching new Deaf self-contained classrooms would assure the programme’s success. Secondly, the LEA should request mainstream school administrators to attend sign language and Deaf education courses for at least one term to be entitled to receive the SEN bonus. This would ensure full enrolment on such courses, despite participants’ complaints of overloaded schedules.

M11s and M1t both suggested that DHH inclusion would be helped by “obtaining highly professional in-service training”, arguing that most teachers needed to enhance their ASL fluency, particularly at the intermediate and secondary stages. ASL acquisition, as with any language, requires a constant effort to improve through practice, exposure and learning from experts in the field. Being a teacher, SEN or generalist, requires a lifelong learning commitment. It is widely accepted that teachers need at least 30 hours of CPD each year to keep up-to-date (NIACE, 2012), but M11s, M9b and M1t claimed that there were SEN teachers who had not been provided with CPD for years. Thus, they agreed on the need to enhance competences, skills and knowledge in the teacher’s subject specialism as well as fluency in cued and alphabetical ASL. (Some of these points are discussed further in Chapter Seven, Section 7.4.4).

S3h emphasized attitudes as key to overcoming barriers to successful DHH inclusion: “Some systematically designed awareness programmes to change mainstream school members’ attitudes towards Deaf integration must be carried out very soon”. He also argued that “more incentives should be provided to teachers who work with DHH students and an injection of funding in SEN education should be sought by the Ministry of Education to cover modification and enhancement of teaching aids”. He added that there should be instruction for all educators in at least basic ASL and general knowledge of DHH culture and developmental issues, which should lead to the shaping of DHH-friendly schools. Indeed, he called for more CPD programmes for all mainstream educators, particularly “those who benefit from the SEN bonus”. Another factor mentioned by both G10a and S3h was the need for adequate preparation of each special classroom, to provide “a better stimulating learning environment”. This is quite important, as many special classrooms have posters that were purchased for hearing students without any cued signs at all. Illustrated coloured posters with signs for DHH students should be funded by the LEA, “not ...teachers’ donations”.

S3h also considered improved multi-professional teamwork to be vital, which emerged as a recurring pattern. Teachers of the Deaf could not work alone in mainstream schools where ignorance was prevalent. Teachers would not be able to achieve the strategic goals of inclusion without the full support of all staff members. There should be a common awareness of the benefits of inclusion for both ordinary and DHH students. This point should work in conjunction with the spirit of teamwork. Inclusion, according to many participants, could not fully reach its aims and objectives if teachers or administrators possessed negative attitudes. Having a mainstream school with a pro-integrative ethos was a prerequisite for successful practice. Before DHH students were brought into a mainstream school, positive attitudes should be promoted, not by a bonus payment but via the school ethos. Administrators of mainstream schools should believe in the principles of diversity, equal opportunity and right of access to mainstream education. These two points, made by G10a, are quite important and will be discussed further in the next chapter.

M2m made the interesting point that “covering educational problems in order to show off or keep up appearances does no good at all”. His two proposals concerned additional

services and regulating transfer procedures to make them depend on DHH teaching proficiency. First, Jeddah LEA would have to provide “all human, teaching, and additional supporting resources before transferring any student with Deafness into mainstream school”. Second, “transfer procedures must be based on multi-professional teamwork decisions rather than solely the wishes of parents or educational supervisors”. To transfer a Deaf or HH student from an intimate, familiar and friendly institution to a new school ought to be based on a coherent multi-professional decision, integrating educational, medical, social and psychological perspectives in the best interests of the student’s educational and social development.



Figure 6.6 Administrator’s views of main broad area for overcoming barriers

Thus, administrators saw CPD, ethos and attitudes (Figure 6.6) as key to eliminating barriers to successful DHH inclusion, while the overall message from teachers was that the LEA should address these two major barriers by providing teachers with modern and professionalized training, especially in sign language, and by providing adequate funding to support and facilitate DHH inclusion, eliminating reliance on donations (Figure 6.7).

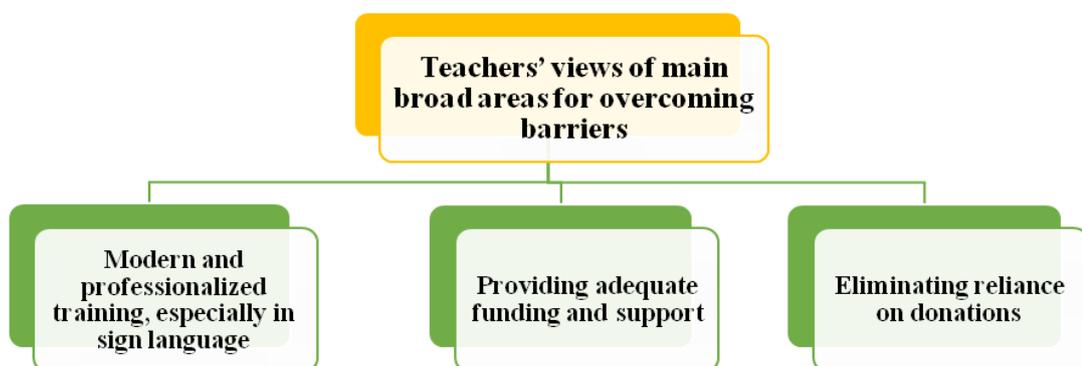


Figure 6.7 Teachers’ views of main broad area for overcoming barriers

6.8 Educators' perceptions of the need for change

Teachers' perceptions of educational change can be said to play a critical role in their teaching careers. Hence, this final theme encompasses five sub-themes which cover the perceived changes needed for DHH inclusion. These are necessarily related to the perceived barriers discussed above, making teacher-related and school/environment-related factors the major issues. The summary analysis is presented in Table 6.10.

Table 6.10 Summary of responses on the need for change

	T7: Change
Teachers	<p>ST1: Teachers' views of the most immediate change needed:</p> <ul style="list-style-type: none"> • Teachers and mainstream workers should follow intensive courses in ASL fluency. • Improvement in DHH education at macro (pedagogy) and micro (IEP) levels. • Total participation in school and after-school activities. • Changes were most urgently needed in mainstream classroom environment. • Some agreement that changes in school-related and teacher-related factors should be first in priority. • This reflects the richness and complexity of this sub-theme. <p>ST2: Teachers' opinions of how classroom should be modified:</p> <ul style="list-style-type: none"> • Limiting the numbers in each special class to facilitate (IEP) instruction, • Equipping classrooms with signs and illustrating all teaching aids with signs • Having "U" or horseshoe-shaped classroom layout for better interaction and eye-contact. • Most participants agreed on some aspects related to mainstream classroom change and improvement. <p>ST3: Teachers' opinions of how curriculum should be modified:</p> <ul style="list-style-type: none"> • Four teachers agreed that recent educational regulations to teach the national curriculum to DHH at mainstream schools constrained them academically and should be modified, • Long articles and narratives should be reduced, and • Cued and alphabetical signs should be integrated into DHH textbooks, which indicates some agreement. <p>ST4: Teachers' opinion of how assessment and exams should be modified:</p> <ul style="list-style-type: none"> • Three favoured continuous evaluation as a reliable approach, • Exams to assess DHH attainments should be objective in nature, such as true/false, multiple choice, • Use of long essays and complicated narratives should be reduced with the new teaching methods. <p>ST5: Teachers' opinions of how teaching methods and homework should be modified:</p> <ul style="list-style-type: none"> • Three indicated that the conventional total communication approach was a very good means of instruction for DHH students, • Homework should be written at school because home did not cooperate enough, and homework should be short and objective at mainstream schools. • The other two teachers at Al-Amal emphasized two other important aspects concentrating on individualized teaching as classes were smaller, and • Lessons should be based on visual stimuli (e.g. transparencies and projectors).
Administrators	<p>ST1: Administrators' views of the most immediate change:</p> <ul style="list-style-type: none"> • Three pointed out the importance of enhancement of the classroom environment • Teacher training was the first priority for change in DHH inclusion, • Two participants believed in early identification and intervention. <p>ST2: Administrators' opinions of how classrooms should be modified:</p> <ul style="list-style-type: none"> • Four participants indicated that classroom enhancement should include ensuring that

	<p>hearing aids were in perfect working order</p> <ul style="list-style-type: none"> • Basing lessons on modern visual teaching aids • Windows should be double-glazed and flooring insulated. <p>ST3: Administrators' opinions of how curriculum should be modified:</p> <ul style="list-style-type: none"> • All participants demonstrated their opposition to the imposition of the national curriculum upon all DHH students at mainstream schools, because they differed in their reading/writing levels from their hearing peers, • Committees should be convened to improve textbooks to suit DHH characteristics. <p>ST4: Administrators' opinions of how assessment and exams should be modified:</p> <ul style="list-style-type: none"> • Three participants believed that continuous evaluation should be carried out to avoid 'exam phobia' and to constantly measure students' attainments on a daily-basis • The other three believed in the traditional way of examining students' achievements through conventional written exams twice a term and at the end of the academic year • The only point of agreement was that exams should be based on objective questions measuring cognition/academic performance, not language mastery. • This seems to reflect complex views of assessment and exams. <p>ST5: Administrators' opinions of how teaching methods and homework should be modified:</p> <ul style="list-style-type: none"> • Four participants offered a holistic solution by demanding enhanced teaching methods and homework that combined features such as applying more cooperative learning, • In-service training should be emphasized to enhance mainstream school members' fluency in ASL, • Homework should be modernized to involve IT skills, creative and critical thinking skills, and problem solving skills, • Homework should be written at school (homes were not cooperating), • New teaching methods, such as the bi-lingual bi-cultural approach, should be introduced, and teachers trained appropriately. • This reflects the complexity of this sub-theme.
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6.8.1 Educators' views of immediate changes required

Let us begin with mainstream teachers, as these schools seemed to be in the most urgent need of change. I5m, who had worked at his mainstream school from the introduction of this mainstream programme, listed eight points that he thought needed to be changed urgently, five of which could be grouped under the environmental code. Each SCC ought to employ "tools of reinforcement to comply with the behavioural theory conditions such as stars and simple gifts. It has to contain full banners and teaching aids filled with alphabet and cued signs". It should have modern equipment: "educational video, TV with a series of signing educational programmes, signing computer software with teletext/subtitles, modern data-shows, classroom walls, windows and floor should be insulated to eliminate echoing disturbance, and air-conditioned". The other three suggestions are associated with the teacher code, referring to specialized training, signing skills courses and other relevant competences, including "teacher motivation to improve their teaching of Deaf or hard of hearing students in order to work for love not for duty". I5m explained that working with special needs pupils requires much patience and love;

greed must not interfere. He then added something that could be considered an important interpretive recurring code: “Teachers who move from general education should hold a specialized diploma in sign language and Deafness. Teachers who are working right now and have not obtained such a diploma should be examined to test their cognitive and signing competences in order to authorize them to continue teaching”. The transfer decision was a repeated emergent sub-theme among participants.

A8o, who had similar views about the changes required to move inclusion from theory to successful practice, proposed that to achieve successful change, donations should be made unnecessary: “Direct official financial support must be provided by the LEA and DGSE, not individual donations. ...Jeddah LEA should fund DHH signing banners at mainstream schools and teachers should not be requested to pay from their own pockets”. This was another emergent sub-theme which recurred throughout the interviews (i.e. donations). A8o also proposed that mainstream programmes should be given ‘more flexibility’ in choosing pedagogical topics from the national curriculum: “Schools should be given wider authority to take various immediate actions that are in the best interest of DHH students, without referring to the LEA in every tiny matter such as adding or removing some DHH lessons”.

Another mainstream teacher, S4s, argued that a smooth transition from theory to practice required close attention to classroom and curriculum change and to active implementation of DHH IEPs: “Classrooms should be enhanced and the national curriculum should be flexible to be modified or sometimes reduced in order to comply with major principles of individual differences”. Classroom change came first, as it was a common demand among mainstream teachers. S4s’s proposal referred to the fact that since the imposition of the national curriculum at the primary stage in 2003 (1424 Hijri) (MoE order 159/27, see Appendix C) and at the intermediate stage since 2009 (1430 Hijri), DHH students and their parents had complained that it was too difficult to cope with. This issue seemed to concern this teacher deeply and it should be taken into consideration as a problem for successful DHH inclusion. Additionally, since DHH students lag behind their counterparts by three or four years in reading and writing (Powers, 1998), they tend to consider literacy lessons with long written passages to be irrelevant. S4s made a second suggestion: “IEPs should be implemented as an active strategy and all teachers should be

required to design a plan for each student”. Although this basic principle in special education was taught at Saudi universities, IEPs appeared to play no active role, as teachers used conventional group teaching, either in signing form for Deaf students or the oral approach with the HH. There was a significant difference between DHH and hearing students in terms of pedagogy and teaching style, according to S4s: “They suffer academically from imposing the national curriculum”. Thus, IEPs, along with differentiation and a flexible curriculum in DHH mainstream programmes, could provide a solution to this educational problem. Curriculum developers at the MoE have a responsibility to modify textbooks for self-contained classrooms (SCCs) to suit DHH linguistic and signing needs. The current curriculum was designed for hearing pupils and requires a high level of linguistic skills and abstract language, which is difficult for Saudi DHH pupils, who have often been identified as D or HH at a late stage.

The Al-Amal teachers had slightly different ideas regarding what should be changed to ensure successful inclusion. K6a, who was Deaf from birth and had worked at Al-Amal for more than two decades, offered an illuminating vision of educational change in Jeddah. He highlighted three central issues that needed immediate change, beginning with “on-going intensive courses of updated ASL, particularly for newly employed Deaf teachers who have no previous teaching experience, and for transferred ordinary teachers who have little or no experience of teaching via sign language”. Thus, training was a recurring emergent sub-theme. Secondly, K6a argued that the “provision of specialized in-service training in sign language, Deaf education and other related skills should target mainstream school members, who should be obliged to attend such courses, as they benefit from the SEN bonus”.

A7s also put teacher training first, evoking “the need to advance teachers’ knowledge with emphasis on fluency in ASL”. Secondly, for those students who wished to transfer to mainstream school programmes, the local authority should provide all their requirements of visual stimulus banners and other teaching aids before moving them. This shows that teachers’ competences and sign language fluency represented a broad theme for Al-Amal teachers.

Thus, teachers broadly agreed that school- and teacher-related factors should be changed first to facilitate DHH inclusion. The former included classroom enhancements, full

official funding of support services and teaching aids, and the provision of curriculum and pedagogical illustrations with more cued signs, while the latter included teacher training in DHH education and sign language, making use of direct behavioural reinforcement, and providing greater flexibility for teachers to choose the most appropriate pedagogical and curriculum differentiation to ease individual instruction (IEPs).

As to the administrators, there was little difference between those at Al-Amal and mainstream schools. G10a argued that “early identification and intervention are not currently applied and this is truly unfortunate”, so he believed that the initial step to rectify previous complications was to identify hearing impairment at the earliest stage possible and then to implement an appropriate intervention programme. Next, he saw Saudi administrative bureaucracy as a major difficulty that needed immediate change, because SEN students needed flexibility in order to facilitate medical or educational intervention; then pedagogy and school settings should be improved. Thirdly, change was needed at the level of Saudi universities, by introducing new majors to cover vital subjects such as speech and language therapy and high proficiency in ASL. Fourthly, he called for “change the way in which hearing aids are provided for DHH students”, including replacement of lost aids and free maintenance. Finally, the national curriculum should be modified to accommodate the special characteristics of DHH learning and developmental needs.

Similarly, S3h proposed changes in early identification, administrative barriers, and pedagogical and curriculum problems. He emphasized the critical need to intervene at the earliest possible stage of a DHH child’s life in order to invest in any residual hearing. He meant by administrative barriers: “shortage of Saudi qualified experts in various SEN majors including DHH”. Curriculum was another problem in its lack of compatibility with the abilities of Deaf signing students. As discussed in Chapter Seven, verbal intelligence scores of Deaf children were lower than their hearing peers at the same chronological-age level (Braden, 1994). The curriculum should be modified so that it “complies with DHH characteristics and other learning styles and preferences related to DHH students”.

M9b had slightly different views about change, focusing on teaching methods, development of teachers’ skills and provision of in-service training. He believed that the

education realm was very dynamic and that teachers should read and improve their knowledge progressively: “rigid teaching methods or emphasizing a single method, such as oral method for instance, may lead to drawbacks in the short and long term”. Traditional methods of teaching DHH students should be upgraded and enhanced with new technologies. Experts should be recruited “to consistently improve the knowledge base of teaching/learning styles”. Moreover, the LEA, along with school administration, should work to provide ongoing in-service training to enable ordinary teachers of teachers of DHH students to work collaboratively to make inclusive schooling achievable.

M1t identified three major aspects that should be taken into consideration in order to facilitate the current status of DHH students. The first aspect related to teachers, the way in which they should be prepared to move into DHH mainstream schools and “...show commitment to teach in new settings and willingness to collaborate with ordinary school administrators who have no or little background about DHH education”. He meant that DHH education was not static, like a book on a shelf, but rather a lifelong career and commitment. In addition, there must be informed consent of Deaf students and their parents in moving to mainstream schools. This point is ethically crucial because it is almost ignored, not only by educational supervisors but also by most regulators.

Furthermore, M1t raised this point to oppose the widespread ignoring of DHH students’ right to be consulted and engaged in the process of transfer from the beginning. Thirdly, he highlighted an ethical and administrative code that was relevant, for both teachers and mainstream school administration, to present the ‘special education rules book’ to “all Deaf teachers and other school members in DHH direct-contact to allow them to know what are their definitive rights and responsibilities at mainstream school”. The reason behind this indication is some teachers’ complaints regarding the absence of awareness of mainstream school standards and what to expect from them. They needed to obtain a handbook of the rules and regulations in which definitions and extended details of interpersonal relationships between all school agents were presented. This should give teachers equal power to tolerate or reject any additional tasks that may be demanded. Therefore, M1t gave four points which were grouped under ethical or administrative codes generally.

M2m touched on another issue, that of the need for conceptual change in how people perceive inclusion. He proposed that: “all sorts of discrimination between hearing and Deaf or hearing with hard of hearing should be eliminated firstly before employing new inclusion practices”. He wanted to raise awareness of individual differences in skills, reasoning, language, potential and abilities. Also, additional supporting services in resource rooms ought to be provided by experts in order to benefit DHH students and facilitate their future inclusion. M1s, however, held a somewhat different view of change from M1t and M2m. He did not see any future for inclusion if the current status remained as it was, insisting that the whole current practice of education was incompatible with the spirit of inclusion. Inclusion, in essence, “requires not only provision and resource preparation but, more importantly, changing social collective understanding of what truly constitutes educational inclusion”. Furthermore, “all school members have to be prepared for inclusion, not by giving nice talks only, but building the core of inclusion values among mainstream school members”, such as rights of access, respect, participation, collaboration and full-engagement. There is thus a contrast in these administrators’ suggestions between the micro-level of educational change and the macro-level of social and conceptual educational change.

The remaining subsections deal with the specific changes recommended by participants, beginning with the topic of modifications to classrooms.

6.8.2 Modifications to classrooms

This sub-theme concerns respondents’ views on immediate modifications needed to SCC facilities and other equipment. Table 6.11 lists MoE regulations regarding spatial requirements for SEN students, including DHH classrooms.

Table 6.11 MoE regulations on requirements for special/self-contained classrooms for hearing-impaired students

The total floor space of SCCs* must not be less than other ordinary classrooms.
Sound insulation should be installed in each SCC.
Classroom floors should be covered with insulated carpet to reduce echo and sound disruption.
Air-conditioning, ventilation and lighting should be adequate for (HI*) education.
Special insulated room for speech and language training should be designated for HI students.
Individual and group hearing aids should be provided for HI students.
Student numbers should not be more than nine in upper primary classrooms and not more than five in lower primary classrooms*.
Curtains should be installed at windows to control sunlight, which may negatively affect HI students' sight.
Every SCC should be next to an ordinary classroom of the same year group to fulfil the goal of inclusion.

Source: DGSE (2012)

*SCC = special/self-contained classroom attached to mainstream schools.

*HI = hearing impaired, including Deaf and HH students.

*Lower primary = age 6 to 9; upper primary = age 10 to 12.

Evidence that the above regulations were not respected is that no curtains were seen within the mainstream schools visited during the research, which reinforces the concerns expressed by educators in this sub-theme and elsewhere. Educators at mainstream schools seemed to have the biggest practical concerns. For instance, I5m insisted on the need for enhancement of SCCs to include all facilities and visual devices designed to teach DHH students. This confirms the results from the last sub-theme, where school factors came first (environment code). In common with a number of other interviewees, I5m reiterated that “resources should be funded and provided through the local authority [not donations] or otherwise major modifications to mainstream classrooms would be just a figment of the imagination”.

A mainstream administrator, M9b, argued that self-contained classes “should be limited to ... eight to nine students” and that this should also apply to inclusive classrooms in the future with hearing and Deaf or HH students alike. This would allow teachers more flexibility for individualized instruction and greater opportunity to give each student the care, education and focus they required. S4s agreed on limiting the number of students and suggested seating them appropriately: “student numbers should be small in any future classroom modifications. ... tables and chairs should take the shape of a horseshoe”. Indeed, there is empirical evidence that the ideal structure for DHH instruction is the

horseshoe shape, which allows students to see the instruction materials and the teachers to monitor students' responses (Figure 6.8).



Figure 6.8 An ideal DHH classroom arrangement (Martin and Mouny, 2005)

Another mainstream administrator, G10a, suggested that mainstream classrooms should be made more visually stimulating for DHH students by introducing “fascinating shapes and colours in terms of classroom floors, walls, tables, whiteboard, textbooks, resource rooms, banners and signs in a DHH friendly manner”. He added that poor or old teaching aids should be replaced by: “more effective coloured data-show projectors, computers with all the curriculum on DVDs, intelligent whiteboard for every mainstream classroom, and all other related assistive technologies for improving reading and writing”. This could be coded as ‘environmental change’. G10a was also one of three mainstream administrators to emphasise the importance of maintaining equipment; for example, M9b felt that “teachers of hard of hearing students have a responsibility to make sure that behind or in the ear hearing aids are fully functioning”, not relying on students or their parents to replace worn batteries.

The Al-Amal teachers felt that their classrooms needed little modification: “...our classrooms were designed primarily to accommodate Deaf students, so all insulation and teaching requirements were accumulated through the years” (K6a); “...all Al-Amal classrooms were horseshoe-shaped and teaching aids were all in sign language”. This is

borne out by the researcher's several visits to Al-Amal classrooms and his own eight years of experience as an Al-Amal teacher. One Al-Amal administrator, M2m, did suggest a number of environmental changes: "walls, carpets and flooring should be insulated to absorb any sort of high volume of speech or surrounding noise for the purpose of not distracting next door classes and we should ensure that natural lighting is adequate". The other Al-Amal administrator, M11s, argued that sign language banners should be displayed in mainstream school corridors in order to allow hearing students to socialize with DHH peers. He strongly advocated the need for an educational environment where the spirit of inclusion was apparent.

To this end, all educators should "create opportunities to socialize and integrate Deaf and hearing students in all school activities", including "...extra-curricular themed activities, competitions, after school art or sport clubs, Eid parties, and stories, quizzes etc." Secondly, teachers of physical education and art, whose lessons were currently the only ones to be inclusive, "should be trained to communicate with DHH students and encourage them to make friends of their hearing peers in order to achieve wider inclusion practices in the near future". M11s conceptualized the social and emotional dimension as: "...the most important aspect of inclusion if we want to improve our current situation of integration". He believed that it was the most difficult aspect of classroom resources to change. Two teachers expressed similar views. A8o explained three conditions that could be put under a new emergent code of 'emotional well-being': "establishing the value of respecting our differences, working in harmony with DHH students and welcoming them, and rooting the value of belonging through full participation in activities". Finally, S4s called for DHH students' "whole involvement in all school and extra-curricular activities in and out of mainstream school" in parallel with the essential physical changes to classrooms.

6.8.3 Changes to the national curriculum

As discussed in Chapter 2, Section 2.5.1, Al-Amal schools operate a special curriculum at all levels, but there were concerns about the imposition of the national curriculum in all mainstream schools. Since the MoE's orders in 2003 for primary schools and in 2009 for intermediate schools, obliging DHH teachers to teach the national curriculum (Appendix C), the consequences have been contentious. Some teachers would like to go

back to the specialized curriculum which had been in force for five decades. The case for reviewing the literature around a national, specialized, individualized, alternative curriculum is discussed in detail in chapter seven.

As to the current participants, their suggestions can be analysed as applying at the macro and micro levels. At the macro level, many felt that the imposition of the national curriculum was inappropriate at the intermediate stage, where more lessons and more subjects necessitated an advanced level of abstract thinking and heavy use of short-term memory to recall a large amount of new vocabulary. As a teacher at an intermediate mainstream school, I5m observed that DHH students had “difficulty catching up with all tasks and homework of the national curriculum compared with the situation before 2009”, with negative consequences for their academic attainment compared with their hearing counterparts. For A8o, the curriculum should be based on “comprehensive knowledge of DHH characteristics”, which ruled out imposing the national curriculum, as this was “primarily designed for hearing pupils”. M2m noted that subtle features of pronunciation had no value in Arabic lessons for the Deaf, “because they would not fully comprehend them without listening and then articulating and repeating these tiny linguistic differences”. M1t, an Al-Amal administrator, felt that it would be a misuse of power to oblige Deaf students to study the national curriculum without assistance, when “the previous curriculum was designed and constructed particularly for DHH students”.

Several interviewees therefore believed that the curriculum as applied to DHH students should be changed, and S3h was among those concerned with the composition of the committee which should be responsible for modifying the curriculum to suit DHH students’ characteristics, such as pedagogical experts, psychologists, special needs curriculum designers, Deaf teachers, educational practitioners, university academics specializing in Deafness and sign language, parents, and specialists in speech and language therapy. G10a also suggested co-opting “parents of Deaf or hard of hearing who could give account of their child’s strengths and weaknesses and what skills should be emphasized”.

At the micro level, there were concerns about the content of the curriculum, about the skills and practices that should be embedded within it to build developmental and thinking skills, language development and short-term memory training for HH students, as well as

establishing strong fluency in sign language for Deaf students. Another micro-level concern was the degree of flexibility granted to teachers. These concerns were broadly applicable to both the mainstream and specialized curricula, and to the textbooks specified in those curricula. Among mainstream teachers, I5m felt that “the national curriculum has lots of filling or narratives that should be reduced”, while S4s said: “the density of narrative and intensity of lessons should be reduced to match the linguistic needs relevant to DHH”. For G10a, textbooks “should be written in short sentences, easy to comprehend, and tend to be more concrete rather than abstract, and signing friendly”. As a mainstream administrator, M9b agreed that “padding or flowery language should be reduced to a minimum, because DHH find massive difficulties in long and complicated clauses”. In the case of the specialized curriculum and materials, M1t also felt that “difficult and complex clauses should be reduced” and was also concerned with the visual element, calling for “...more enhanced pictures with high definition of resolution ... and ... cued and alphabetical signs”. K6a concurred, suggesting that long and complex narrative passages should be reduced and that alphabetical and cued signs should be attached to difficult and new words in order to improve reading comprehension. For S4s, visual stimuli and other teaching aids should be based on sign language and presented not only in textbooks but also in classrooms and corridors.

A7s felt that the specialized curriculum could be improved by a focus on the development of thinking and problem-solving skills, whereas M1t saw a need to relate it to “...the immediate needs of the local job market”. In other words, as many Al-Amal graduates worked in simple, rather low-level jobs, the secondary vocational stage should be modified accordingly. S4s made a similar set of proposals, related to the broader context in which the curriculum should operate: “DHH rights to general education should be assured, vocational secondary education for DHH should be linked to market needs, Saudi Universities ought to open their doors to highly qualified DHH graduates, and jobs should be created to recruit the increased number of DHH graduates”. M11s confirmed the importance of connecting the pedagogy of DHH education at high school level to: “...possible matching majors at university or other career opportunities”. He claimed that some DHH students had engaged in anti-social behaviour or violence when they had realized the difficulty of obtaining a university education or finding a decent job and thus living independently.

G10a raised the issue that greater flexibility “should be given to teachers in order to manoeuvre more freely within literacy, numeracy and other lessons”. M11s, while wishing to retain the specialized DHH curriculum, rejected the old-fashioned insistence on an “oral approach being designated for hard of hearing students and cued and alphabetical sign language for Deaf students”. Instead, teachers should be trained to be flexible, adapting the materials to students’ characteristics and circumstances. M2m shared this conviction regarding the importance of allowing teachers more flexibility, suggesting that for HH students, “it might be possible to have a year’s trial period to examine their academic attainments with the implications of teaching the national curriculum”. Such flexibility, according to I5m, would deal with the problem of inappropriately heavy and complex texts, by removing the curriculum requirement to cover the whole textbook; literacy lessons could then “be linked to more concrete and less complex and abstract language”. A8o went further, proposing that teaching methods should be flexible enough to accommodate individual differences among DHH students. Thus, total communication should not be the only method of teaching, but rather the oral method should be tolerated for the HH with mild hearing loss, while manual or sign language could be employed for Deaf students who came from dominant signing families; or the lip reading or bilingual bicultural approaches could be used as appropriate. Thus, flexibility could be considered an emergent sub-theme attached to change needed in modifying the national curriculum (see also Section 6.8.1).

In summary, participants broadly agreed upon the problem of imposing the national curriculum on DHH students who lagged behind their counterparts, particularly in literacy. Thus, changes should be sought, such as giving mainstream schools greater flexibility to select from the general textbooks the content best suited to their DHH students. Furthermore, as DHH students are offered only vocational majors at the final secondary school stage, emphasis should be given to the majors in which they want to specialize at secondary school. While Al-Amal teachers tended to make more detailed and advanced suggestions related to Deaf curriculum development, implying general satisfaction with the appropriateness of their basic regime, the two groups agreed on the need for three broad areas of improvement: a) more flexibility given to teachers in pedagogical and curriculum change (shifting the focus from linguistic skills to thinking skills), based on what is relevant to DHH characteristics, (b) reduction of long narratives

in the national curriculum and (c) comprehensive enhancement of textbooks by coloured photos, charts, paintings and more cued sign illustrations. These common suggestions are illustrated in Figure 6.9.

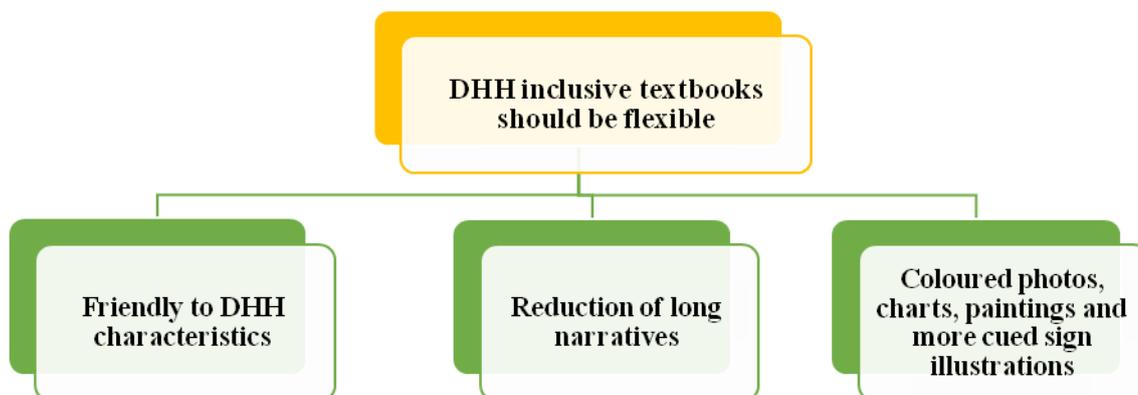


Figure 6.9 Changes required to curriculum and DHH inclusive textbooks

6.8.4 Assessment

On the question of assessment, there was a widespread belief among interviewees that the traditional exams should be modified to reduce the requirement for expressive writing and to make them more objective; they should also be supplemented with a continuous assessment component. An experienced teacher at a mainstream school, I5m, noted that DHH students had weak proficiency in reading and writing, which implied the need to reduce “narrative or expressive questions”. Thus, exams should be limited to: “...direct objective questions including multiple choice, true/false questions, filling the gaps in passages, linking the right word on the left to its relevant answer in the right column, etc.” This use of ‘American-style’ exams was also favoured by the mainstream administrators G10a and S3h, who saw no need to subject DHH students to exams that needed “lots of essay and academic writing skills which are obviously not developed enough among them”. They were concerned that DHH students’ expressive language lags behind their peers. Rather than requiring students to write long essays, which would depend on verbal intelligence, memory retrieval and rhetoric, an objective test of non-verbal performance, metacognition, understanding and thinking skills would be a more attainable and practical solution. This view was broadly shared by K6a and A7s.

While agreeing that objective exam items such as multiple choice should be employed, particularly for the first three grades of primary school, S4s suggested the additional use

of “continuous assessment”, operated daily by teachers to ensure the gradual progress of each student and to reduce the use of exams. M2m and M1t also believed that a combination of both techniques would be the most effective way of measuring DHH students’ attainment, though with less frequent assessment: “...it could be achieved through continuous assessment conducted every week and at the end of each term there should be traditional written exams to have the complete assessment conducted properly” (M2m).

M9b went further, asserting that continuous assessment, defined as “a mechanism whereby the final grading of learners in the cognitive, affective and psychomotor domains of learning systematically takes account of all their performance during a given period of schooling” (Falayalo, 1986), was the best way to examine DHH students, as well as all other hearing students at the primary stage. It should therefore become the major assessment method: “As we are gradually abandoning traditional methods of examining students which constitute two written tests per semester, rather we should continuously assess their performance holistically during the whole year”.

Ao10 proposed that changes should be at the macro-level and evidence-based: “We should take some action beforehand, such as consulting teachers with long years of experience in DHH education and other relevant practitioners, and asking for help and support from staff members at Saudi universities and other Gulf countries who work in the field of DHH education”. He agreed upon the importance of the ways in which traditional assessment and exams had to change but did not give specific details.

6.8.5 Teaching strategies and homework

On the topic of teaching strategies, many contributors spoke of the importance of moving on from “traditional pedagogic methods of memorizing information in order to retrieve it in monthly exams” (I5m). One-way instruction of this sort should be replaced by two-way interactive teaching (S4s) featuring one-to-one interaction. Students should also be encouraged “to participate effectively at the whiteboard as a direct dynamic question/answer way of practice” (I5m) and in “interactive-participation between teacher and students ... at the whiteboard” (A7s) , although I5m appeared to be making a contrasting point when he suggested that direct participation by students at the whiteboard

should happen three to four times in most lessons so that this repetitive procedure would lead to comprehension of the core idea of each subject.

There must be flexibility for teachers (see 6.7.3), who should not use one method of instruction for all; their strategies need to be sensitive to students' individual needs and differences. According to A8o, "DHH voices must be heard relevant to what is the most interesting teaching approach they would enjoy and attain more with". The teacher should then use oral, visual or total communication approaches as appropriate. There was considerable support for multisensory teaching. G10a, with long experience in teaching DHH students at special and mainstream schools, argued that the tension between the oral and signing schools of thought in Deaf education should be reduced as far as possible. Teachers should make use of any possible mode of communication in order to teach successfully, such as auditory, visual, kinaesthetic, oral, written, tactile and signing approaches. Instead of relying on two distinct ways of teaching, holistic teaching approaches such as total communication and bilingual-bicultural methods are more suitable for DHH students at mainstream schools.

I5m also supported the visual-auditory-tactile-kinaesthetic or multisensory learning approach, while M9b referred to teaching methods that concentrate on visual/tactile stimulation and other learning approaches, which he stated were supported by research. As most DHH students could not communicate in verbal form, "other alternative ways of communicating should be activated and invested in". This meant that the use of the oral method or signing method alone should be abandoned and replaced by total communication and bi-lingual bi-cultural methods. Additionally, teaching methods should be "presented and enhanced by coloured pictures, charts, and signs with all textbooks and pedagogies" (M1t).

Other interviewees nevertheless saw the need for some focus on speech and language for HH students (S4s), who should be enabled to exploit their residual hearing through auditory training, hearing aids and other means of improving oral communication (K6a). Conversely, K6a "would prefer to see all instruction at Al-Amal Institutes through sign language only, as it seems to be the most efficient mode of communication with Deaf students". K6a conceived sign language, as a Deaf person himself, as a part of their identity, culture, preferred mode of communication and lifestyle from childhood, and

insisted that hearing people should understand this. Yet, HH students at mainstream schools might prefer other methods to make use of any residual hearing. M1t, for instance, argued that teaching methods for Deaf students were completely different from those for HH students. For Deaf students, “there should be a clear instruction for this group that sign language depends on a different order of grammar to Arabic spoken language”. Hence, literacy lessons should be according to spoken Arabic and not mixed with the sign language system. A number of others agreed that signing was vital for Deaf students and their teachers. M11s insisted that new and transferred teachers “should be tested in their signing skills proficiency against standardized criteria and they should score no less than 80 to 85% in order to be allowed to teach Deaf students.”

M2m believed that the latest bilingual-bicultural approach, which teaches two different language systems, treats the Deaf as a linguistic minority and makes use of the cued sign system as the first language of Deaf students, with spoken or written language taught later as the second language, was the best solution to avoid the overlap between Arabic grammar and the cued signing system. He thought that confusion between the Arabic reading and writing rules that dictate our narratives with that of sign language was a consistent source of Saudi teachers’ burnout, because “after a long effort of teaching, DHH tend to lag behind hearing counterparts at reading and writing level. Teachers then receive persistent administrative and parental complaints resulting from the unfair comparison between hearing and DHH levels of linguistic performance”. M11s also mentioned the crucial role of administrators in motivating teachers by offering them constant support through CPD programmes, because some teachers had a tendency towards depression and burnout when they could see no real improvement in their students’ reading and writing skills.

On the other hand, teachers of HH students should make sure, according to M1t, that “all students’ wear their hearing aids at all times and invest in residual hearing to improve mastery of spoken language”, so that they would not have significant confusion between spoken and signing language systems. Furthermore, a new subject should be launched called ‘articulation training’, where all HH students at mainstream schools would be trained as individuals to articulate alphabets, their phonetics and pronunciation.

S3h insisted upon the vital role of the new trends in teaching methods and assistive technology specifically designed and installed for DHH students. This he rationalized by the fact that the Saudi market is filled with alternative modernized Deaf-friendly teaching aids in which school life could be a very enjoyable and interesting place rather than a place of inflexible and traditional schooling. He emphasized, as mentioned in previous sub-themes, that “total modernization and resourcing of SEN professional training would not be applicable unless official fundraising was established”. This is quite understandable, because computers, auditory training labs, data-show projectors, signing banners and intelligent whiteboards and other modern facilities, along with highly specialized training, require a significant amount of funding that could not be collected through donations. Similarly, M2m recognised that the new bilingual-bicultural approach would need more training, directly supported by the local authority, to update teachers’ skills with new instruction styles.

Establishing a base of literacy and numeracy at primary school was emphasized by M11s as essential “in order to found an independent learner”. A7s emphasized the importance of consistent “primary and secondary reinforcement” as a technique of behaviour modification (behaviourism), particularly at the younger primary stage. While incidental learning plays a vital role in child education, DHH children, not hearing what others around them are saying, require other means of encouragement in order to keep them motivated at mainstream schools, such as small rewards like simple gifts, sweets, snacks, drinks, vouchers for school trips or other extracurricular activities. However, A7s was alone in suggesting the use of behaviourist techniques based on classical and operant conditioning. In a more progressive approach to motivation, G10a suggested “dividing the classroom into two groups to create a kind of cooperative learning and also a sense of competition”, which he claimed to have used successfully to motivate learning.

I5m saw small classes and one-to-one teaching as consistent with the implementation of effective IEPs, while for M9b, these also required the full and active participation of students’ families. He argued the long and short-term objectives of DHH inclusion “could not be accomplished without harmonic engagement between school and family”. Hence, his proposal was mainly to update teachers’ skills in applying new methods of teaching DHH students. He saw no purpose in blindly carrying on the same routine “of traditional

teaching methods like a tape recorder”. The participation between school and family should include an agreement upon the most effective teaching methods, so if the Deaf or HH student came from a family where signing was the dominant language, this should be applicable to the classroom too. Otherwise, he explained that if the Deaf or HH student came from a family where speaking is the dominant communication method, this should be followed by the same medium of instruction in the classroom.

Many contributors (I5m, A8o, S4s, K6a, G10a, S3h, M1t) felt that homework should be done at school, with the help of the teacher, because families were unable or unwilling to provide the support that students needed. Whether because of the large size of families (A8o), their poverty, low level of education (S3h) or inability to sign (K6a), there was a view that parents of DHH students may “not give equal importance to their Deaf or HH child (S3h) and “tend not to be consistent in following up their academic progress” (I5m). A7s, for example, said that he preferred: “homework to be answered at the end of each lesson, such as the last ten or fifteen minutes, with teacher support”, while K6a saw this as “...better than letting their father or brother do their homework on their behalf”. S3h insisted that doing homework at school would ensure accuracy in writing, provide support and assistance to Deaf or HH students who were slow learners or low achievers, giving immediate reinforcement to successful attempts and immediately identifying any reading/writing mistakes. By contrast, M9b considered that homework would not serve its purpose without the active role of the family, as parents are a cornerstone of the teaching/learning process, which requires full communication between school and home. Interestingly enough, M1t claimed that “parents blame teachers for not doing their utmost in teaching, so that their child cannot write his homework on his own.”

A number of educators felt that the content of homework, like that of exams (6.7.4) should be in the form of simple objective questions, “concentrating on language development (M11s), because DHH students had poor reading and writing (I5m). For A8o, this was “particularly important at the primary stage”, when pupils’ language proficiency would be immature and their parents would not give them enough attention (as Saudi families are not nuclear but extended) to catch up with their classmates, though this might be slightly better at later stages when the DHH students have become more independent. M2m distinguished between Deaf and HH students regarding the content of homework:

HH students at mainstream schools “should be given short stories to improve their reading level and then asked to rewrite a brief summary about what they understood from these stories”. This should be emphasized at the primary school stage in order to establish their narrative skills, to catch up with their hearing peers and not to have a clash with the school administration about competences and standards. As to Deaf students, they should have different skills to follow through mastering cued and alphabetical signs: “Signs should be included and attached to any textbook of their pedagogy to make it easier to memorize and practice constantly”. He recommended that Deaf students at the primary stage should be given at least five new signs to be practised every day, as ASL is their dominant language.

G10a was concerned about how to present homework in a more enjoyable fashion to motivate DHH students to complete it. He saw this task as quite difficult for teachers who “are used to giving regular homework and do not like to bother with new technology”. Nevertheless, some homework should be done at the end of each school day, directly through computers in the classroom, or via email as an interactive method of doing homework during vacations.

6.9 Summary and reflections of second phase findings

This chapter has drawn together the key findings under each of the themes and sub-themes of the analysis, namely conceptions of Deaf and hard of hearing, inclusion, inclusion process and requirements, barriers, and change. The analysis revealed that educators held heterogeneous perceptions. They broadly embraced the integrated model of Deafness, perceiving it as a complex construct which recognizes the deficit/medical and socio-cultural models equally. Most educators seemed also to embrace ‘SEN’ as the best idiom to represent Deaf and Hard of Hearing students without stigma. This was affected by the socio-ethical context (Arabic/Saudi and Islamic values) in which it is considered unacceptable to label other people. Most educators seemed to hold positive attitudes towards the inclusion of HH students, with tentative reservations against Deaf inclusion raised mainly by two administrators and two special school teachers. Teachers generally believed in Deaf inclusion but not all administrators, as they lacked training and fluency in sign language. This brings out clearly the tension between inclusion as locational process manifested in ordinary schools and the inclusive values of respect, social

participation, and academic engagement for the DHH community/signing/identity which will be discussed in further details in the final chapter (Section 7.4.3). Teachers, but not administrators, embraced the continuity of Al-Amal institutes as day-schools. Eight educators believed that being hard of hearing is best perceived as an integrated construct, where the medical, social and educational models complement each other, while seven educators believed that Deafness should be perceived in the same way. Almost all educators believed that partial inclusion, for some selected lessons, at special classroom within mainstream school, is the best possible current educational alternative for hard of hearing students. Administrators embraced a progressive position reflected in their behavioural intention for managing future hard of hearing inclusion, but teachers were more reluctant.

Inclusion was conceived as locational and possibly social integration. Some of these perceptions reflect progressive thoughts about inclusion, seen as partial participation, and equal access to general education underpinned by Arabic/Saudi and Islamic social values. Others reflect the traditional approaches to integration as merely a placement issue. Educators considered inclusion to be both important and beneficial to the education of DHH student and seen as gaining access to general education. The data also shows that teachers tended to hold mixed feelings towards inclusion, associating inclusion more with hard of hearing and less with Deaf students. However, such feelings could be considered slightly positive, as there were more educators who believed in it. Key benefits were seen as improvement of socialization with their peers. Educators indicated that official provision of classroom facilities and human resources should be established first to ensure the expansion of DHH inclusion. They also emphasized the continuing role of Al-Amal Institutes, which should be improved and diversified (Figure 6.3).

Under the inclusion process and requirements, many positive elements were reported, with educators indicating that they had experience and adequate competence relevant to DHH education. However, it was recognized that much more could be done; for example, all educators believed that there was a need for more specialized, professional in-service training in order to ensure better management of future DHH inclusive classrooms, especially as teachers newly transferred from general to special education lacked fluency in sign language and DHH education. In the same vein, donations seemed to be a constant

problem for educators, particularly for DHH visual aids at mainstream schools, and they reemphasized the vital need of official provision via Jeddah LEA and the potential of the new role of teaching assistant.

The qualitative analysis of barriers to the implementation of inclusion highlighted the role of the contextual factors more clearly and supports the argument that barriers to inclusion are not all related to resources; rather, this is a very complicated issue that encompasses many inter-correlated contextual factors that should be addressed very carefully in order to implement inclusion effectively. Additionally, investigation of these contextual factors helps to enlighten the picture and gain insight into what affects educators' daily routines. Human-related factors were found to be the most significant barriers to attaining successful DHH inclusion, followed by those related to mainstream classrooms and schools. Human resources, such as professionals, sufficient special needs educators and teaching assistants, were perceived to be another weak area and viewed fairly negatively by most participants. More professionals such as teaching assistants needed to be involved with mainstream schools. Training was also considered to be inadequate by most educators. All interviewees attached considerable importance to the physical environment, complaining of old and unsuitable building and expressing underlying frustration and dissatisfaction with poor resources. They were also concerned with fluency in ASL.

The findings indicate that change should be comprehensive to address all relevant issues, such as human and physical resources, which could facilitate DHH inclusion. There is a tendency raised by some participants to see DHH inclusion and DHH education as the same. Trying to improve the education of DHH students is what some of respondents are talking about and some others were focusing in DHH inclusion. This goes back to whether education for all implies inclusive education as locational inclusion or not. This is a big issue internationally. I raised this issue in Saudi context getting beyond this issue in the final chapter. Analytical results show that teachers should come first as the key element of this success and that they do not work in a vacuum, but in a certain context which constrains them and limit their efforts. Therefore, change should occur in three related contexts: the education system, schools and classrooms, and the teacher. The context of the educational system covers the imposition of the national curriculum and measures to

change the assessment of DHH students' academic performance; the school and classroom context includes classroom facilities, early identification/intervention, visual and signed teaching aids, supply and maintenance of hearing aids and sound insulation of windows and flooring; and the teachers' context refers to ASL training, more modern instructional methods, including the multi-sensory method, IT skills, the bilingual approach and teachers helping students to complete their homework at school.

In order to fully appreciate participants' understanding and perceptions of the wider picture, all these interrelated issues need a more holistic view via an in-depth reading of educators' responses. The discussion chapter, which follows, therefore takes such an approach to the data.

CHAPTER SEVEN

Discussion, implications, recommendations and
conclusion

7 Discussion, implications, recommendations and conclusion

7.1 Introduction

This chapter presents an interpretation of the main findings of the current study. It begins with a summary of the aims and rationale of the study, then summarises and discusses the findings of the first and second phases in relation to the relevant literature. It examines the strengths of the study, its potential difficulties and limitations, and its implications, both theoretical and practical. It also makes recommendations for future research and concludes with a summary of the findings.

7.2 Rationale and overall aims of the study

The rationale for conducting a study of DHH students was that, as a teacher having been engaged in DHH education for a decade in both special and mainstream schools, it was always my hope to understand my home country's experience of DHH inclusion. It is widely accepted that in order for inclusion to be successful, mainstream teachers need to adopt acceptance along with positive attitudes towards special needs students (Chow and Winzer, 1992; Westwood, 1982; D'Alonzo, 1983). The research was undertaken because of a perceived need to identify the reasons for the negative attitudes of teachers and administrators at Al-Amal schools towards greater DHH integration into mainstream schools. There were many Saudi websites, blog, forums and newspaper articles alluding to the drawbacks of the integration movement with respect not only to DHH students but also to other groups of special needs pupils.

Thus, the rationale for the current study lies in familiarity with the problems marking the current situation and the need to seek a better understanding of these phenomena. The discussion should be understood in the light of the following overall aims:

1. To explore some background factors such as teaching setting/Deafness type, years of experience, qualifications, education stage, placement and in-service training, and their influence on educators' beliefs and attitudes towards DHH integration/inclusion.

2. To explore educators' beliefs, emotions and behaviour towards DHH integration/inclusion.
3. To explore educators' views of barriers to DHH integration/inclusion and of changes needed for it to be successful.

7.3 Discussion of the first phase findings

This section discusses the quantitative findings, relating them to the above aims and to the literature. The overall mean scores on the four cognitive measures are given in Chapter 5 (Section 5.6, Table 5.14). The mean score on the cognitive scale was below the mid-point, indicating relatively less than positive belief in the cognitive component of attitude. Participants' beliefs and knowledge tended to be somewhat against inclusion in mainstream classes. The mean for Affective towards Deaf inclusion was somewhat above the mid-point, indicating that participants felt somewhat positive about inclusion of Deaf students in mainstream classes. For Affective towards hard-of-hearing inclusion, the mean was higher than for Affective_D. This indicates that participants had rather more positive feelings about inclusion of hard of hearing than of Deaf students. Finally, the mean for the behavioural component was near the top of the scale, meaning that teachers claimed they would adopt very inclusive practices if they had a DHH student in their mainstream classroom.

The mean scores were broken down by Deafness type/teaching setting, years of experience, qualifications, education stage, placement and in-service training. The results are discussed in the following sections.

7.3.1 Factors affecting Saudi educators' beliefs and attitudes towards DHH inclusion

There are various factors that influence educators' attitudes towards DHH inclusion. This difference between rhetoric 'theory' and action 'practice' in education is considered "oppressive niceness" (Slobodzian, 2009, p. 187). The success of DHH inclusion is affected by administrators' and teachers' support of inclusive practices, ongoing staff training and belief in Deaf culture (Furlonger et al., 2010; Hung & Paul, 2006). Thus, teachers' and administrators' support for DHH inclusion is a prerequisite for success. This section discusses these factors in turn.

7.3.1.1 Type of D/deafness/where teachers teach

As analysed previously in Chapter 5 (Section 5.7.1, Tables 5.15, 5.16 and 5.17), educators in all school settings shared a similar level of knowledge of DHH inclusion and a similar level of confidence in their behavioural intentions when teaching DHH students. Where they differed was in their feelings towards inclusion of Deaf or HH students, with Al-Amal educators having less positive attitudes (feelings) towards Deaf inclusion than did the mainstream educators of the hard of hearing in special classrooms in mainstream schools.

The analysis showed Al-Amal teachers as having less positive feelings towards inclusion of Deaf students in mainstream schools than did the teachers of the hard of hearing in special classrooms in mainstream schools. As for feelings towards inclusion of HH students in mainstream classrooms, Al-Amal teachers and teachers of the Deaf in mainstream schools held less positive feelings than did teachers of the hard of hearing in mainstream schools.

These findings are quite consistent with the fact that all educators working with Deaf students at Al-Amal Institutes were certified in Deaf education. They would daily communicate fluently with the Deaf students, attend their in- and out-of-school activities, and have obtained enough knowledge to enable them to facilitate and individualize their education, because they felt more efficient in teaching Deaf students (Randall, 2008). This finding is consistent with the conclusion of Center and Ward (1987) that teachers tended to have positive attitudes towards including students whose disabling characteristics were not likely to require additional instructional training or skills. Teachers of Deaf students require additional instructional training in ASL, which explains teachers' tendency to have more positive emotions towards HH inclusion, as HH students have residual hearing that would allow them to be taught via auditory-visual therapy and/or oral/aural methods (Chapter 3, Section 3.3.1). It has also been reported that DHH students often struggle academically in terms of reading skills and that a large number never achieve functional literacy (Thoutenhoofd, 2006; Geers et al., 2008), despite their normal intelligence (Moore & Sweet, 1990; Marschark et al., 2003; Sarant et al., 2010). In addition, HH students do not perform as well as hearing students (Hocutt, 1996), and the gap in performance increases with age (Powers, 1999).

It is quite important for a teacher to see the results of his efforts in the form of positive academic attainment by his students. A complication is that some general education teachers participating in the survey had a diploma in special education but did not fully comprehend Arabic Sign Language (alphabetical and cued signs, as reviewed in Chapter Three, Section 3.3.1), while some Deaf and HH students were raised in Deaf families and others in hearing ones. Such teachers, deficient in sign language, would predictably prefer to work with students who could use the oral/aural method (spoken language). However, spoken language acquisition among DHH students has been found to be universally delayed when compared with hearing students (Kretschmer & Kretschmer, 1986; Moeller, 2000; Sarant et al., 2010), while it is estimated that approximately 5 to 10 % of DHH students have a hearing impairment sufficient to prevent altogether the natural acquisition of spoken language (Boothroyd, 1991). In developed countries, DHH students are candidates for cochlear implants and many will learn spoken language at similar rates to those with mild to moderate hearing loss (Duchesne et al., 2009; Spencer et al., 2013). Thus, recent technological advances could benefit DHH students considerably, supporting early literacy development and academic achievement in their new educational settings (Marschark et al., 2007).

However, Deaf or HH students raised in Deaf families tended to perceive Deaf people as forming a linguistic minority and to make use of ASL as their first language of communication, whereas those born in hearing families tended to communicate in spoken Arabic or via the total communication approach. One way of understanding this position involves the recognition of Deaf students as a linguistic minority with the right to receive their education through sign language, in either mainstream or special school settings (Chapter Three, Section 3.1). Relevant to this line of argument is the US Bilingual Education Act of 1988, which provides legal definitions of two important terms frequently used in educational legislation: “native language” and “limited English proficiency” (Marschark et al., 2007). The Act includes Deaf students along with sign language under bilingual terminology for the first time (U.S. Department of Education, Office of Civil Rights, 2006). It lists five factors that local education authorities should take into account in determining placements for deaf students: linguistic needs, degree of HL and potential for using residual hearing, academic level, social/emotional needs and communication needs, including students’ and parents’ preferred mode of communication

(which became mandatory under re- authorizations of the IDEA in 1997, PL 105-17, and 2004, PL 108-446). In their conclusion, Hadjidakou and Nikolarazi (2007) support the premise that educational settings influence DHH students' perceptions of themselves. They investigated 24 Cypriot Deaf adults aged 19 to 54 years, of whom ten thought of themselves as culturally Deaf, ten as bilingual/bicultural and four as culturally hearing. The majority of participants in this study who had graduated from ordinary school settings felt that they were engaged in both Deaf and hearing cultures.

Some unspecialised mainstream teachers tend to prefer to teach HH classes over Deaf ones, as they are bilingual/bicultural in their communication mode. However, some of these teachers do not completely understand that a students' preference for sign language is the key criterion in this situation but not merely their degree of hearing loss. Some Deaf students might prefer aural/oral methods and some HH students might prefer to sign, perceiving themselves as full members of a Deaf linguistic minority and as signers by nature and vice versa. This means that being Deaf or HH has nothing to do with how much you can hear, rather, how you identify yourself as more closely with hearing students or with Deaf students (closely related to the discussion presented at section 7.3.1.5).

For example, Mann and Prinz (2006) conducted a study of Californian teachers' attitudes towards assessing Deaf students' sign language skills. Most felt that it was vital to assess students' ASL skills to mentor their linguistic and academic progress. Similarly and as ASL is well established as L1, this means that Arabic literacy can be achieved by means of writing and reading with relatively easy exposure to Arabic in its primary form of speech or alternatively through Arabic-based signs (Lifshitz et al., 2004). This finding points to a need for appropriate instruments to assess sign language skills/fluency and preferences. Another study highlighting challenges to mainstream classroom communication access is that conducted by Marschark et al. (2007) in the USA, who examined the comprehension of Deaf students including pairs that used ASL, pairs using spoken language (oral/aural method) and pairs in which one signed and the other used the aural method. They concluded that communication was low for all groups due to lower criteria for comprehension. These two studies indicate diversity among the DHH population.

On the other hand, the present findings revealed that educators of HH students at mainstream schools were more emotionally positive towards inclusion. This is consistent with the finding of Elshabrawy (2010) that general educators in Egypt believed in the importance of socialization and normalization of special needs students at mainstream schools, where the positives outweigh the negatives. He found that because general teachers came from mainstream education, they believed that providing access to mainstream education would give special needs students an equal opportunity to observe, imitate, interact, model and build friendships with other students in the same age group. They would have more chance to be exposed to society overall and learn their social norms, which could improve their self-esteem and self-confidence. Moreover, this interaction would be mutually beneficial, as ordinary students would also learn from this process how to tolerate differences, accept other students and understand that we are all different (Elshabrawy, 2010).

Furthermore, these previous findings are consistent with the results of other studies in terms of engaging and accepting special needs students in general. This is supported by the argument of Clough & Lindsay (1991) and Forlin (1995) that the nature and severity of a disability influences the attitudes of teachers. Some prefer to include children with hearing disabilities rather than students with learning disabilities, because of their characteristics. In the current study, it could be concluded that most teachers supported the inclusion of students with mild hearing loss, rather than that of profoundly Deaf students. It is worth referring to Elshabrawy's (2010) argument that experience of special needs teaching in special settings can lead to negative attitudes towards SEN inclusion. He argues that this could be due to the nature of these experiences or to the effect of the special school context on teachers' attitudes and perceptions.

Moreover, the results here (Chapter 5, Section 5.7.1, Table 5.16) showed that educators at Al-Amal schools scored relatively highly on the cognitive component, which means that they tended to hold slightly more positive beliefs than mainstream educators about DHH inclusion. However, the p-value of .055 shows this result to be non-significant and only a suggestive one that future researchers may want to pursue. It is relevant that other studies have found this factor not to be significant in forming educators' beliefs about inclusion; for example, Romi and Leyser (2006) found no significant differences in the

cognitive dimension between general and special educators. Although this study compared general with special educators, it is relevant to the current study, as some educators were newly transferred from general to Deaf education after recently acquiring a diploma, so might be expected to share some attitudes with general educators.

Additionally, the mean for the behavioural component of attitude was near to the top of the scale (See Chapter 5, Section 5.6, Table 5.14), indicating that educators claimed that they would adopt very inclusive practices if they had a DHH student in their mainstream classroom. This did not differ by teaching setting/Deafness type.

This is in line with the finding of LeRoy and Simpson (1996) that the confidence of educators both in their teaching efficacy and in successful inclusion increases with their experience in teaching special needs children generally. The experience factor is considered next.

7.3.1.2 Years of experience

As reported in Chapter Five (Section 5.7.2, Tables 5.18, 5.19 and 5.20), when the relationship between the cognitive and affective attitudes to HH inclusion and years of experience was explored, statistically significant differences were found between very experienced and novice educators: the former tended to have more positive beliefs towards DHH inclusion than did the latter. This could mean that initial teacher training is not addressing the issue of inclusion. However, for affective attitudes towards Deaf inclusion and the behavioural components of attitude, there were no significant differences by years of experience, with the exception of affective attitude to inclusion of the hard of hearing being more negative among teachers with 11-15 years' experience than among those with 6-10 years.

Having reviewed literature on teachers' attitudes towards inclusion, Avramidis and Norwich (2002) conclude that initial resistance is more likely to occur among teachers with less experience during any innovative policy. This could be because the teachers learned beliefs and philosophies more consonant with inclusion through experiences in the classroom. However, their attitudes might become more positive later, as they develop the necessary expertise and gain specific experience that allows them to perceive the success of their efforts.

Thus, it can be said that as Saudi educators gain experience, their attitudes become more positive towards DHH inclusive education. This contrasts with a study by Soodak et al. (1998) of general education teachers' attributes as predictors of their attitudes towards inclusion in New York. They found that experienced teachers were more hostile towards inclusion than inexperienced teachers, regardless of whether they made use of differentiated teaching methods (Soodak et al., 1998; Florian, 1998; Alsaratawi, 1995; Berryman, 1989; Center and Ward, 1987; Clough and Lindsay, 1991).

A study by Dupoux et al. (2005) found positive correlations between years of teaching experience and attitudes towards SEN inclusion, between advanced degrees and attitudes, and between other teachers' attitudes and attitudes toward integration. They asked 216 high school teachers in the United States and 152 in Haiti to complete the Opinions Relative to the Integration of Students with Disabilities scale (Antonak & Larrivee, 1995). Results showed that teachers in both countries had similar attitudes toward the integration of SEN students. Years of experience was individually correlated with attitudes but was not a significant predictor when other variables were included in a multiple regression. Three variables predicted attitudes towards integration of students with disabilities: teachers' attitudes explained the largest variance as a dependent variable, followed by advanced degree, then range of effective accommodation of different categories of disabilities. This is more relevant to SEN generally and may or may not apply to DHH inclusion.

Consonant with my findings for Saudi Arabia, LeRoy and Simpson (1996) also found a positive relationship between length of experience and the acceptance of teaching SEN students, in that teachers felt more confident and more successful in teaching special needs students in inclusive practice when they had more experience of doing so. Similarly, Koutrouba et al. (2008) investigated factors influencing Greek teachers' stance towards SEN students' inclusion and found a positive relationship between years of experience and position on inclusion: teachers with 20 years of experience held more favourable attitudes towards including SEN students into their classrooms. Thus, as teachers gained more experience, their attitudes became more positive towards inclusion. In the same line, Avramidis et al. (2000) conducted a study of 81 primary and secondary teachers in England, finding that teachers who had more experience of inclusion, having

worked in a school with inclusive practices, had significantly more positive attitudes than did teachers from another school which had not implemented inclusion. In a longitudinal study, Harvey (1992) compared the attitudes of a sample of teachers, teachers-in-training and non-teachers in Victoria, Australia, to those of the corresponding groups six years later. Initially, teachers showed negative attitudes towards inclusion, but they gave considerably more positive responses in the second evaluation. Cestaro (2008), however, found a more complex picture in his study of general and special teachers' attitudes towards inclusion in New York State, whereby those with less than ten years of experience held significantly more positive attitudes towards inclusion, while there was no significant effect in those with more than ten years of experience.

In contrast, other studies of teachers' attitudes towards inclusion have reported that length of teaching experience did not significantly relate to teachers' attitudes towards inclusion (Avramidis et al., 2002; Kalyva et al., 2007; Leyser, et al., 1989; Reynolds et al., 1982; Stephens and Braun, 1980). Kalyva et al. (2007) investigated 72 Serbian teachers' length of experience and its relationship with their attitudes towards the inclusion of special educational needs students in mainstream schools, finding no statistically significant effect. Citing Good (1973; 1981) and Peters (1977), Al-Ahmadi (2009) also reports finding no statistically significant relationship between length of experience and teachers' acceptance of special educational needs students within mainstream schools. It should be cautioned that studies may use different assumptions, constructs and measures of educators' beliefs and attitudes regarding inclusion, reflecting the complexity of inclusion and of attitudes. Furthermore, unlike the current study, most of these others did not distinguish between three components of attitudes.

Lampropoulou and Padellidu (1997) argue that the nature of teaching experiences may alter perceptions, as negative encounters may reinforce negative perceptions while positive experiences may result in more favourable perceptions. This would lead to a lack of correlation between years of experience and attitudes to inclusion. Furthermore, Koutrouba et al. (2008) found that a large percentage of teachers had negative perceptions of their experience of working with special needs students, leading them to adopt a negative stance towards the inclusion process. Such results indicate that there is a need to

enhance positive experiences of inclusion and to overcome the barriers to inclusion which could lead to negative attitudes.

To conclude, these contradictory results indicate a lack of agreement on how the experience factor affects teachers' attitudes towards inclusion. Some researchers see no significant relationship (Avramidis et al., 2000; Leyser et al., 1989; Rogers, 1987; Stephens and Braun, 1980; Kalyva et al., 2007; Al-Ahmadi, 2009), whereas others believed that there is a significant relationship between experience/age and attitudes towards inclusion, particularly at the beginning of a teaching career (Berryman, 1989; Center and Ward, 1987; Clough and Lindsay, 1991; Forlin, 1995; Leyser et al., 1994; Harvey, 1985; LeRoy and Simpson, 1996; Koutrouba, 2008). The present study confirms that in the Saudi context the cognitive component of attitude to inclusion becomes more positive with years of experience. The contradictory findings in the literature could result from the studies not distinguishing between the three components of attitude as was done in the present study. In the present study, also, only the cognitive component changed steadily with years of experience, not the affective or behavioural components.

7.3.1.3 Qualifications

As reported earlier (Chapter 5, Section 5.7.3), when the relationship between attitudes and qualification was explored, no statistically significant differences were found for the cognitive component, although the mean score of the educators who had a master's degree in special education was lower than the means of the remaining groups, which were almost identical. Similarly, there were no statistically significant differences in the means of the affective and behavioural components of attitudes towards DHH inclusion. Thus, qualification had no effect on these two components.

This finding is contrary to the results of Leroy and Simpson (1996), Stoiber et al. (1998) and Elshabrawy (2010), who found that level of education and training did affect teachers' attitudes. These studies, however, concern attitudes towards SEN inclusion in general, which may or may not be directly applied to DHH inclusion. Nonetheless, it should be noted that the results of previous studies regarding the effect of qualifications on educators' attitudes are inconsistent. Whereas some studies indicate a negative relationship, a higher educational being associated with more negative attitudes towards integration (Antonak et al., 1995; Stoler, 1992), others suggest a positive relationship

(LeRoy & Simpson, 1996; Villa et al., 1996), while a third group reports no relationship between level of qualification and attitudes towards inclusion (Heiman, 2001; Kuester, 2000). As in the present study, Heiman (2001) and Kuester (2000) conclude that teachers' level of educational qualification did not significantly influence their attitudes to the inclusion of students with disabilities into mainstream regular classrooms. This contrasts with a study by Stoler (1992) which indicated that teachers with high levels of education had less positive attitudes toward inclusion than those qualified below the master's degree level.

The type of qualification may be as important as the level. Lehmann (2004), for example, notes that the best DHH inclusive schools have to have appropriately qualified educators, but that some DHH teachers are not adequately prepared for students' learning styles. He adds that DHH teachers sometimes do not completely understand DHH students' characteristics, needs and communication preferences (Marschark et al., 2011; Slobodzian, 2009), which may lead to social exclusion or/and lower academic attainment (Angelides & Aravi, 2007). He reports that when asked to point out negative aspects of inclusive schooling, DHH students indicated educators who showed little understanding of Deaf culture (ibid), which implies a responsibility on mainstream schools to provide opportunities for all students and staff to have exposure to Deaf culture and sign language (MECY, 2009). Thus the content of DHH teachers' qualifications need to be consistent with the needs of DHH students in their inclusive classrooms.

Reviewing these studies indicates inconsistent findings regarding the relationship between level of qualification and educators' attitudes towards DHH inclusion. In the Saudi context, the current study found no statistically significant relationships between these two variables, consistent with the conclusion that educators' qualifications cannot be considered an indicator of their attitudes towards DHH inclusion, but with the proviso that the content of teachers' training courses may be a key to their subsequent attitudes.

7.3.1.4 Education stage

When respondents were distinguished according to the three main education stages, there were statistically significant differences in mean scores on the cognitive_component, whereby educators working at the intermediate and secondary school levels in Jeddah tended to hold more positive beliefs about DHH inclusion than did primary school

educators (Chapter 5, Section 5.7.4, Table 5.24). There were no statistically significant differences in mean scores on this component between educators at intermediate and secondary schools, indicating that beliefs about inclusion were similar for educators at these later school stages. However, similar to the results for experience and qualifications, no statistically significant differences were found among the three groups on the affective or behavioural components.

This may be because teachers specialize in a subject at the intermediate and secondary stages, being required to hold a degree in maths, Arabic, physics, chemistry or English, whereas at the primary stage a bachelor degree in Deaf education (see appendix J) is the only requirement (this is relevant to the situation regarding the preference for inclusive settings for HH students discussed in section 7.3.1.5 below). This may be because subjects taught at the primary stage are not as sophisticated as those at the intermediate/preparatory and secondary stages. For example, algebra and geometry are taught at the intermediate stage in place of mathematics at the primary stage. In addition, students are taught English language at the intermediate/preparatory and secondary stages, but not at the primary stage. This contradicts the opinion that primary schooling is more holistic and more concerned with student development and individual differences, whereas the secondary school ethos is more subject-oriented, so less compatible with inclusion, which may affect teachers' attitudes (Avramidis and Norwich, 2002). The findings broadly indicate significant differences in only one dimension, namely the cognitive, at the intermediate and secondary stages, in contrast with studies and reviews which found no relationship between grade level and attitudes towards SEN inclusion in general (Avramidis et al., 2000; Hastings & Oakford, 2003; Monsen & Frederickson, 2003; Jamieson, 1984; Hannah, 1988).

The literature is inconclusive regarding the effect of school stage on educators' attitudes (Avramidis and Norwich, 2002; Elshabrawy, 2010). Some studies have found differences between primary and secondary teachers in their views of inclusion and the sort of classroom facilities they provide for students who are included (Chalmers, 1991; Rogers, 1987), or that inclusion of children at higher grades in the school system is viewed more positively (Leyser et al., 1994). However, many others have suggested that teachers working with younger children are more positive (Clough & Lindsay, 1991; Scruggs &

Mastropieri, 1996; Salvia & Munson, 1986; Savage & Wienke, 1989). This inconsistency relates to the present study in that grade level cannot be considered a reliable indicator of educators' attitudes towards DHH inclusion. However, significant differences between primary and intermediate/secondary in the cognitive dimension only suggest that these other studies may have been measuring different dimensions of attitude.

7.3.1.5 Placement (Al-Amal vs. mainstream)

The results analysed in Chapter 5 (Section 5.7.5, Tables 5.25-5.29) show the opinions of the educators concerning the best placement for Deaf or HH students. The majority of the sample believed that Al-Amal Institutes with internal residence were the most appropriate school settings for profoundly Deaf students, followed by Al-Amal Institutes as day schools without residential facilities. In comparison, quite a small number of educators believed that these were appropriate settings for hard of hearing students, while only 2.5% of participants believed that Al-Amal Institutes as day schools were the most appropriate place for both Deaf and HH students. As to the inclusive alternative, more than half of participants believed that full inclusion was the most suitable setting for HH students, 11% that it was suitable for Deaf students and 22% for both groups. There was a general tendency to believe that inclusion was more suitable for HH rather than Deaf students, whereas Al-Amal Institutes were more appropriate for Deaf students. Put simply, educators preferred inclusive settings for HH students and special education settings for Deaf ones.

In one way, this can be seen to reveal the effect of the nature and severity of disability on educators' attitudes towards inclusion. Both in the United States (Antia et al., 2004) and Australia (Power & Hyde, 2002), students in general education classrooms tend to have lesser degrees of hearing loss (i.e. more hard of hearing than Deaf). This also means that more of the students in general classrooms use spoken language as their primary means of communication (Antia, Kreimeyer, & Reed, 2010). Avramidis and Norwich (2002) conclude that educators tend to hold differing attitudes about school placements, based largely upon the nature and severity of the students' disabilities. Mainstream teachers are more likely to accept the inclusion of students with mild disabilities or physical/sensory impairments in their mainstream classrooms than students with more complex needs. It can be concluded that educators are likely to support the inclusion of students with mild

or partial rather than severe or profound hearing loss. There is sufficient consistency regarding educational environment-related variables, including mainstream classrooms, which suggests that a significant restructuring in the mainstream school environment should take place before including SEN students (Avramidis and Norwich, 2002). This finding is consistent with the results of the current study in that mainstream educators tended to take a more positive position towards the inclusion of HH students because they are dualistic in their communication (i.e. being able to make use of Oral as well as manual methods), and could cope more easily with the current pedagogical situation of mainstream schools in Jeddah (Chapter Three, Section 3.1, 3.2 and 3.3.5) sometimes called ‘mixed methods’ learners (Schick, Marschark, and Spencer, 2006).

Furthermore, inclusive classrooms offer advantages to DHH students that they may not experience in special schools, including openness to higher level curricula (Angelides & Aravi, 2007), opportunities for academic advancement (Angelides, 2004), furthering academic (Eriks-Brophy et al., 2006; Lehmann, 2004) or postsecondary and vocational goals (Thagard et al., 2011) and gaining experience of communicating with the hearing world (Nowell & Innes, 1997). Students experience the hearing world from a Deaf perspective and identify that they require effective sign language skills to be successful (Eriks-Brophy et al., 2006). Special schools may be more suited to meeting the social/cultural and emotional needs of Deaf students (Angelides and Aravi, 2007), whereas inclusive schooling offers better opportunities to increase HH academic skills (Silvestre et al., 2007). These mandatory academic skills enable DHH students to function successfully in post-secondary studies (Nowell & Innes, 1997).

The findings of the current study indicate that a range of alternative DHH placements is better than a ‘one size fits all’ style (Byrnes et al., 2002). DHH inclusion is not merely an issue of placement in the same classroom with hearing students, but rather a process which encompasses whole school restructuring (Avramidis, 2001), in order to develop tolerance, accommodate diversity (Ainscow, 1997) and an inclusive ethos (Booth, 1999; Cornwall, 2001; Daniels & Garner, 1999; Levin, 1997; O’Brien, 2001).

The results of the current study support the idea of educational provision within a continuum of services, in line with the Warnock Report (1978) and the 1981 Education

Act in the UK. Warnock (1978) indicated that there was a commitment to a continuum of provision for SEN students in the UK. Similarly, the UK Labour Government (DfES, 2006, Section 28) definition of inclusion was consistent with emphasis on a system which could involve special schools (Norwich, 2013) and, in the USA, PL94-142, the Education of All Handicapped Act of 1975 established the principle of “zero-reject” or entitlement for all students in public education (Elshabrawy, 2010). In addition, statistics for the UK demonstrate a 9% reduction of special schools between the academic years 2002-2010, but no real change in the overall percentage of students (2.7% of children with statements; 14.4% SEN without statements) (OECD, 2003) attending such provision (Norwich, NALDIC Conference 2011). This relates to the present study in that educators believed in the idea of a continuum of educational services and provision ranging from exclusion (residential and/or Al-Amal Institutes for the Deaf) to public school inclusion (regular classrooms with and without additional supporting services) (Peters, 2004).

7.3.1.6 In-service training

As to in-service training and its relation to attitudes towards DHH inclusion, the study found no statistically significant differences between educators with and without in-service DHH training in their mean responses to the three components of attitude.

This finding was unexpected in that it conflicts with those of most previous studies (e.g. Avramidis and Kalyva, 2007; Avramidis et al., 2000; Gaad, 2004; Subban and Sharma, 2006; Elshabrawy, 2010; Leyser et al., 1994; Lifshitz et al., 2004; Shade and Stewart, 2001; Van Reusen et al., 2000; Beh-Pajoooh, 1992; Shirmman, 1990; Dickens-Smith, 1995), which found that training was effective in forming positive attitudes towards SEN inclusion (Buell et al., 1999; Van-Reusen et al., 2000; Center and Ward, 1987). Some of these studies were unspecific to DHH, referring to SEN in general. However, Sari (2007) and Sahbaz (1997) found that teachers having professional in-service training in DHH inclusion increased their knowledge of D/deafness and that their attitudes to DHH inclusion were accordingly more positive than those without (see Section 7.3.6).

Two factors may explain the discrepancy between the present results and those reported in the literature: a) most concerned SEN generally; b) quality of training may matter more than quantity (emphasized by I5m in Chapter 6, Section 6.4.3). It could be claimed that in-service training will be effective only when it is systematically designed and planned

for DHH inclusion, academically monitored, professionally and continuously provided, whereas short courses provided by poorly skilled educators may not be sufficient to create significant positive changes in educators' attitudes (Avramidis & Kalyva, 2007; Leyser & Tappendorf, 2001; Martinez, 2003). Indeed, rather than doing any good, inadequate training may cause undesirable perceptions among all educators about D/deafness, DHH education and the fundamental aims and philosophy of inclusion. While the findings of the current study challenge the hypothesis that in-service training inevitably leads to positive attitudes, this may be because the quality of training is a major factor in determining its influence. Superficial, outdated and/or repetitive short courses may not result in more positive attitudes (Akcemete and Karggin, 1994; Sari, 2000), but may instead cause harm when presented by those lacking expertise.

In other contexts and in support of the need for improved in-service training for DHH educators, Luft (2007) suggests changes in provision and placement so that most DHH students in mainstream education have teachers with improved training and preparation. Teller and Harney (2005) studied the perceptions of 19 directors of DHH teachers' preparation programmes in the USA and identified a need for more training and experience in the resource and itinerant situation, better understanding of the general curriculum, more training in oral teaching methods, higher proficiency in signing skills, experience of DHH students with additional needs and more focus on working with those with cochlear implants. This relates to the current study in that educators in mainstream settings seem to require more professional, longer-term, reflective, modernized, in-service training (Bayliss, 1998; Tilstone et al., 1998). According to Avramidis (2006), this type of critical, self-reflective, professional training results in the acquisition of more generic teaching skills that empower educators to modify and enhance their practice in ways which are conducive to meeting the needs of all learners. The lack of such training for teachers in the present sample could account for the similarity in attitudes between DHH teachers with in-service training and those without it.

7.4 Discussion of the second phase findings

This section discusses the second phase, that of qualitative findings, in the light of the literature on provision and attitudes, in terms of the five research sub-questions, i.e. considering the following topics:

1. Saudi educators' perceptions of Deaf and HH students.
2. Saudi educators' perceptions of and attitudes to DHH inclusion.
3. Saudi educators' beliefs regarding the inclusion process and requirements.
4. The main barriers to attaining successful DHH inclusion.
5. The major changes needed in order to achieve better DHH inclusion.

Interviews are a very useful tool for collecting qualitative data, as they provide a rich picture embedded within the socio-cultural context under investigation. This is one justification for giving the qualitative interviews more weight than the questionnaire phase. The inclusion of DHH students in mainstream schools with hearing students remains a complex, controversial and dynamic issue that offers challenges to both practitioners and researchers. Results of various studies confirm that merely assimilating DHH students in the physical presence of hearing students in the same school, without helping them to interact, socialize and learn together, will not necessarily change their attitudes (Hung and Paul, 2006). This may be why some first-phase findings do not harmonize with those from the second (e.g. in-service training). The findings of both phases regarding attitudes towards DHH inclusion are mixed and complex, in common with reports in the literature (Ainscow, 2007; Brantlinger, 1997; Farrell, 2004; Schlegel, 1975; Schlegel and DiTecco, 1982), in that some studies have reported positive attitudes towards SEN inclusion associated with some contextual factors, while others have had negative results or found no relationship at all (Yuker, 1988). Activists who support DHH inclusive practices argue for successful academic performance and the development of active social lives and friendships (Bunch, 1994), as well as acceptance of DHH students by their hearing peers (Kluwin, 1999; Kluwin and Stinson, 1993; Kluwin, 2002; Luckner, 1999; Power and Hyde, 2002; Powers, 1996). Conversely, opponents of DHH inclusion refer to complex difficulties associated with effective language and communication approaches, socialisation and cultural identity (Innes, 1994; Schildroth and Hotto, 1994; Stone, 1994), reporting that DHH students have encountered negative attitudes held by their hearing peers (Al-Zahrani, 2005), have experienced isolation or loneliness (Zureikat, 2007; Majeed, 2008; Kurdistani, 2008) or have failed to establish close relationships with their hearing peers (e.g. Antia, 1982; Weisel, 1988; Angelides and Aravi, 2007) (Chapter 3, Section, 3.3.3). These seven themes are discussed in the following sections.

7.4.1 Saudi educators' perceptions of Deaf students

The first theme to be considered (T1) is Saudi educators' perceptions of Deaf students in general. From the analysis in Chapter 6 (Section 6.2, Table 6.3), teachers seem to differ in their views about what constitutes Deafness. Some believed in the medical/biological, disability or pathological definition of Deafness as an inability to hear spoken language (which may imply severe limitations on how students could learn); some preferred the social/cultural model of a linguistic minority group, whereby for Deaf students, normal language modality is not auditory and oral but visual and manual (signing); others favoured an integrative model of personal/biological/sociocultural interaction, conceiving a 'melting pot' of the two perspectives (Moore, 2001). This interactionist model is in line with the Warnock report (1978), which understood the development of the SEN child in terms of the interaction between personal strengths/difficulties and environmental supports/obstacles (Wedell, 1995). The balance of perspectives is suggested by Norwich (2009) through a new teaching model based on a 'bio-psycho-social' conception of disability and difficulty, or what he calls a three-dimensional model that goes beyond the sub-groups and the category division argument. This places greater weight on assessment for intervention and implies a balance between common and diverse needs. The model also offers a creative way to overcome conceptually the dilemma of difference relevant to identification (Norwich, 2009).

The separation of the medical and the social forms the basis of a distinction between biological and cultural Deafness, although Deaf people are both deaf and Deaf (Padden & Humphries, 1988). Additionally, Lane (1984) argues that cultural Deafness was wholly "liberationary", as it was embraced and supported by enlightened benefactors (Corker, 2002). Therefore, the concept of culture has come to rest upon the theory that the entire process of identity formation is conceived of in terms of human freedom, where the Deaf as 'rational, liberal subjects' are empowered to manipulate positive identity (as a culturally and politically constructed concept), in order to achieve their ultimate social and material benefit (Corker, 1998).

In the present study, the majority of educators (five administrators and two teachers) agreed that the medical and social models should be combined and integrated to better understand such a complex construct (Figure 7.1). Regarding the second sub-theme, there

was general consensus that ‘special educational needs’ is the best term to describe this group of students without any sense of stigma or negativity.

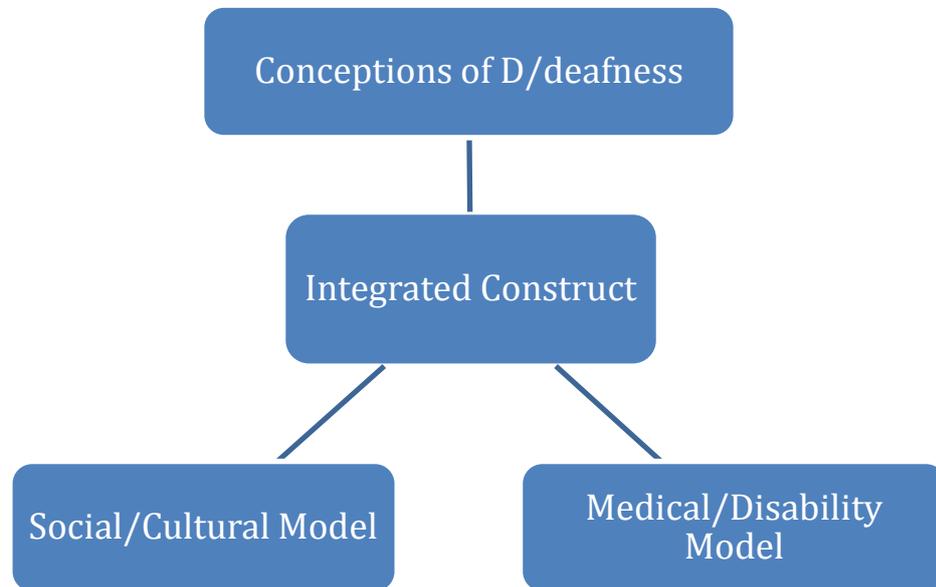


Figure 7.1 Diagrammatic outline of educators’ perspectives on the Deafness concept

No agreement was reached among administrators regarding their position on Deaf integration, as some were for and others against it for various reasons, and the same was noticed among teachers, who had moderate reservations about the way integration was currently employed as a practice and as a term used in Jeddah schools. This suggests a continuing need for special schools as a moderate inclusion option (Cigman, 2007a) and as an alternative form of educational provision. This position is supported by Farrell’s (2006) assertion that special schools usually deliver the most effective education possible for special needs students. Similarly, Warnock (2005) conceives inclusion to be more important for school than for education as a position, rejecting ‘all children under the same roof’ (Terzi et al., 2010, p. 126). At the same time, given adequate resources and additional support services, schools should be able to assist more DHH students to be more successful in mainstream schools. This is in line with the findings of Hocutt (1996) and Komesaroff & McLean (2006) that there is no compelling evidence that placement rather than instruction is the critical factor in students’ academic, social, material and cultural success. The interventions that were effective in improving academic outcomes for students with disabilities required significant improvement in resources along with

extensive pre- and in-service professional training and support for teachers (Hocutt, 1996).

However, teachers raised two conditions concerning integration:

- The move from special to mainstream school has to be a multi-professional decision, and
- Some mentioned that the consent form should be explained and signed by both Deaf students and their parents.

This slight difference in position, some teachers emphasizing the first condition and others the second, may be because most teachers of the Deaf, particularly those at Al-Amal Institutes, were specialists in Deaf education and would prefer the voice of DHH students to be heard. Interestingly enough, although there have been recent calls in Jeddah to close down Al-Amal Institutes, teachers and administrators agreed that Al-Amal should carry on serving and teaching those Deaf students who insisted with their parents on remaining there. Contrary to expectations, both groups pointed out that Al-Amal Institute was, and still is, the most suitable setting for Deaf students and their parents, as the whole ethos and medium of communication in the Institute is designed for the Deaf and all staff members are supportive. This position is challenged by Hall (1992) and Avramidis (2001) as regards SEN in general. The latter demands the gradual dismantling of special schools and the transfer of specialist human resources into mainstream schools, while the former argues that inclusive education requires the closure of special schools as an urgent priority: “The question is not, Can we do it? My advice to the reader is—Just do it!” (Hall, 1992: 23). These comments about SEN generally may or may not apply directly to DHH inclusion.

Nevertheless, Saudi educators’ perception of the Al-Amal Institutes as a good alternative placement within a continuum of educational provision (illustrated in Figure 7.2), is in line with the British Association of Teachers of the Deaf (1996) and the Royal National Institute for Deaf People (2002). These two associations emphasize the value of the spectrum of educational provision currently available to DHH students and their parents. This should allow for more freedom of choice in communication methods and type of educational placement (Powers, 2002). Similar to the participants’ position, there is evidence in the USA that many parents of DHH students choose a special school for the

Deaf (Holden-Pitt, 1997) and similar evidence that some DHH students in UK mainstream schools would like to be in special schools (National Deaf Children’s Society [NDCS], 2003). Thus, the two groups agreed upon the last three themes but differed on the first one.

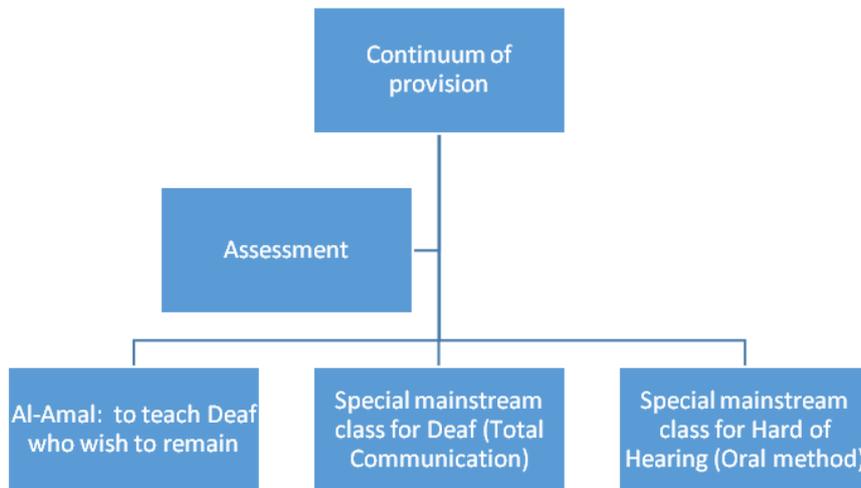


Figure 7.2 Diagrammatic outline of educators’ perspectives on the continuum of provision

7.4.2 Saudi educators’ perceptions of hard-of-hearing students

The second theme to be considered (T2) is Saudi educators’ perceptions of HH students in general. The analysis in Chapter 6 (Section 6.2, Table 6.4) shows teachers and administrators agreeing that the ‘hard-of-hearing’ concept would not be fully understood by restricting perception to one model. In contrast to the variety of opinions on the best model of Deafness, there was consensus on an integrated and coherent understanding of HH, where the medical and social models complement each other in a way that cannot be separated. Teachers and administrators differed on the second sub-theme, however, the former feeling that ‘special educational needs’ was the best representation of the concept of Deafness, while school administrators preferred to embrace ‘Deafness’, believing that DHH students felt more comfortable with it. On the third sub-theme, the two groups agreed that special/self-contained classrooms would be the best educational alternative for HH students, as they have residual hearing and could benefit from being taught via the oral approach within mainstream schools, although they insisted upon the wearing of hearing aids all the time to allow for vocabulary expansion. Finally, there was general agreement that full/radical inclusion was impossible at present, given the current status

of mainstream schools. However, the administrators believed that full inclusion might be applicable in future if targeted schools improved significantly.

Thus, the groups agreed on three sub-themes and differed on only one. Additionally, it is worth mentioning that the participants' perceptions of Deaf and HH students will be discussed together, as they both represent their understanding of disability. Generally, theoretical approaches to Deafness as a disability differ. Analysis of data gathered in the current study indicates that teachers' responses cannot be labelled as reflecting either the deficit model or the social model alone. Rather, they reflect an integrative approach to understanding Deafness which recognizes both models and sees them as complementary. There was more emphasis on within-child factors for Deaf students and on environmental factors at mainstream schools and their impact on integration in the case of HH students. This may be explained by a variety of contextual factors that constrained educators and made them hesitant to tolerate Deaf inclusion.

In terms of educational provision, teachers believed that while students might have some problems, it is the school's responsibility to accommodate their needs. This finding is supported by the argument that neither environmental (Gutierrez and Stone, 1997) nor individual variables (Ainscow and Hart, 1992) can be disregarded. It is consistent with the interactive approach to understanding SEN children in general. This method of perceiving special needs sees the level of need as the product of an interaction between the student's strengths and weaknesses, the level of support available and the suitability of the educational alternative being provided (Frederickson and Cline, 2002). Thus, the school environment should be assessed and prepared in order to receive SEN pupils in general and DHH ones in particular.

Regarding terminology, there was a tendency among participants to prefer 'SEN', as it avoids stigma and any negative implication (S3h, I5m, A7s, K6a, A8o, M9b and M2m). This preference is compatible with the ethos of the Warnock Report on SEN (1978 and 2005) and the SEN and Disability Act (SENDA, 2001), which promoted eliminating the conventional classifications of disabled children and shifting the focus to the type of special educational provision, identified according to a comprehensive profile of individual needs. This is relevant to the UK debate around the term 'SEN' as it has a

negative meaning for many people, although some argue that it should have positive implications (Norwich, 2013).

7.4.3 Perceptions and attitudes towards DHH integration/inclusion

The third theme to be considered (T3) is Saudi educators' perceptions of integration/inclusion (Chapter 6, Section 6.3, and Table 6.5). Teachers and administrators agreed unequivocally that inclusion entails giving all special needs students' easy and equal access to their nearest local mainstream school, which reflects the integration ethos (Avramidis et al., 2002). However, there was no mention of the importance of engagement or belonging (Bayliss, 1998), nor of respect, value, participation and accommodating diversity (Ballard, 1995; Ainscow, 2005), suggesting that participants' understanding of the mainstreaming movement was associated with integration but not inclusion. They appeared to perceive inclusion in a relatively reductionist way (Elshabrawy, 2010), not as a complex educational system but merely as the sum of its parts. This entails an extensive provision of resources, in-service training, adapting effective pedagogy, additional support services and modification of curricula and examinations throughout mainstream schools, in order to be inclusive. This finding is consistent with that of Vaughn et al. (1996), that teachers' perceptions of inclusion depend largely on five factors: decision-makers' engagement with classroom realities, classroom size, inadequate resources, the extent to which all students would benefit equally from inclusion, and the lack of adequate teacher preparation. Similarly, Avramidis and Norwich (2002) conclude an extensive review of literature on teachers' attitudes towards inclusion by recommending significant restructuring of the mainstream school environment prior to inclusion, as this was an implication of some studies.

On the second sub-theme, both groups felt that special/self-contained classrooms were the best alternative for the time being for HH and less favourably for Deaf students, in light of the current status of mainstream schools. However, administrators emphasized that Deaf students should be told about mainstream schools in the first place and their consent obtained for any move from Al-Amal Institutes, because mainstream classrooms were not always the most beneficial educational alternative for all DHH students. This is in line with the findings of Most (2006), who studied hearing and hearing impaired (HI) Israeli Palestinian students in Israel, comparing their scores on the Screening Instrument

for Targeting Educational Risks and their achievement in Arabic and mathematics. The sample comprised HI students included in general education classrooms, in comparison to their classmates with normal hearing. HI students were found to lag behind their hearing peers and, more importantly, the level of functioning of HI students declined as grade level increased.

There was again consensus on the third sub-theme that supervisors at the SEN Department at Jeddah LEA should ensure that all necessary classroom alterations be made and audio-visual equipment provided in mainstream schools before moving any Deaf or HH students from their special school settings. The availability of physical and human resources (Avramidis and Norwich, 2002) has often been found to be related to more positive attitudes towards inclusion (Center and Ward, 1987; Clough and Lindsay, 1991; Myles and Simpson, 1989).

Finally, the two groups agreed that under no circumstances should any Al-Amal Institute be closed because of expansion of integration programmes and that they should work in harmony, not in conflict, which corresponds with Warnock's recent position (Terzi et al., 2010). This raises the question of mainstream schools' efficiency, because most participants argued that there would always be a need for some form of special school, but that they should probably be used more flexibly and adopt new roles (Chapter 6, Section 6.3.4, Table 6.3). Ainscow and Bond (2007) highlight five advantages of special schools: the consistency and continuity of education that can be provided, teachers' and administrators' common desire to educate and support students with difficulties, the provision of expertise in a well-organized school environment, the provision of an educational alternative with appropriate curricula and pedagogy, and the opportunity for school-based in-service training. These points of strength would allow special schools to play a new role as resource centres that could provide advice and innovative ideas for transferred, new and mainstream teachers in public schools.

Thus, the two groups agreed upon all four sub-themes and no major differences were found. Additionally, the qualitative data analysis indicated that the participants held different conceptions of inclusion, ranging from little understanding of integration to suggesting quite reasonable familiarity with the notion of inclusion. Generally, they were

oriented towards the integration philosophy (Avramidis et al., 2002), as their perceptions were based on the nature and severity of disability. These findings harmonise with the results of Forlin (1995), Bowman (1986) and Chazan (1994), who found that teachers tended to prefer part-time integration of students with mild and moderate physical and sensory disabilities. The participants' alignment towards the integration ethos could be explained by the influence of many contextual constraints which they acknowledged as barriers to the development of inclusive education (see Section 7.4.6). Interviewees' overall attitudes towards inclusion were fairly positive, consistent with other studies (Sadek & Sadek 2000; Tufelis, 2001; Avramidis et al., 2000; Avramidis & Kalyva, 2007; Rojewski & Pollard, 1993; Villa et al., 1996; Ward et al., 1994).

The long history in Saudi Arabia of the two models of DHH school settings (special and mainstream) may have affected teachers' perceptions of the suitability of inclusive settings. This corresponds with the finding of Romi and Leyser (2006) in Israel that despite showing very strong support for the philosophy of inclusion, teachers sometimes tended to prefer special education placements for some SEN students, expressing concerns about behavioural problems and management issues in inclusive settings. Educators in the present study saw self-contained classrooms as a good alternative setting for HH students to gain access to mainstream education, as debated by a considerable number of researchers (Croll & Moses, 2000; Kauffman & Hallahan, 1995; Low, 2007; Slee, 1993; 2006) who have sought to identify the most appropriate placement for disabled students. This finding is also consistent with that of Avramidis et al. (2002), whose participants were more acculturated to the integration than the inclusion model, seeing only some SEN children as suitable for inclusion. The authors further argue that inclusion presumes a significant restructuring of mainstream schooling to accommodate all students regardless of their special needs, which the present study seems to partially agree with.

7.4.4 Perceptions of DHH inclusion and requirements for in-service training, teaching skills and Arabic Sign Language

The fourth theme to be considered (T4) is Saudi educators' perceptions of the inclusion process for in-service training, teaching skills and ASL (Chapter 6, Section 6.4, Table 6.7). Teachers believed that they had acquired all the necessary competences to teach

DHH students, because most of them were obliged to obtain a degree in Deaf education, while those who wished to transfer from mainstream into Deaf education would require a diploma in Deaf education. The second sub-theme was that most felt that their experience of teaching in various settings had afforded them all the competences required to work with DHH students, with the exception of a number of administrators, since all mainstream programmes were administered by staff unspecialized in SEN and only the three Al-Amal administrators were SEN specialists.

A number of interviewees mentioned that mainstream schools accepted Deaf or HH students without first requiring administrators to obtain an SEN diploma or even to attend a short intensive professional course in ASL at level one. One explanatory factor may be the incentive of the additional 30% in salary awarded to all educators working with SEN (including DHH) students at all mainstream Saudi schools, irrespective of qualifications. The decision to initiate an inclusive programme should be driven by the desire to provide equal educational opportunities for all, not merely to gain financially (further discussed in sections 7.5.1 and 7.5.2). This emergent theme could partially explain the administrators' positive views on inclusion. It has been generally argued that inclusion should benefit DHH and hearing students alike by helping them to learn together about individual differences, enabling tolerant and accepting attitudes of their own strengths and weaknesses (Buysse et al., 1998). It is also relevant that Pearson et al. (2003) found that more accepting attitudes towards receiving students with special needs and their admission into mainstream schools were expressed by educators at mainstream schools with extra funding provision, teachers trained to teach special needs students, additional help and counselling resources, and specialist support.

However, Riehl (2000) identifies three main tasks of inclusive education administrators according to their responses and respective contributions to inclusion and diversity as: a) embracing the development of new understandings of diversity, b) promoting an inclusive ethos and culture within schools (e.g. inclusive pedagogy and learning practices) and c) establishing connections among 'microsystems' (pupils, schools, families and communities). The approach of mainstream administrators to these three roles would define the level to which their practices are characterized as being inclusive and able to successfully achieve changes to accommodate students with diverse needs (Riehl, 2000).

Inclusion is widely perceived as having overall beneficial effects and has been reported as an advantageous choice by educators and integrated students alike (Andrews and Lupart, 2000; Biklen, 1992; Bunch et al., 1997; Lombardi et al., 1994; Northcott, 1973; Stoker and Spear, 1984; Winzer, 2002). However, the interview data suggest that educators may be keen to initiate mainstream programmes (before establishing all the prerequisites of inclusion), not for the good of the educational, social and emotional development of DHH students but rather for their own benefit. In addition to the (a) 30% additional salary mentioned above, these benefits include (b) a reduced workload (from 24 to 18 lessons per week) and (c) much smaller classes (6 to 9 students instead of 33 to 39). Nonetheless, specialized administrators believed that they had adequate competencies to educate and serve DHH students.

Interviewees also referred to the influence of professional development programmes in the creation of positive attitudes towards DHH inclusion. The results indicate that both pre-service and in-service training programmes played an important role in forming teachers' attitudes towards inclusion. In this regard, Schmidt and Venet (2012) cite Salisbury and McGregor (2002) and Guzman (1997) as having interviewed five administrators considered exemplary in their practices of inclusive education. The features of inclusive leadership identified by these participants included encouraging the formation of learning communities and sharing the power of decision-making with staff members. The researchers report four main findings: 1) these administrators attempted to bring about practical changes in attitudes, beliefs and practices to enhance and improve each school's ethos; 2) they hired staff members by taking a reflexive approach and sharing experience from various schools to elicit constructive discussions of the values and implications of diversity, inclusion, collaboration, and cooperative and individualized teaching practices; 3) they knew how to create innovative opportunities to permit staff members to reflect on the factors which might affect the enhancement of inclusive practices; 4) and staff at these schools learned to collaborate more effectively, modify their teaching approaches to support all students and document the efficiency of their intervention techniques. These findings indicate the importance of both continuing professional development (CPD) and the inclusive ethos of mainstream schools.

However, there was some inconsistency between the questionnaire and interview results regarding the role of training. The former indicated that the effects of training were limited and insignificant, while the latter suggested a greater positive effect of training upon educators' attitudes towards DHH inclusion. The effect of training on teachers' attitudes is not unexpected, given the wealth of attitudinal studies in the literature confirming the role of training in forming positive attitudes towards inclusion (Beh-Pajoo, 1992; Shimman, 1990; Buell et al., 1999; Van-Reusen et al., 2000; Center and Ward, 1987; Avramidis et al., 2000; Avramidis and Kalyve, 2007; Leyser et al., 1994; Lifshitz et al., 2004; Shade and Stewart, 2001; Dickens-Smith, 1995).

Additionally, the qualitative data analysis showed that participants had reservations about training courses that focus on traditional teaching methods but not related directly to DHH inclusion and sign language efficiency. In a sense, this reflects what Florian (2008) calls 'inclusive pedagogy', which should be enhanced by different teaching strategies to accommodate the diverse needs of DHH students. These teaching strategies include: a) facing the class while speaking, b) providing preferential seating to facilitate lip reading, c) writing notes and assignments on the whiteboard, d) providing class notes, e) speaking more slowly, f) facilitating the use of buddies and note-takers in class, g) providing active participating opportunities for learning including labs, resource rooms and small group discussion (Eriks-Brophy et al., 2006). Inclusive pedagogy is crucial for all mainstream teachers, because effective teaching strategies can work with all students, rather than using teaching styles limited to DHH students. Similar findings are reported by Cook and Schirmer (2003) and by Lewis and Norwich (2005), who propose that teaching strategies can be considered to lie along a continuum from high to low intensity, rather than according to their association with a distinct group of SEN students. The interview analysis showed that in-service training played a role in developing teachers' attitudes. This could be explained by the direct effect of in-service training on teachers' attitudes, as it addressed their everyday problems and guided them in how to teach, support, communicate, socialize, help and interact effectively with all students, DHH as well as hearing.

The discrepancy in results between the questionnaire and the interviews might be explained in several ways. The quality of training rather than its quantity may be a key

factor in determining educators' responses (Chapter 6, Section 6.4.3). Cosmetic training courses will have less effect than longer-term reflective training (Bayliss, 1998) that would allow for the acquisition of generic teaching skills (Elshabrawy, 2010). The contrasting results from the first and second phases may alternatively be explained by the belief of some participants that training automatically leads to positive attitudes. However, the interview analysis indicates that intensive in-service training programmes were seen as functional only when carefully and professionally planned and continuously provided, which is consistent with the conclusion of Elshabrawy (2010). The second phase findings demonstrate that short, outdated, routine training programmes may not be adequate to construct solid positive attitudes towards inclusion (Avramidis & Kalyva, 2007; Leyser & Tappendorf, 2001; Martinez, 2003). Given that some Saudi teachers move from mainstream into special education without standardised training or a specialist diploma in Deaf inclusive teaching/pedagogy and sign language (or other relevant teaching approaches), it is essential to rethink teacher training from general to inclusive education, so that all teachers are professionally trained to be able to meet the needs of all students. Without this course content (i.e. Deaf inclusive pedagogy and sign language), provided via these specialist diplomas, newly qualified teachers lack the necessary background information to provide a quality education to DHH students. A Deaf inclusive education diploma will need to address this flaw if transferred and new teachers are to be effective in the near future. A restructuring of their training programmes and specialist diplomas curricula and methods will be required in order for this change to be successful.

A helpful suggestion made by Peneston (2012) for universities and specialist centres for Deaf education would be for them to begin to collaborate with the schools and local authorities which employ their diploma graduates to determine exactly where the specific weaknesses lie (identifying and assessing dilemmas or problems). After that, work could be undertaken with those mainstream schools to initiate and redesign their diplomas and other DHH inclusive programmes in order to obtain the desired outcomes.

This progressive type of inclusive teacher training course should provide training on the psychological principles as well as educational principles of DHH teaching styles, e.g. differentiating the national curriculum, assessing academic progress in writing and via sign language, managing behaviour in inclusive settings, designing and developing IEPs

to suit each Deaf or HH student, recognizing and accommodating the needs of all learners, and working collaboratively with other mainstream school members of staff (Avramidis, 2006). Such courses should also provide knowledge resulting in a critical understanding of the inclusive educational process (Robertson, 1999), which would ultimately empower teachers to respond innovatively to the difficulties of attaining successful social and academic participation and inclusion, and remove barriers to better achievement (Norwich, NALDIC 2011). If Saudi teachers received professionalized, modernized and regular assistance/training in the skills necessary to implement successful inclusive education, they would be likely to become more committed towards inclusive change as their efforts and skills increased (Avramidis, 2006). In addition, this well-prepared specialised training could provide them with regular CPD courses provided by an expert in ASL and Deaf education, to facilitate inclusive pedagogy.

In the UK, the House of Commons Select Committee Report on Special Educational Needs (2006) makes recommendations about training and equipping the workforce relevant to SEN provision. The Committee focuses on SEN training as a core measure of initial teacher training for all schools (e.g. advanced skills for some teachers/all schools, and specialist skills in some schools) and refers to a three-fold strategy for SEN training: 1) initial training for newly qualified teachers; 2) CPD; 3) the three-stage 'training triangle' model from the 2004 Government SEN Strategy (Terzi et al., 2010). The Committee also makes recommendations concerning qualified SEN coordinators, appropriately trained teachers in all mainstream schools in management positions, specialist support services, the role of educational psychologists, the place of early intervention, managing key transitions and effective parent partnerships (ibid).

7.4.5 Perceptions of the inclusion process and requirements for support services, resource rooms and teaching assistants

The fifth theme to be considered (T5) is Saudi educators' perceptions of inclusion requirements in terms of additional support services, resource rooms and teaching assistants (Chapter 6, Section 6.5, Table 6.8). The two groups agreed that all educational logistics required for DHH should be provided by the Ministry of Education through the Jeddah LEA. They emphasized that private donations should not be the main source of teaching aids, because it is not the responsibility of teachers and parents to secure these

fundamental requirements. On the second sub-theme, teachers tended to agree that existing visual aids were inadequate and that more government support was needed in this matter, whereas administrators were divided on this question: only half believed that their schools had adequate DHH visual aids. As to the final sub-theme, there was complete agreement that easing the transition from integrating DHH students by granting them access to the nearest local mainstream school to benefit from the progressive concept of inclusion would be smoothed by launching a new post of ‘teaching assistant specialising in ASL’.

Participants in both groups indicated that to include Deaf or HH students in ordinary classrooms with more than thirty students without help from a TA would be impossible. Another important justification for recruiting TAs is to facilitate inclusion at the intermediate and secondary stages, where teaching requires an advanced level of fluency in sign language which is able to communicate abstract reasoning and metacognition, in addition to a degree in an academic subject, which is hard to find in one teacher. Thus, having a specialized teacher with a TA who is fluent in ASL would improve the chance of successful inclusion. DHH students enrolled in mainstream educational settings require classroom support services such as TAs if they are to accomplish their academic potential. However, there is considerable evidence that DHH students continue to lag behind their hearing peers in a variety of academic fields and across placement settings in the USA (e.g. Karchmer & Mitchell, 2003; Traxler, 2000). Although DHH students in mainstream education show overall academic achievement somewhat higher than that of their peers in special classrooms or special schools (Antia et al, 2008), those who are in mainstream education classrooms continue to lag behind those of hearing student peers, on average falling at the “low-average” level in the USA (Most, 2006; Antia et al, 2008).

Empirical interest in learning via sign language interpreting has re-emerged recently, as the dispersal of Deaf students to local public school classrooms was not accompanied by progress in understanding how students learn via interpreting (Kluwin & Stewart, 2000; Marschark et al., 2005a; Stewart & Kluwin, 1996). According to several researchers, the impact of educational interpreting on DHH achievement is only now being explored. Results of various studies raise questions about its effectiveness and how support services harmonise with student communication skills. Research interest in learning through sign

language interpreting has emerged recently, partly because the major transfer of DHH students into local mainstream schools has not been accompanied by progress in understanding how students learn through interpreting (Kluwin & Stewart, 2000; Marschark et al., 2005a; Stewart & Kluwin, 1996). This is why most participants believed that highly fluent TAs could significantly enhance DHH inclusion.

Thus, inclusion seemed to be understood by the majority of participants in the current study as a process in which features such as resources (e.g. labs, resource rooms, C-print), training (e.g. pre- and in-service CPD courses), appropriate support (e.g. on-demand lecture notes, real-time translation), adaptation of the curriculum (e.g. drawings and pictures of both alphabetical and cued signs) and the examination system (Marschark et al., 2006) would need to be developed more extensively (Stinson & Ng., 1983; Stinson et al., 1988; Stinson et al., 2000; Stuckless, 1983). Sign language interpreting is an essential support service for many DHH students. Until recently little was known about how well DHH students learned via interpreting (Harrington, 2000; Lang, 2002). These findings coincide with that of a study by Morley et al. (2005), whose participants perceived inclusion as a journey towards improving educational quality for all learners. They also support the argument of many authors, including Booth and Ainscow (1998), that inclusion is a continuous process of reducing barriers to accomplish active participation and learning for a great diversity of students.

Additional support services constitute an important theme raised by various participants in the current study (Sari, 2007). Avramidis and Norwich (2002) identify some factors associated with positive attitudes towards SEN inclusion: availability of support services in mainstream classrooms at all school levels (Center and Ward, 1987; Clough and Lindsay, 1991; Myles and Simpson, 1989; Janney et al., 1995); logistical and physical support, such as availability of adapted teaching materials (LeRoy and Simpson, 1996; Center and Ward, 1987); continuous encouragement by the headteacher (Janney et al., 1995; Chazan, 1994; Center and Ward, 1987; Thomas, 1985); support from specialist resource room teachers (Kauffman et al., 1989; Janney et al., 1995; Clough and Lindsay, 1991; Minke et al., 1996); more collaborative plans for non-contact time (Diebold and von Eschenbach, 1991; Semmel et al., 1991; Myles and Simpson, 1989).

The findings of these studies and of the present study emphasize the need for interpreters to facilitate DHH inclusion in their local communities (Schwartz, 1990). In contrast, the findings of Eriks-Brophy et al. (2006) indicate the need for sensitivity towards DHH students and the use of facilitative communication strategies as opposed to intermediaries (e.g. TAs, itinerant teachers and interpreters). This unique viewpoint emphasizes the criticality of independence and the ability of each DHH student to participate as an equal agent.

7.4.6 Main barriers to successful DHH integration/inclusion

The sixth theme to be considered (T6) is Saudi educators' perceptions of barriers to successful DHH inclusion (Chapter 6, Section 6.6, Table 6.9; section 6.7.2, Figures 6.6 and 6.7). There were major similarities between the two groups in terms of priorities, as both considered human resources, whether teachers or administrators, to represent a more serious barrier than school and classroom-related environmental or structural factors. Among the various barriers which were found to have contributed to the tendency of educators to express relatively negative attitudes towards Deaf inclusion, the qualitative analysis highlighted the role of contextual factors and revealed perceptions of many barriers to more inclusive education practices. This corroborates the findings of Elshabrawy (2010) and Avramidis (2001) that barriers to inclusion are complex and involve various interrelated circumstantial factors which need to be addressed cautiously in order to accomplish inclusion effectively.

Most administrators from mainstream schools in the current sample admitted ignorance of how to utilise assistive technology and a lack of effective communication skills in DHH education, consistent with the findings of Eriks-Brophy et al. (2006). Specialist DHH teaching is also required in this regard, because of the layering and spatial organisation of meanings within sign language, leading to differences in development between signed and spoken modalities that may affect both social and cognitive development (Moeller & Schick, 2006). Gregory (1998) questions whether DHH students think differently because of their visual focus, influencing their preferences for methods of instruction. Similarly, Sari (2007) found that teachers in Turkey who attended intensive in-service training courses based on DHH-friendly teaching increased their knowledge of D/deafness and that their attitudes to DHH inclusion were significantly more positive than those of a

control group. Sari also cites Sahbaz (1997) as stating that teachers never become comfortable with DHH students in their classes if they are not provided with regular specialized and updated information about Deaf education. According to Stakes and Hornby (1998) and Webster and Wood (1989), the greater the D/deafness the more extensive is its perceived effects and the more time is needed to help the student overcome his/her communication and learning needs. Most (2004) found that students with mild or moderate hearing loss might be viewed more positively by classroom teachers than those with severe or profound loss.

Hearing loss from birth often represents a significant barrier to the natural acquisition, development and use of spoken language (Eriks-Brophy et al., 2006), which may partially explain the tendency of most participants to accept the integration of HH rather than Deaf students. In a recent study, El-Zraigat (2013) found that moderately HH students with 55-69 dB hearing loss might benefit more from assistive technology than severely Deaf ones with ≥ 90 dB hearing loss. Therefore, there is a clear need for hearing aids, speech and language units and differentiated teaching and learning styles (Northern and Downs, 2002; Moores, 2001). Indeed, the degree of hearing loss and any delay in fitting DHH students with appropriate hearing aids or cochlear implants are two important factors that impact directly on spoken language acquisition. Thus, the resulting overall language delay often found in DHH students has been seen as an underlying cause of reduced academic achievement, which results in educators' reluctance to accept DHH students in their classrooms (Moores, 1982; 1996; Maxon et al., 1982). Therefore, the placement of DHH students into inclusive settings, either in special or mainstream classrooms, has been a controversial educational alternative (Eriks-Brophy, et al., 2006).

In addition, teachers who were recently transferred from the general to special education sector, to meet the demands of mainstreaming expansion, also lacked experience in educating DHH students (Chapter 6, Section 6.6.1, Figure 6.5). There was no agreement between the two groups on the second sub-theme, however. Most teachers said that lack of fluency in sign language represented a major teacher-related barrier, particularly among newly and transferred teachers. Administrators, on the other hand, had diverse views on which human-related factor or skill was the main barrier to successful DHH inclusion.

On the third sub-theme there was consensus, consistent with the literature, that human resources training should be given more attention, to improve mainstream school practices (Jordan et al., 1997; Hyde and Power, 2003; Sari, 1993), and that it is crucial from the beginning for educators to feel an active part of the inclusive planning process for effective and successful DHH inclusion (Montgomery, 1993; Garner, 1996; Akcamete, 2005). However, teachers added that the LEA should provide all facilities to accommodate DHH students within Jeddah mainstream schools, rejecting reliance upon teachers and parents for ‘donations’. This same point was raised repeatedly by several participants when considering the requirements of the inclusion process (Section 7.4.5). Relying heavily on donations would result in lack of consistency in services provided to DHH students, the placement of students with hearing loss in classrooms with large student-teacher ratios and inadequate budgets for the purchasing of assistive technology, hearing aids and acoustic modifications to classrooms (Eriks-Brophy et al., 2006). In a study of developing inclusive schools and how to change teachers’ attitudes and practices through critical professional development, Avramidis (2006) identifies two main barriers to promoting successful inclusion: the competitive policy environment, which renders mainstream schools unfavourable places for SEN students, and the inadequate preparation of teachers to meet the needs of an increasingly diverse student population (e.g. hearing, Deaf and HH students). He suggests an alternative perspective: that inclusion requires a shift from the pathological-disability-individual model of need towards social belonging, academic participation and productive pedagogies that accommodate all learners (Avramidis, 2006).

Full discussion of this theme is combined with that of the following theme, given the overlap between the barriers to success and the need for change to ensure that success.

7.4.7 Need for change

The final theme to be considered (T7) is perceptions of the need for change to successful DHH inclusion (Chapter 6, Section 6.7, Table 6.10; section 6.4.2, Figure, 6.2). The two groups agreed on the first sub-theme, believing training, particularly in ESL (or ASL), to be very important (Jordan et al., 1997; Hyde et al., 2003; Kayaoglu, 1999; Sari, 2007; Beh-Pajooh, 1992; Shimman, 1990; Buell et al., 1999; Van-Reusen et al., 2000; Center and Ward, 1987; Avramidis et al., 2000; Avramidis and Kalyve, 2007; Leyser et al., 1994;

Lifshitz et al., 2004; Shade and Stewart, 2001; Van Reusen et al., 2000; Dickens-Smith, 1995). As discussed in Sections 7.3.1 and 7.4.6 and by Power and Leigh (2004), the lack of high-quality and consistent training is one of the main barriers to DHH inclusion; this includes in-service ASL training for newly and transferred mainstream teachers. Many mainstream teachers learn signing from the DHH students they teach (Schick et al, 2006). This is consistent with the conclusion of Reeves & Kokoruwe (2005) that the ability to sign fluently is consistently considered the greatest need by DHH students, teachers and administrators. They consider the ability to communicate visually with DHH students the most important characteristic of effective mainstream teachers and TAs. However, administrators added that mainstream classrooms should be facilitated and well equipped to match those in special schools. Moores (2001) refers to differences between DHH and hearing students in how, what and where they are taught. As previously discussed, mainstreamed DHH students should be offered additional services such as speech and language therapy, audiological rehabilitation, professional educational interpreters, teaching assistants, modified curricula, specially adapted instructional materials and special teaching approaches (El-Zraigat, 2013). Educators at mainstream schools must be able to communicate effectively with DHH students by developing language skills. Inadequate competence or fluency in signing, limited opportunities for in-service training and the failure to require proficiency for employment provide major barriers to successful DHH inclusion. Waters and Sroufe (1983, p. 80) define competence as “an integrative concept that refers to the ability to generate and coordinate flexible, adaptive responses to demands and to generate and capitalize on opportunities in the environment”. Komesaroff (1999) classifies such barriers as personal (reluctance to accept educational change) and structural (seeing D/deafness simply as a disability). Administrators in the present study argued that early intervention had to take place in Jeddah to maximize DHH students’ potential.

On the second sub-theme, the groups agreed that classrooms should be modified before receiving DHH students (Chapter 6, Section 6.5.2, Figure, 6.4). Administrators added that this modification should take the shape of enhancing classrooms with visual aids and signs, everyday checking of hearing aid functions, double-glazed windows and sound-insulated flooring. There are several key studies that address how Deaf teachers may engage Deaf students in visually oriented and meaningful ways (Marschark, 1997).

There was also agreement on the third sub-theme, of curriculum modification. Both groups opposed the latest decision of the LEA to teach the national curriculum to all DHH students (Chapter 6, Section 6.8.3, Figure, 6.9). Participants indicated the need for special curricula that meet DHH developmental stages. These results are consistent with the findings of several researchers, such as Johnson and Seaton (2012), Dimiling (2010), Wolters et al., (2011) and El-Zraigat and Smadi (2012). Interviewees favoured a special curriculum because they had noticed that DHH students found it difficult to achieve a sufficiently high level of language proficiency and numeracy. Thus, they believed that modification should take the form of enhancing textbooks with more coloured pictures and cued signs, using less wordy text. This finding is consistent with the call by many educational researchers for a rethinking of the curriculum and with the reported expectations of mainstream teachers (Angelides, 2004; Stainback & Stainback, 1992). In addition, Norwich (2013) indicates that there is a tradition in special education in which what is 'special' is the specialized nature of the areas of learning and the objectives of programmes within these areas to reduce any difficulties or avoid them. He identifies therapeutic programmes that involve both teaching/learning processes and therapeutic interventions which are learning-based. In the case of DHH students, speech and language therapists or clinical psychologists work actively with teachers of the Deaf in developing programmes for students with hearing impairments.

On the fourth sub-theme, teachers believed that continuous evaluation and objective exams such as multiple choice and filling gaps should be continued without change, being easier for DHH students and not requiring high-level language skills. Studies of exam success among DHH students are underrepresented in the literature, but they do account for some of the most recent research in the UK. Socio-economic status, the presence of additional child difficulties and language used in the home appear to be more reliable indicators of DHH exam success than is degree of hearing loss (Powers et al., 1998). Thus, the current analysis of data indicates that participants believed that the national curriculum taught in mainstream settings and the examination system represented additional barriers to successful DHH inclusion.

Finally, there was partial agreement on the fifth sub-theme: the groups agreed on the urgent need to modernise the traditional transmission teaching method but differed on

how to achieve this. Teachers preferred to make use of the total communication approach, utilizing all modes of communication: written, spoken, finger spelling and cued signing. They also preferred homework to be done at school, not at home, as parents tended not to follow up their child's academic attainments properly. However, administrators envisaged the modernization of teaching through a bilingual/bicultural approach which would put greater emphasis on interactive IT skills, because DHH students respond well to visual stimulation of their creative and critical thinking skills.

As noted above, the findings related to barriers and to the need for change will now be discussed together. The questionnaire and interview findings revealed a perception amongst participants that many barriers had to be overcome and prerequisite conditions met to smooth the transition to an inclusive education system. Overall, the results underline the role of background factors more clearly and support the argument that barriers to inclusion are not simply an issue of resources. Rather, it is a complex issue that incorporates many interrelated contextual factors (Elshabrawy, 2010), which should be addressed cautiously in order to implement DHH inclusion efficiently. For example, issues of lack of training and retraining in sign language were amongst the main concerns for some teachers. In terms of resources, it is unsurprising that most teachers in this study wanted more modern and high-quality resources and additional support services to develop a successful DHH inclusive educational system. This accords with the finding of Eriks-Brophy et al. (2006) that poor working conditions or outdated pedagogical technology were mentioned by many participants as key barriers to successful DHH inclusion. In addition to donations by teachers and families, LEAs should take responsibility for providing resources for the purchase and maintenance of equipment and the proper functioning of hearing aid technology. Donations constituted a recurring theme raised by several participants, who felt that the facilities and services delivered by some teachers or parents in Jeddah were not enough to meet DHH students' needs, because of limited financial support. Thus, it should be noted that the lack of services offered may negatively impact the success of DHH inclusion.

Additional barriers related to the LEA or administrators included a lack of consistency in services provided to students with hearing loss, a lack of budgetary consideration for the purchasing of assistive technology and acoustic modifications in classrooms and a lack

of commitment to the allocation of funds for resource support services for both teachers and students, which is in line with the findings of Eriks-Brophy et al. (2006). They were also looking for further training, especially in cued sign language. A solution suggested by an Australian educational study is to target and retrain mainstream school teachers, with specific knowledge of the curriculum, in DHH education and sign language (Paterson, 2003). In addition, McKee (2005) suggests that employing DHH paraprofessionals in mainstream schools is a fundamental success factor for visually communicating students because of their ability to model good language and cultural skills. Furthermore, provision of early ASL requires a major shift from looking at D/deafness as a deficit/disability towards a cultural/lingual minority perspective (Evans, 2004; Johnston et al., 2002).

However, lack of resources should not be used as an excuse for not promoting inclusive practice, as Miles (2000) notes, arguing that the attitudinal barrier to inclusion is so great that the level of resourcing may be seen as irrelevant. A large number of barriers to effective DHH inclusion have been associated with factors related to teachers and administrators (Eriks-Brophy et al., 2006), including mainstream classroom teachers who lacked information (Sari, 2007), preparation and/or interest in understanding the effects of hearing loss on communication development and academic performance (Tufekcioglu, 2002; Sari, 2007), or who were unwilling to invest the additional time and effort that might be required to teach DHH students effectively. An additional barrier to successful DHH inclusion was the negative attitudes of educators (Most, 2004; Punch, 2005; Sari, 2005) who were inflexible in their alternative teaching styles and evaluation strategies (Staks and Hornby, 1998; Kayaoglu, 1999) or unwilling to maintain active communication with parents and solicit their involvement in the educational process (Eriks-Brophy et al., 2006). It is people's attitudes to these resources and how to make use of them in different ways that are important to the advancement of DHH-inclusive education.

The data analysis indicates that the majority of teachers participating in the current study also believed that the curriculum and evaluation system represented a barrier to inclusion. Teachers were against imposing the national curriculum for all children, as it requires high level linguistic skills (i.e. reading and writing) and so does not suit DHH students.

Most studies have shown that DHH students lag several years behind hearing students in their reading achievement, but some have indicated that degree of hearing loss and educational placement itself do not appear to influence reading and may not be the most important factors in reading achievement when others are taken into account (Powers et al., 1998).

The current study supports the argument of many authors about rethinking the curriculum (AlAmri, 2009) and about the expectations of teachers and parents (Angelides, 2004). Teachers' apprehensions about the curriculum could be explained by their distress (Figure 6.9, section 6.8.3) at not achieving the national performance targets in the timeframe planned, which they found problematic as it might affect their positions (Carrigan, 1994) or result in burnout. Educators of DHH students at mainstream schools must assume the responsibility of imparting knowledge in a variety of fundamental content areas related to DHH education, motivating students to learn while maintaining enthusiasm and working in conjunction with parents, among many other duties. They must have a strong background in audiology, be able to individualize instruction to facilitate IEPs, work with a variety of secondary diagnoses and know the boundaries that distinguish the teaching of Deaf and HH students from hearing ones. Taking into consideration all these duties, responsibilities and everything that goes into teaching this population, it is no wonder that there is such a high rate of burnout (Holstein, 2008; winona.edu, 2008). This implies that SEN supervisors should grant more flexibility to DHH teachers in choosing from the textbook what could benefit DHH students and that curriculum designers at the Saudi MoE should consult DHH educators and experts in the process of curriculum formation on how to add cued signs and other Deaf-friendly illustrations in order for these students to have their voices heard.

The main concern for Saudi educators regarding the curriculum and the examination system is that they have no control at all over decisions regarding developing appropriate curricula (AlAmri, 2009), or planning effectively for inclusive education. There is an acceptance that all content areas of the curriculum should use all lessons as channels for developing cognitive and language abilities, particularly vocabulary richness. Marschark and Spencer (2003) criticise the training of teachers of DHH as lacking sophistication in understanding modern curricula and alternative methods (Fitzgerald, 2010). This is quite

important and supported by the findings of Powers et al. (1998), who raise three crucial issues associated with active participation within DHH mainstream schools: the involvement a) of DHH students in decisions that affect them, b) of parents in decisions that affect their DHH children and c) of DHH adults in policymaking. These findings are echoed by the RNID (2002) which reports that DHH students considered that they were not actively involved in planning how their needs should be met. Wilbur (2000) further argues that a clear goal of DHH mainstream education is to provide equal access to an age-appropriate curriculum in all areas (Fitzgerald, 2010). Similar concerns are reported by Forlin (1995) among Australian teachers.

The data offers considerable evidence that both new and transferred teachers felt inadequately prepared to serve Deaf students in general education classrooms in the current situation (Figure 6.2, section 6.4.2). Despite the best efforts of DHH mainstream educators, they sometimes do not provide a sign language user with adequate linguistic, academic and social participation in a learning context configured for hearing students. Examples are given of DHH students working quite differently from the rest of the mainstream class because of a lack of prior knowledge required for the lesson, of a strong language base and of skilled interpreting (McKee & Biederman, 2002). This is supported by the finding of Cawthon (2001) that teachers directed fewer utterances to DHH students than to hearing students (Fitzgerald, 2010). In general talks, DHH students were not actively engaged in the classroom dialogue. Interpreters were providing more support than just interpreting, which extended to explaining lessons and cueing for attention to task. DHH students sometimes reported few or no meaningful social relationships or friendships with hearing students, even when good interpreting was available (Russell, 2010).

The current finding that newly transferred mainstream teachers felt their skills and training to be insufficient to serve Deaf students adequately, especially in sign language, conforms with the argument of many authors (Forlin, 1998; Lambe and Bones, 2006; Smith and Smith, 2000; Winter, 2006) that a lack of training and skills among teachers is a major obstacle to developing inclusive education. Russell (2010) concludes that teachers can be oriented to develop alternative strategies and teaching styles that include DHH students, such as preparing lessons with the interpreter or TA, ensuring adequate

pauses, calling on DHH students to answer, use of the board and other visual cues, and reduction in dual simultaneous requirements. Teachers of the DHH and TAs are able to provide more monitoring of comprehension and engagement strategies, including use of metacognitive questions and language modelling, when they work actively together (Russell, 2010).

Thus, it is imperative to prepare teachers to have both the confidence and the skills to teach in inclusive settings, equipping them to provide appropriate teaching for both hearing and DHH students. The results of the current study confirm this proposition. To ensure successful implementation it is vital that in-service training for teachers is intended to promote positive attitudes and these training courses should be technically supported (Avramidis, 2001), professionally designed and continuous. For real inclusion, all educators and DHH students need skills in sign language and DHH culture. Acknowledging and accepting social and cultural difference promotes greater equality of interaction (Komesaroff & McLean, 2006).

Additionally, mainstream school factors that promote successful DHH inclusion encompass administrative support, adequate resources, adequate scheduled time for teachers to plan with special educators and to make adaptations, and scheduled high-quality in-service training for new and transferred teachers (Reed et al, 2008). In conclusion, Luckner and Muir (2001) and Reed et al. (2008) investigated the variables that influence the academic success of DHH students in general education classrooms in the USA and identify the following factors as contributing most to developing successful DHH inclusion among educators and DHH students themselves: family involvement, self-determination, extra-curricular activities, friendships skills, self-advocacy skills, communication with and support for general education teachers, pre-/post-teaching content, vocabulary being learned in the general education classroom, collaboration with early identification and early intervention services, reading, and high expectations.

This concludes consideration of the qualitative findings. There follows a discussion of how the first and second phase findings relate to each other, whether they complement or contradict each other and why.

7.5 General discussion of first and second phase findings

This section discusses the findings of the first and second phase and highlights where they complement (7.5.1) or contradict each other (7.5.2). This is followed by an assessment of the contribution and implications of the study to theory, practice and methodology (7.5) and how it relates to the wider body of knowledge.

7.5.1 Complementary findings to both phases

The above analyses reveal complementary results between both phases, the quantitative and qualitative which seem to suggest more positive feelings towards the inclusion of HH than of Deaf students among the participants (see Table 5.14, section 5.7). Recent findings concerning the variety of needs of Deaf students are relevant here because they may justify the reason behind this complementarity between participants' position in both phases. Dimiling (2010) indicated that Deaf students may need special vocabulary intervention (e.g. I5m, 6.5.2; 6.5.4; S3h, 6.6.3; and 6.8.3) in order to improve their word recognition, production and comprehension. Wolters et al. (2011) found that Deaf students had more severe language problems than their hearing classmates. Houston and Perigoe (2010) assert that Deaf students need access to skilled professionals (e.g. A8o, K6a and A7s at section 6.5.1) who can improve receptive and expressive language through planned programmes. Gilbertson and Ferre (2008) described major difficulties when making educational decisions regarding inclusion of profoundly Deaf students, specifically challenges associated with reading (sections 6.5.5; 6.8.1; 6.8.2; 6.8.3; 6.8.4; and 6.8.5), language acquisition and learning activities. Esera (2008) and Schick, Williams and Kupermintz (2006) list among the educational needs of Deaf students an effective learning environment, educational interpreters (6.5.1; 6.5.4; 6.5.5; and 6.6.3), visual communication and signing. Furthermore, Anderson-Inman and Terrazas-Arellanes (2009) demonstrate that the use of labelled illustrations and/or concept maps is related to Deaf students' successful recognition of unfamiliar and abstract words (e.g. I5m at section 6.5.3). All of the above-mentioned challenges are commonly encountered by educators of the Deaf in inclusive education globally, and likewise, Saudi educators are faced with similar issues within their specific context. That partly explains their tendency to accept the inclusion of orally instructed Hard-of-Hearing students rather than signing Deaf ones in their mainstream classrooms as they need effective sign language

proficiency and specific skills to teach them reading, writing and language acquisition (figure 6.7, section 6.7.2).

A second finding of the first phase was that participants considered Al-Amal Institutes to remain one of the best educational alternative settings for Deaf students, supporting the emergent theme of a continuum of provision (Figure 6.3, section 6.4.4). Likewise the second phase findings suggest that some participants were for HH inclusion and less favourable to Deaf inclusion because of the current situation of Jeddah mainstream schools while confirming the continuing need for Al-Amal Institutes. This finding also confirms the continuum of provision recommended by Warnock (DES, 1978; Warnock, 2005) and by the UK House of Commons Select Committee Inquiry (2006): “special schools have an important continuing role to play within (...) a continuum of provision”. This has been raised by several educational researchers (e.g. Lipsky & Gartner, 1997; Marston, 1996) and also in other countries (Elshabrawy, 2010)

Findings of both phases indicate support for a continuum of special education provision (sections 7.3.1; 7.4.1; 7.4.4; and 7.5) that ranges from exclusion (special schools for the Deaf) to inclusive settings (part-time or full-time mainstream classrooms with no additional support services), which reflects the ‘moderate’ inclusion perspective rather than ‘radical inclusion’ (Cigman, 2007a, p. 131). The preservation of special school provision is incompatible with educators’ efforts to promote a full inclusion but prospects for its closure currently seem highly improbable (Norwich, 2002b; Lindsay, 2003), which was the position of several participants (sections 6.4.4; 6.3.3; 6.5.2; and 6.8.1). Historically, the provision for SEN students has moved from exclusion to gradual inclusion (Peters, 2004; Elshabrawy, 2010).

In addition, findings of both phases show that in the Saudi context educators’ perception of and attitude to DHH inclusion becomes more positive with years of experience. This could mean that initial teacher training for novice educators is not addressing the conceptual and practical issues of inclusion as discussed previously (section 7.2.1.2). As analysed in Chapter six of the interview phase (section 6.4.1), experienced mainstream educators’ demonstrate more positive beliefs of and attitudes towards DHH inclusion (e.g. M9b and G10a). This contrasts with the opinion that younger educators were the most positive about inclusion generally (Leyser et al., 1994; Harvey, 1985; LeRoy and

Simpson, 1996; Koutrouba et al., 2006). However, a small subgroup of Al-Amal experienced educators' did not share the same position (e.g. M1t and M2m) as they felt that mainstream schools have not yet fully prepared to serve Deaf students in terms of teacher specialized training, welcoming Deaf students and engaging them and in terms of physical and logistical readiness. This might be also understood in the light of their fear of losing their long-lasting superior position or/and incentives (e.g. M9b at 6.4.4; and 6.4.2; 6.5.1; 7.4.4).

7.5.2 Contradictory Findings to both phases

Sections 7.2 and 7.3 revealed differences among the factors affecting teachers' attitudes at both quantitative and qualitative phases. In this regard, a significant finding from the first phase shows that educators working at the intermediate and secondary levels tended to hold more positive beliefs of and attitudes to DHH inclusion than other educators. Contrary to this and as analysed in Chapter six of the interview phase (section 6.3.3), primary school educators' demonstrate more positive beliefs of and attitudes towards DHH inclusion (e.g. A8o, G10a, S3h, M2m, and M9b). This might be understood in the light of the fact that education at the primary level contains basic subjects but this might not be the case at the intermediate and secondary stage. This supports the view that primary schooling in general is more holistic and more concerned with student development which means more compatible with inclusion ethos, which may affect teachers' attitudes (Avramidis and Norwich, 2002). However, as mentioned in section 7.2.1.4, there is some inconsistency among various studies which examined this factor, as some researchers supported the idea that primary school educators were more positive towards inclusion (Savage and Wienke, 1989) and some were against (Leyser et al., 1994).

The second contradictory result is about in-service training and its relation to attitudes towards DHH inclusion. No statistically significant differences were observed between educators with and without in-service DHH training in their mean responses to the three components of attitude (section 7.3.1.6). This quantitative finding was unexpected in that it conflicts with the interview analysis phase in Chapter six (sections 6.4.3; 6.4.4; 6.5.1; 6.5.4; 6.6.1; 6.8.1; and figure 6.7, section 6.7.2)), which suggested that educators' with in-service training have more positive beliefs of and attitudes towards DHH inclusion

(e.g. G10a, M9b, A8o, and S4s). As discussed earlier in this chapter, two interfering factors may explain the discrepancy between the result of the first phase and those reported in the literature. First, because a large number of research studies (Buell et al., 1999; Van-Reusen et al., 2000; Center and Ward, 1987) are concerned with SEN in general and, secondly, because the quality of training may matter to a greater extent than quantity (e.g. I5m and K6a at section 6.5.3 and 6.8.1 respectively).

The third contradictory result is about participants' behavioural intentions to DHH inclusion. The mean score for the behavioural component of attitude was near the top of the scale, meaning that the educators claimed that they would adopt very inclusive practices if they had a DHH student in their mainstream class (Chapter 5, section 5.7, Table 5.14). This finding conflicts with the interview analysis phase in Chapter six (ST5 at section 6.5, Table 6.5), which show three administrators believed they could manage future inclusive classrooms and the other three opposed it. The same pattern seems to appear from the teachers' side as no agreement on this complex issue was found. Three teachers showed no behavioural intentions in managing DHH inclusive classroom. This might be understood as they had not been specifically trained to do so (Figure 6.5, section 6.7.1; and 6.5.1); mainstream school status (sections 6.8.1; 6.8.2; 6.4.3; and 6.6.1) and standards were not suitable for inclusion (ST2 at 6.3; 6.5.1; 6.8.5; and Figure 6.2, section 6.4.2). In addition, they believed it would be a source of disturbance (6.5.5 and 6.6.3) (Kluwin, 1985) and because of poor mainstream school preparation (6.3.3; 6.4.3; 6.6.1; 6.7.1; 6.7.2; and 6.8.1) (RNID, 1999). This might be also understood in the light of their fear of losing their 30% bonus if they would not adopt DHH inclusive practices, fearing that the local authority could decide to replace them with another school (e.g. S3h at section 6.6.1).

Although it was statistically non-significant, another finding revealed that educators in close contact with DHH students at Al-Amal Institutes had slightly positive beliefs about inclusion as they seemed to have relatively more knowledge of the targeted themes (Chapter 4, section 4.6.3); however, this finding should be considered as suggestive for future research. Nonetheless, various researchers in the USA (Leyser et al., 1994; Leyser and Lessen, 1985; Stainback, Stainback, and Dedrick, 1984), Australia (Harvey, 1985; McDonald, Birnbrauer and Swerissen, 1987) and the UK (Shimman, 1990) have found

that in general, educators with experience of contact with disabled students generally had significantly more positive attitudes towards inclusion than those with little experience of contact (LeRoy and Simpson, 1996). Contrary to this, some researchers have claimed that social contact does not positively affect attitudes towards inclusion (Stephens & Braun, 1980; Center and Ward, 1987). Other studies indicate a negative relationship between these two variables, which may be related to stress, as educators with experience of contact suffered from stress and burnout to a greater extent than those educating mainstream students (ibid). Some research has also suggested that educators' beliefs and attitudes regarding student diversity and heterogeneity have a central role in the success of students' inclusion into general education settings (Semmel et al., 1991).

Research into the effects on educators' attitudes towards SEN inclusion of education stage and school type reveals inconsistent (Avramidis and Norwich, 2002) and conflicting (Elshabrawy, 2010) results which go in line with the study's findings (Section 7.3). This general discussion shows that there is a variety of barriers to DHH inclusion (sections 6.7; 6.8; 6.9; and figure 6.5, section 6.7.1), supporting the call by Slee (1993). He suggested to move the discussion of inclusion away from technical resources (Allan, 2005) and reductionist assumptions (Elshabrawy, 2010) towards greater appreciation of the complex interaction among school-related factors such as ethos, organization, pedagogy, curriculum, in-service courses and teacher education (e.g. ST2 at Table 6.9; ST5 at Table 6.7; 6.4.1; 6.3.1; and 6.5.1). Contrary to the claims of the MoE that inclusion is progressing well (section 2.5.1), the current research found, particularly at the second phase, low-level fluency in cued sign language among participants (e.g. 6.3.3, 6.4.4; 6.5.1; 6.5.4; 6.7.2; and 6.8.3), insufficient professional teacher-training (6.5.3; 6.7.1; and 6.8.5), unclear procedures for the transfer of teachers from general to DHH inclusion (6.3.3; 6.4; 6.5; 6.6; 6.7; 7.8; and 6.9), inadequate mainstream provision relying partially on the goodwill of parents and educators (e.g. ST1 at Table 6.8 at 6.6.; 6.4.3; 6.6.2; 6.6.1; 6.7.1; 6.7.2; 6.8.2; and 6.8.5), absence of student/parent consent (6.7.1; 6.4.2; 6.4.1; and 6.8.1) and poor preparation for DHH inclusion (section 6.5).

7.6 Contribution and Implications

This study has made a timely and important contribution to the overall body of knowledge arising from research into educational practice in Jeddah, Saudi Arabia in terms of

understanding educators' beliefs and attitudes towards DHH inclusion. In addition, the study comprises of a number of practical and methodological implications relevant to the Saudi context. This section evokes the main findings of the investigation and the multiple dimensions of its contribution to the theoretical knowledge of attitudes and perceptions (section 7.5.1) and presents the implications of this study for policy, practice, teacher training (section 7.5.2), and research methodology inherent to researching in SA (section 7.5.3).

7.6.1 Contributions to Theoretical Knowledge

The study has the potential to contribute to the cumulative body of the complex inclusive discourse at the level of theoretical educational reform in the Saudi context in following ways:

- i. It identifies certain problems in the educational field at the level of theory and practice from the perspectives of both administrators and teachers.
- ii. It conveys rich and detailed images of their knowledge and understandings concerning DHH inclusion that had not been qualitatively investigated before.

Chapter six argues the need for conceptual reform of Deaf inclusive education and for updating and improving educators' perceptions of and attitudes to DHH inclusion. This could be accomplished through contributing to an open debate about the cultural argument of the social model of DHH inclusion by increasing the number of social activities sessions at least to once a week within the existing curriculum (AlAnazi, 2012) and teaching/learning strategies for the inclusive classroom (section 3.2). It may also be that the presence of a strong moral framework to guide the implementation of inclusion reduces the need for a more academic debate (section 3.11), with attention focused on the practicalities (ibid). Saudi experience of DHH inclusion is relatively new and given the continued debate among educators and researchers from various disciplines, there is a need to raise educators' awareness of the variation of inclusion, SEN and D/deafness (section 6.4), how to distinguish between them and identify their implications. This implies the need for an open theoretical and academic debate on the philosophy, process, and implications of DHH inclusion.

The theoretical contribution provides opportunities to conduct more social constructivist and mixed-methodology studies in the field of DHH inclusion with particular focus on educators' attitudes towards it. In addition, the study makes significant contribution to the development of a more progressive understanding of DHH education and attitudes towards inclusion. Considering the Saudi context in relation to the abovementioned conceptual debate, the findings imply the need to move beyond phased integration (as an issue of presence and assimilation) through a process which starts from locational integration inside special classrooms and leads to social-functional-pedagogical-psychological inclusion into mainstream classrooms. It should instead lead to academic belonging and social participation within the mainstream classrooms (Norwich, 2013) with its characteristics of interdependence, mutuality and reciprocity (Bayliss, 1995a). This reform also includes a better social understanding of DHH and the impact of positive attitudes towards it, as these themes are interconnected (Elshabrawy, 2010).

Additionally, many researchers have argued that inclusive education is predominantly an endeavour to change current education policies and practices which result in pupil failure, not specifically in DHH inclusion but Special Education in general (Ainscow, 2007). SEN reform should not only be multidimensional, but also basically structural (Ferguson, 2008). Booth and Ainscow (2002) argue that for mainstream schools to embrace inclusive education, changes should need to occur along three main dimensions:

- i Creating an inclusive culture by building supportive communities and establishing inclusive values;
- ii Producing inclusive policies by establishing the fundamental principle of developing schools for all and organizing support for all;
- iii Evolving inclusive practices by arranging learning to accommodate diversity, and mobilizing resources to facilitate active academic and social participation for whole-school activities (Booth and Ainscow, 2002).

The relevance to the current study is that participants highlighted a lack of DHH inclusive knowledge particularly related to newly transferred educators into mainstream schools (section 7.7.2). In addition, educators involved in the present study saw self-contained classrooms as a good alternative setting for HH students to gain access to mainstream education; therefore, in my view, educators should extend their positive beliefs to include Deaf students as well (section 7.4.2). Thus, without educational change directed to the

questioning of exclusionary thinking, inclusion in SA will continue to follow a placement rhetoric which in turn may lead to regressive consequences for the DHH inclusive education (AlAnazi, 2012). Another finding suggested eliminating the conventional medical classifications of disabled children and shifting the focus to the type of special educational provision that would be identified based on a comprehensive profile of individual needs. This is relevant to the UK debate around the term ‘SEN’ as it has a negative connotation for many people although some argue that it should have positive implications (section 7.4.2).

Other researchers concur to his idea, indicating that educational change is non-linear (Avramidis, 2001), socially complex (Knoster, 1991; Fullan, 1992; Fullan and Stiegbauer, 1992; Fullan and Hargreaves, 1991) and attributable to the interactions of managerial, socio-political and organisational factors (Dyson, 1994). Change also takes the form of personal involvement with school inclusion (Bayliss, 1995b). For instance, Elshabrawy (2010) argues that people’s beliefs and attitudes are complex and context-dependent; they cannot be explained by simple causes and their complexity stems from the notion that a considerable number of hidden and transitional factors interfere in many ways in the process of shaping values and tendencies. These hidden factors can sometimes set up uncertainty about what exactly inclusive education implies, such as the tension between dimensions where deaf student could be present in mainstream schools but not feel socially or/and emotionally belonging (AlZahrani, 2005), or be located in a separate setting, which reflects the views of I5m in section 6.2.3. These interfering factors may manifest in the form of tension between levels of inclusion, when HH students study in mainstream schools but not in mainstream classrooms (section 6.2.3), or when Deaf students are ‘included’ in the education system but not mainstream schools (section 6.2.3; Norwich, NALDIC 2011).

Allan (2008) argues for inclusion as an ethical scheme encompassing a continuing struggle. People may provisionally accept the most basic form of partial academic integration, but prefer progress towards fuller inclusion. Moreover, inclusive educational change in Jeddah LEA should be perceived as a matter of basic human rights (e.g. I5m) and not as a privilege. Deaf students have the right to be academically and socially engaged and to participate actively in the culture, curricula and communities of local

schools (Booth et al., 2000). This could take many forms, such as raising awareness of DHH inclusion and Deafness issues as a matter of empowerment and respect (I5m), full access (M1t), full participation (A8o) and engagement among nationwide school communities through leaflets, family assemblies (S3h), local authority workshops, public presentations and the use of mass media to raise awareness of the fundamental principles of equity and equality (Avramidis, 2001) within the Islamic faith (AlAnazi, 2012; Elshabrawy, 2010; Ghaly, 2007; section 6.2.2).

Reform at the school level is not an independent issue but a contextual matter that largely depends on the wider community's understanding of diversity (A8o) and its political will (Avramidis, 2001), on interactions and on the socio-cultural circumstances in which the community has been formed (Elshabrawy, 2010). Thus, change from integration practices to more inclusive ones is indeed irregular and complex. It requires macro (M11s) and micro-level (I5m) change in the educational system (sections 6.6, 6.7, 6.7.1, 6.7.3; Tables 6.9 and 6.10) and a thorough understanding and collaborative efforts to ease the major transition from perceiving inclusion as an issue of disability, locational integration (S3h), physical presence and assimilation to more progressive issues of accommodation, rights (M1t), participation (I5m), social belonging (A8o) and provision for diversity (Norwich, NALDIC 2011). Thus, social activity should be increased within mainstream schools and one way to achieve this is by make use of mainstream school resource room by hearing students and, equally, the playground or the main hall should be used by DHH students for family assembly and other social activities (AlAnazi, 2012).

From the perspective of educators, the study not only has contributed to the body of literature and knowledge but also comprises of important implications for educational practice and methodology in which I will turn to now.

7.6.2 Implications for Policy, Practice and Professional Teacher Training

This section highlights a number of practical implications relevant to administrators and teachers, curriculum, pedagogy and training. Only recently, SA adopted DHH inclusion and this study provides policymakers, supervisors and curriculum designers with in-depth insights into the gap between the policies governing DHH mainstream programmes and what is actually happening in mainstream special classrooms. Saudi supervisors need to

counter the static conventional styles of teacher training, as these fail to achieve significant success in reforming educators' beliefs and attitudes. The traditional one-way training of large numbers of educators does not motivate them to attend in-service training or to improve their careers. Expert teacher trainers should embrace new technologies & teaching styles and participate in interactive communication where both participants, whether trainer or trainee, are active and can have an effect on one another. This dynamic, two-way flow of information is crucial in evaluating courses or teacher achievement in small group workshop approaches. Educators should be taught to be professionally skill-centred, not disability-centred (Elshabrawy, 2010). New and non-specialized educators should be made aware of effective ASL, the equity and diversity perspective (AlAnazi, 2012) on inclusion (Avramidis, 2001) and its vital role in promoting inclusion, as this would be beneficial to DHH and hearing students alike.

To further illustrate the gap between policy and practice at the level of the Saudi MoE, Habbash (2011: 148) concludes a study of language policy by noting the "lack of a comprehensive strategic vision on the part of policy decision makers" and "a gap between policy and practice". His research was conducted in Riyadh, but its conclusions could be extended to the way in which Jeddah LEA is applying DHH integration, because both authorities answer to the MoE. It is quite understandable that shaky education foundations, poor transparency, quantity-based policy and poor outcomes would reflect negatively on schools and their members. According to various teachers and administrators participating in the present study, many mainstream programmes had been initiated in the last decade without proper preparation. These failings included poor school facilities to receive DHH students, absence of professional training in sign language or in DHH education, unclear procedures for transfer decisions when DHH students moved from special to mainstream schools, inadequate preparation for ordinary educators moving from general to DHH education and lack of additional support. In addition, the physical environment was impoverished by factors including teaching aids being mainly funded by educators' and parents' donations, lack of DHH-oriented pedagogical modifications to the national curriculum and insufficient staff well trained in ASL.

Additionally, providing CPD opportunities which help build skills in the area of staff training is an important factor, as new DHH inclusive education teachers are often required to present in-service workshops to general education teachers and administrators (Peneston, 2012). In the SA context, participants believe that there should be no rush to full inclusion and special schools should remain a parallel and flexible system (Chapter 6, Section 6.3.4). In-service teacher training should involve continuous, technically supported, intensive programmes (Fullan 1991; Fullan and Hargreaves, 1992; Sarason, 1990) that would advance educators' consciousness of the difficulties that some DHH students may face in mainstream settings. This in turn would aid educators to move from the old-fashioned deficit understanding of learning problems as being within the child, towards a cooperative understanding that emphasises on an ecological and social view in which the roles of administrators and teachers are central (Trent, Artiles and Englert, 1998). In-service training programmes should be mandatory in light of the 30% salary supplement awarded (AlAnazi, 2012) to those transferred from general to DHH education. They should cover both Deaf and HH education and include efficient intensive sign language courses at basic and advanced levels, provided by experts in ASL (e.g. K6a and A7s). Such courses should include academic and social inclusion activities, multi-sensory methods of teaching (visual-auditory-kinaesthetic-tactile), pedagogy that incorporates DHH visualization, raising of self-confidence for DHH students in mainstream classrooms, enhancement of inclusive values via socialization and friendships between hearing and DHH students, promoting respect, active engagement, creative and intuitive thinking, etc. This would be accomplished by focusing on what DHH students can do, not on what they cannot do.

At the pre-service stage, diplomas in Deaf education should be combined with in-service training related to DHH inclusive education and sign language, which might affect educators' attitudes positively. Hence, SE departments at Saudi universities should provide specialized diplomas and professionalized training for general education teachers who wish to teach DHH students at mainstream schools to master ASL (6.4.1), and increase the number of sign language courses (G10a at section 6.5.1) (see Appendix J for detailed course description). There should be effective professional training programmes and positive experiences of inclusion which might also promote positive attitudes (Elshabrawy, 2010).

The second phase data indicate that the GDSE as a representative of the MoE should rethink the status of newly transferred teachers' performance, donations and the quality of training programmes they provide (Section 6.4.3; Elshabrawy, 2010). In that regards, it has been found that inclusion initiatives often fail due to poor teacher training provision in mainstream education, lack of knowledge on the concept of inclusion among administrators and also a lack of funding which affects the quality of training and resources (Thompkins, 1994). In addition, at the Jeddah LEA level, administrators and education supervisors should equally assist schools to find ways of promoting open discussions with all parents across targeted DHH mainstream schools (AlAnazi, 2012). Thus, at the national level, policy makers, curriculum designers, and academics should promote an open debate about social (AlZahrani, 2005), and academic benefit of inclusion in relation to mainstream school policies, practices and teacher training. If they do so, training and educators' performance may deliver generic teaching skills that are modern (6.7.5), innovative, DHH friendly (6.3.4), creative and up-to-date (6.4.3), allowing educators to differentiate their practices in a way that benefits hearing and DHH learners together, which is one of the main goals of inclusion. Another longer term choice suggested by AlAnazi (2012), is to launch the "Saudi Parent Teacher Associations (SPTAs)" which would specialize in involving interested academics, practitioners and parents in promoting the discussions. Ainscow and Hart (1992) proposed that the move from theory to practice in inclusion as comprising of three components, which could inspire Saudi researchers and practitioners to rethink their inclusive practices. Firstly, there should be a better understanding of educational difficulties manifested in individual characteristics and interactions and in the problem of mainstream curriculum limitations, all of which being related to the barriers and challenges discussed in Chapter 6 (section 6.7.3). Individuals need to receive CPD training and acquire professional diplomas in Deaf education and sign language (6.4.1; and 6.4.5), while the national curriculum appears to need more modifications in order to fit DHH characteristics (AlAmri, 2009) and developmental needs (sections 6.4.3; 6.6.1; 6.7.1; and 6.7.3). Secondly, it is important to facilitate organizational change and educators' development, manifested in additional expertise or 'add-on' ideas and models of provision, adaptations of new practices in existing arrangements (e.g. recruiting teacher assistance) and enquiry as the basis of progress (6.5.3). These are related to themes T4, T5 and T6 (sections 7.4, 7.5 and 7.6).

Saudi DHH educators seem to need the help of experts to organise ongoing intensive ASL courses at mainstream schools, to contribute to the modification of the national curriculum (AlAmri, 2009) while considering DHH developmental needs and to design IEPs that foster Deaf-friendly practices. This was suggested by (G10a at section 6.5.1) be have two or more course modules to enhance educators' proficiency in sign language such as ASL level 1 and ASL level 2. Finally, in order to avoid difficulties, there should be systematic arrangements which could take the form of withdrawal, in-class additional support services, cooperative learning, adaptation of new teaching materials, active roles for resource rooms, or improved curricula. This third proposal by Ainscow and Hart is also related to themes T4 (in-service training, teaching skills & ASL), T5 (additional support, resource rooms & teaching assistants), and T6 (barriers to DHH successful inclusion). As discussed in Chapter 6, some DHH students asked to go back to Al-Amal Institutes, as they felt uncomfortable in their new school settings.

Additional services should be provided for both current special classrooms and the more progressive practice of inclusive classrooms in the future. These services include TAs, modernized educational technologies, resource rooms equipped for IEPs and individual auditory training and pre- and in-service training (section 6.4.5). Newly transferred Saudi teachers should also attend specialized courses before entering DHH education (M11s and S3h), to improve their fluency in ASL (A8o), familiarize themselves with pedagogical cued signs (S3h), gain competence in bilingual teaching methods (A8o), master new assessment and evaluation strategies and improve in-class interaction by actively engaging DHH and hearing students. These enhancements should be inspired by an Islamic ethos and the Saudi national traditions, emphasising all students' potential to achieve (AlAnazi, 2012).

A number of educators mentioned their apprehension about including profoundly Deaf students, entailing a major development in terms of curriculum and policies that would be hard to achieve. The difficulty of imposing the national curriculum on mainstream special classes would depend significantly on the nature of that curriculum (AlAmri, 2009). Thus, respondents expressed reservations about this move and called for curriculum developments to match the individual characteristics of DHH students. Koutrouba et al. (2006) suggest that curriculum change should take the form of two major

differentiations: the objectives of each lesson ought not to be solely set to achieve cognitive competence, but rather to improve learning and thinking skills so that DHH students are not jeopardised by their linguistic shortcomings; and inclusive DHH socialization (AlZahrani, 2005) should be central to all extracurricular activities. Likewise, professionals and experts at the GDSE responsible for designing the curriculum should devise diverse approaches to create a curriculum that is more appealing and Deaf-friendly (AlAmri, 2009) in order to ease DHH inclusion and allow educators, particularly newly transferred ones (sections 3.11; 6.4.4; and 6.5.2), to accommodate their teaching/pedagogical styles (sections 6.5.2; 6.5.3; 6.5.5; and 6.7.1) to each student's needs (sections 6.8.2; and 6.8.4) by applying effective IEPs (section 6.8.1).

Ferguson (2008) argues that planning for curriculum differentiation entails a rethinking of how lessons could be delivered differently to enhance teaching and learning for all. Educators can differentiate content (individual abilities), process (teaching/pedagogical styles) and product. Ferguson then proposes steps towards achieving inclusive education for all learners all the time (Norwich, 2008) which is quite relevant to the current findings. These include five "shifts" towards a more progressive practice embracing innovative ideas that problematize and substitute the traditional school conventions: moving from teaching to learning; from offering services to providing support; from individual to group practice; from parent involvement to family-school engagement and from school reform to ongoing improvement and participation. The identification of SEN students must shift from 'within-the-child', or 'person-centred orientations' (Norwich, 2013), to a complex interaction between the educational environment and the student's factors. This requires policymakers and education supervisors to rethink human and physical resource allocation to facilitate active academic and social participation for whole-school activities (Booth and Ainscow, 2002). Additionally, this requires also emphasising the outcomes of learning for all (section 3.11), rather than the deficits or difficulties viewpoint.

Furthermore, at the legislative and practical level, this study has highlighted the responsibility of the GDSE, Jeddah LEA, mainstream school administrations and curriculum developers at the MoE to overcome these failings. For example, curriculum designers should include experts in DHH inclusion and sign language (AlAmri, 2009) to systematically adapt the national curriculum to individual differences (sections 6.5.5;

6.8.1; and 6.8.3) in order to accommodate the needs of DHH inclusion (sections 6.7.2; 6.8.1; 6.8.2; and 6.8.3). This differentiation could take four general forms:

- (i) providing access to the national curriculum and modifying teaching styles to match DHH characteristics,
- (ii) adding more cued signs to illustrate new vocabulary and make it visually stimulating,
- (iii) excluding old-fashioned long-narrative memorising to focus on critical thinking, problem-solving and creative skills development, IT and
- (iv) modernizing assessment by focusing on measurable objective questions.

Another level of implication is to the Saudi context in general and specifically to the school education system insofar as the current study suggested defining clearer procedures of students' and educators' transfer to and from special/mainstream institutions (sections 6.3; 6.4; 6.5; 6.6; and 6.8). Within the unique social structure of Saudi Arabia, various factors contribute to how people interact and perceive educational reform at both conceptual and practical level. The practice of inclusion reflects a country's context. These include the cultural and linguistic homogeneity of the population; the heavy dependence of the MoE and other ministries on the petro-dollar financial system; adherence to the conventional Sunni school of Islam and the application of Islamic Sharia law to most personal and social matters; family values and lifestyle, rather than political and moral individualism, as the most important feature of identity and social institutions; the authoritarian monarchy; and the tribal lineage, with strong loyalty and extended ties. However, there are some non-tribal people, and new liberal schools of thought that challenge the old, religiously conservative one. The educational system applies gender separation based on Islamic beliefs (Offenhauer, 2001). AlAnazi (2012) suggested that in SA the overall aim of inclusion is embedded within a specific Islamic/Arabic society. She argue that the development and implementation of educational policy is less directed by technocratic principles and more guided by the teachings of Islam (sections 6.2.2; 6.9; 6.3.3; and 6.3.2), which influence the adoption, modification and implementation of educational policies, and how policy is translated into practice.

Finally, the present study highlights the fundamentally challenging nature of the process to accomplish DHH inclusion and the need for significant personal and environmental changes, including fostering an inclusive ethos and enabling educators to modify or adopt

new Deaf-friendly educational practices. The Saudi MoE and LEAs should work creatively to minimize these barriers before transferring any more DHH students into mainstream schools, such as by providing DHH educators with specialized CPD, by adapting inclusive curriculum models that celebrate diversity, full acknowledgment should be given and parents must give consent for the referral, by increasing official supply and funding of DHH-friendly resources prior to inclusion. This concurs with several studies in the Middle East which was discussed earlier (Chapter 3, section 3.6.2, Table 3.6). These implications should be understood within the Saudi educational and social context, with the current situation of mainstream schools in terms of buildings, facilities, resources, in-service professional training, D/deafness awareness, communication skills efficiency and the desire of some Deaf students and their educators to maintain Al-Amal Institute and/or diversify its role. This desire reflects a belief in the Institute's continuing vital role in the overall continuum of provision and the need for it as a symbolic representative of Deaf culture (e.g. I5m at section 6.4.3).

7.6.3 Methodological Implications for Researching in SA

In this mixed-methodology social constructivist study, the researcher has attempted to understand educational and culturally situated phenomena and arrive at clear interpretations of Saudi educators' perceptions of and attitudes to DHH inclusion. At level of research methodology, the combination of quantitative and qualitative research methods to approach the issue of Saudi educators' attitudes towards DHH inclusion is a novelty for the SA context. The data produced from the first phase helped to shape the themes and sub-themes of the second phase of interviews, which proved to be a very useful tool for collecting qualitative data that could not have been obtained from questionnaires alone (Section 4.7.2; Table 4.13). Adopting pragmatic social constructionism, as opposed to only depending on a scientific methodology proved an innovative approach to educational research in SA which may prompt further valuable research.

In general terms, professional beliefs and attitudes concerning the DHH inclusion process, as with all other educational projects, are dependent on the cultural context which in turn affects the success or failure of inclusion initiatives. In that regards, it is not easy to determine the success of inclusion in a particular context compared with the UK or the

US versions of DHH inclusivity construct which has been developed over time, through various institutional, political, legislative, philosophical, social and academic interactions. This study has indicated that the participants' existing concept of inclusion in Saudi Arabia reflects an ethos of physical integration (i.e. access to local schools, assimilation and placement), implying that the full inclusion model is still under question. This may be because this model is not a well formulated one and this is not only a Saudi issue but an international one (i.e. the zero-rejection model) (Booth and Ainscow, 2002). This is evident in positions about 'full inclusion' in the USA (TASH, 2012) and 'radical inclusion' in the UK (Cigman, 2007a). Cigman (2007a) sees radical inclusion as 'a universal inclusion', which opposes all forms of exclusion, emotional and social, and to segregation by labels, whereas special schools in moderate inclusion position means some students enjoying part-time integration, being included, belonging in some sense and being served by a label.

A number of participants tended to adopt the philosophy of 'moderate inclusion' (Cigman, 2007a) with some specialisation balanced with some inclusion, in the form of the continuance of the special education model, particularly for Deaf students. The study shows that the teacher participants' continued support for Al-Amal Institutes has been justified in the current Saudi context. This aligns with the observation of Romi and Leyser (2006) that teachers sometimes favour inclusion and its theoretical conventions but prefer special education placements for some groups of SEN students, such as the Deaf. Saudi educators' support for traditional special institutions was anticipated, particularly as the Saudi experience of DHH inclusion is relatively new. These conclusions need to be set within the continued international debate among educators and researchers from various disciplines (Croll & Moses, 2000; Kauffman & Hallahan, 1995; Low, 2007; Slee, 2006; Avramidis, 2001; Elshabrawy, 2010) on the most effective educational alternatives for children with diverse special needs.

7.7 Strength, Difficulties and Limitations

This innovative sequential mixed methods research faced several difficulties and comprises of potential limitations in terms of data collection tools, access to schools, time, administration and culture. One limitation is that a number of Saudi parents live in remote villages or in deserted areas and some of them cannot afford daily commuting to and from

the city. They may be illiterate and therefore have a limited understanding of DHH inclusion and developmental needs as well as little awareness of educational provision, help and counselling services. That is why a number of parents experienced difficulties in participating in the study hence they were excluded from the current investigation. Indeed some parents simply did not wish to participate in the study and refused to be interviewed. Likewise, the researcher experienced access problems, as the schools included in the study were scattered all over the Jeddah area and the sample was entirely drawn from one province only. This is also relevant to the point that schools were selected on the basis of being already DHH inclusive which means that educators' attitudes in schools that are not yet inclusive were not dealt with by the current study.

Although anonymity and confidentiality were assured, some Saudi educators disagreed with the rush for inclusive education, explaining informally that they would prefer to keep their negative opinions to themselves. None of the administrators and teachers wanted to risk their 30% bonus (sections 6.5.1 and 6.4.2) by suggesting that some of them had problems with the recently initiated DHH mainstream programme at their school, fearing that the local authority would decide to replace them with another school. Having little knowledge of D/deafness, other participants may not have wanted to be perceived as ignorant in the way that they implemented the DHH mainstream programme. Educators' reluctance to open up meant that their attitudes were not explored as fully as intended at the beginning. As in all other social constructivist research, instead of collecting data as it is, there is a risk of eliciting politically correct information from participants, who would not want to expose their beliefs and attitudes about sensitive educational issues and reveal information that could stigmatize or incriminate them, such as their positions on disability, D/deafness and inclusion. It was expected that there would be several shortcomings in collecting data for the present study, which would need to be handled with caution, as discussed in Chapter four (4.6.2; and 4.12). In addition, the complex nature of this highly specific phenomenon together with the relatively small sample size and the sampling techniques utilised in the current study (purposive sample, section 4.11) resulted in the lack of generalizability of the research findings (AlAnazi, 2012). Although questionnaires were distributed to all 159 administrators and teachers working with DHH students, only 120 were completed; however, a response rate of 74.7% was deemed acceptable. A similar limitation must be noted regarding the second phase sample, as it

was intended to include fifteen participants in order to reach a level of saturation suitable for qualitative research (Bertaux, 1981; Strauss and Corbin, 1990), but there were constraints of time, resources, transportation, energy and availability of participants that resulted in only eleven being included. One limitation was that the researcher adapted the Likert scale designed by Elshabrawy (2010), but the questionnaire lacked open-ended questions about the affective dimension, which would have given participants more space to explain their sentiments about DHH inclusion. Open-ended questions were not included, as the questionnaire already comprised 48 items and it was felt that this might have caused more participants to withdraw. Many were too busy to fill in a long survey, so it was reduced to a maximum of ten minutes with the open-ended questions being transferred to phase two.

It was originally intended to include DHH students in the sample for the second phase of data collection in order to elicit their perceptions of teaching/learning processes at special and mainstream schools and to gauge their levels of satisfaction. This would have required more facilities, such as having an interpreter at each interview, finding a quiet place, arranging transport and obtaining the informed consent of participants and their parents, all of which would have required resources of time and/or money. Thus, the sample was limited to teachers and administrators. Concerning gender, the inclusion of female teachers or administrators would have provided an additional layer of participants and strengthened the research design by allowing sample triangulation (Denzin, 1979; Patton, 1990; De Voz, 1998). However, this was not feasible in the Saudi context where adherence to the Hanbli doctrine of Sunni Islam makes it impossible for a male researcher to be allowed to conduct an interview with a female respondent under the necessary conditions of free communication in a closed room or quiet area.

7.8 Recommendations for Future Research

The insights emerging from the current study open the way for more research, particularly in the Gulf Cooperation Council (GCC) states, which have similar Islamic values and ethics, Arab customs and tribal traditions. There needs to be more research into other aspects of inclusion in GCC countries from a social constructivist viewpoint, such as the inclusion of students with special visual needs, learning difficulties or autism, which could adopt similar mixed methods.

Attitudes and beliefs could be studied via alternative qualitative methodologies such as case studies, school-based research, grounded theory or action research. These could be employed within disciplines including sociology, philosophy or psychology, to enrich and widen perspectives of DHH inclusion and its complexity. Such research should explore the influence of educational factors in shaping educators' understanding of and attitudes towards inclusion. A further study is needed to address in greater depth the influence of other cultural, social, CPD, and pedagogical factors, and their impact and reflexivity on educators' practices, parents' beliefs, teachers' competences and attitudes relevant to the inclusion of Saudi DHH students. Although there is a considerable body of literature on the main themes of this study, there is clearly a need for more qualitative research, particularly in Arab countries, to understand the other factors around DHH inclusion. In that regards, Avramidis and Norwich (2002) and Elshabrawy (2010) have showed that teachers' and administrators' attitudes are not the sole factors influencing successful SEN inclusion.

Thus, as suggested by Hastings and Oakfordmore (2003), more research is needed that addresses a broad range of topics, including students' and parents' engagement, teachers' training and SEN skills, regulators and policymakers, inclusive school ethos, full local participation in and community interaction with inclusive education, and the importance of accommodating diversity in reforming inclusion. Some aspects of the conceptualization of inclusion have been tackled in this study and future research should address these findings to find a way in which theory could effectively be transformed into everyday practice. From this a recommendation should be drawn for a longer in-service DHH inclusion training programme. The teachers' and administrators' demands for better governmental support and resources derived from the research findings (section 6.4.3; 6.6; 6.7; 6.8; and 6.9) require some research at the level of the local authority to reflect effective ways of improving the provision of additional services (Farrell, 2000).

As discussed in Section 7.3.7, the wider theme of change can take various forms and levels, such as the individual/micro level, the teachers' or administrators' level or the educational system/macro level in terms of school standards and ethics (Dyson, 1990). The only views of the Saudi experience of DHH inclusion identified in this study were those of teachers and administrators. Saudi mainstream teachers need to be able to rise to

the challenge by adjusting their teaching styles in accordance with the multiplicity and differences of SEN (Peterson & Beloin, 1992) and DHH learning styles. It may be better for education supervisors to promote closer working relationships between experienced teachers of the Deaf at Al-Amal and mainstream teachers in order to meet the needs of active learning for all students hearing and DHH alike (AlAnanzi, 2012). Further research could elicit the views of hearing and DHH students and their parents. In addition, there should be more evidence-based enquiry into how to bring about inclusive educational reform for SEN students in general and DHH in particular. Reflecting recent Saudi policy and legislative changes towards more inclusion, greater awareness, family participation and official funding support are needed within ministries, local educational authorities, mainstream schools, and newly transferred educators. This process should be at the forefront of transfers toward successful inclusive education at the national level if DHH students are to be equal learners and participants (Powell et al., 2013).

7.9 Conclusion

This study has provided valuable insights into the understanding of educators' beliefs, emotions and behaviour in relation to DHH inclusion. It has shed light on a new conception of educators' understandings of and attitudes towards DHH inclusion, which cannot be labelled as reflecting either the deficit or the social model but rather an integrated medical/social conceptualization of D/deafness and DHH students, because their responses were interactive. Inclusion was mainly understood as a matter of assimilation and physical/locational access of DHH into mainstream schools. Attitudes varied considerably with the type of D/deafness represented, with teaching experience and education stage, and with many contextual and environmental factors which affected teachers' conceptualization of inclusion, their attitudes towards it and thus potentially its success. This study has given a unique contribution to the debates concerning educators' perception which appeared to be concerned about the lack of teaching skills in the fluency of sign language, cued signs and alphabetical signs, of general education teachers and about the academic outcomes of inclusion. They expressed uncertainty and concern about the lack of support, resources, specialized continuing in-service training, curriculum and pedagogy, mainstream schools' ethos and their members' attitudes to and beliefs about DHH inclusion. They supported HH inclusion in general terms but made Deaf inclusion

conditional on the wishes of each student and his/her parents and supported a continuum of provision.

New insights have been gained into the understanding of educators' attitudes and perceptions that can now be described as contextualised, rooted in experience and not based on automatic or routine conduct. This study has opened a debate around issues of diversity, belonging and DHH social inclusion through valuing equity and human rights within a societal context that places societal values at the heart of educational practice. This also implies that change is not a simple issue of addressing educators' attitudes to the phenomenon, but a comprehensive and wide-ranging process that should address all macro and micro-level contextual factors that shape educators' perceptions. Furthermore, educators' attitudes are not a simple educational issue, but a quite complicated social context-laden phenomenon. In this sense, attitudes have many features related to people's conceptualizations, customs and values. Although educators supported the inclusion of HH more than Deaf students, this does not mean that they were not in favour of inclusion generally, but that they were constrained by a number of factors. Saudi educators' perceptions of barriers to DHH inclusion mainly comprised educator-related and school-related contextual factors that should be addressed very carefully in order to accelerate and enhance the effective adoption of DHH inclusive practices in Saudi Arabia.

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Appendices

Appendix A

First phase of data collection, the three components questionnaire

Saudi educators' Attitudes towards Deaf and Hard of Hearing Mainstreaming Education in Jeddah, Saudi Arabia

This questionnaire is for a doctorate study focusing on educators' attitudes towards Deaf and Hard of Hearing inclusion students in Jeddah city, Saudi Arabia. This study is for academic purposes only and all given information will be treated confidentially and will be stored securely according to the rules of the British Educational Research Association (BERA, 2004).

This first phase of this questionnaire is divided into two main sections:

A- General background information about you.

B- Three groups of questions regarding your 1- cognitive/perception, 2- affective, and 3- connotative/behavioural educators' perceptions and attitudes towards DHH inclusion in Jeddah.

There is no need to mention your name or position, and the whole process will take approximately 15 minutes to fill in the questionnaire.

Thanks a lot for your time, support, and collaboration.

Section A

General background information

Please circle the response which applies to you:

1- Have you ever taught a Deaf (D) and/or Hard of Hearing (HH) student?

() Yes, () No

2- Number of students in your class

(A- Less than 20 B- 21 to 30

C- 31 to 40 D- more than 41 students

3- Are they all

() Deaf, or () Hard of Hearing?

4- Your educational background:

A- BEd in SEN/Deaf Education

B- BEd in Ed with SEN diploma

C- BEd in Ed

D- Diploma

E- Master

F- Other (Please specify

5- Have you had any specialised in-service training (for certified teachers)?

() Yes, () No

6- Have you had Special Education pre-service training related to hearing impairment such as Arabic Sign Language (ASL) (for non-certified teachers)?

() Yes, () No If yes would you please specify briefly

.....
.....

7- How many years of teaching experience of D and/or HH students have you had?

A- 5 years or less B- 6 to 10 years

C- 11 to 15 years D- 16 to 20 years , E- 21 years or more

8- Please indicate how many years have you spent in special and mainstream schools.

- Years of teaching experience in special schools ()

- Years of teaching experience in mainstream schools ()

.....

9- What grade level are you teaching at present?

A- Primary B- Intermediate , or C- High School

10- In what type of school are you teaching currently?

A- Al-Amal Institute/Special School

B- Mainstream self-contained classrooms for Deaf

C- Mainstream self-contained classrooms for Hard of Hearing

D- Other (Please specify.....)

11- Please specify your age group

A- 22 to 30 B- 31to 35
 C- 36 to 40 D- 41to 45
 E- 46 to 50 F- 51 or more

12- How many D or HH students with cochlear implants are there in your class?

13- Please rate how strongly you agree or disagree with each of the following three statements by placing a tick against the appropriate number.

Statements	Very low	Low	Average	High	Very high
My degree of success in dealing with D or HH students has been	1	2	3	4	5
The level of administrative support I have received relevant to D or HH students has been	1	2	3	4	5
The availability of additional support services for accommodating D or HH students (resource room, speech therapy, clinical psychologist, etc.) has been	1	2	3	4	5

Section B

Cognitive Component

What do you think about DHH inclusion?

In these questions, the following abbreviations and definitions are used:

D and HH = Deaf and hard of hearing (deaf) students

D = Deaf means a person with hearing loss above 70 dB

HH = Hard of hearing means a person with hearing loss from 25 to 69dB

ASL = Arabic Sign Language, which has been relatively united since 2004-2005

Inclusion = the process of teaching D and HH pupils in ordinary school settings (self-contained classrooms).

Please indicate how strongly you agree or disagree with the following statements by circling the number which best describes your belief/perception. There are no right or wrong answers; the best one is that which frankly reflects your true belief.

1 = Strongly Agree (SA), 2 = Agree (A), 3 = Neutral (N), 4 = Disagree (D) and 5 = Strongly Disagree (SD).

	Statements	S A	A	N	D	S D
1-	D and HH students would achieve better academically in Al-Amal institute “special schools”	1	2	3	4	5
2-	Self-contained classrooms have a negative impact upon social and emotional development of D and HH students	1	2	3	4	5
3-	Al-Amal institute is the most comfortable place for teaching D students	1	2	3	4	5
4-	At lunch break, D and HH students gather together apart from hearing students	1	2	3	4	5
5-	Inclusion of D of HH students could lead to unfair comparison with their hearing counterparts	1	2	3	4	5
6-	D and HH students feel more isolated when been taught in special self-contained classrooms	1	2	3	4	5
7-	Mainstream schools limit D and HH friendship networks	1	2	3	4	5

- Which of the following do you believe to be the most appropriate educational placement for D and HH students in Jeddah? Please tick the appropriate box

N o.	Alternative Placement	Deaf	Hard of Hearing
1-	Residential institute for D and HH		
2-	Al-Amal Institute day school for D and HH		
3-	Self-contained classrooms (special classes) within mainstream school		
4-	Partial inclusion with resource-room and speech and language therapy unit		
5-	Full inclusion with all necessary support such as in-class interpreter, speech and language therapy unit, and clinical psychologist		

Section C

Affective Component

How do you feel about DHH inclusion?

Please indicate how you feel about the following statements by circling the number which best describes your feelings. There are no right or wrong answers; the best one is that which frankly reflects your true feelings.

For example:

- 1 = strongly uncomfortable
- 2 = uncomfortable
- 3 = neither uncomfortable nor comfortable
- 4 = comfortable,
- 5 = strongly comfortable.

1- If a profoundly Deaf signing student, i.e. with hearing loss (HL) of 70dB and above, was about to join your classroom, either full-time or part-time, with the additional support of an interpreter, speech therapy unit and clinical psychologist, how would you feel? Please tick the appropriate number on each line.

Uncomfortable	1	2	3	4	5	Comfortable
Negative	1	2	3	4	5	Positive
Pessimistic	1	2	3	4	5	Optimistic
Uninterested	1	2	3	4	5	Interested
Unhappy	1	2	3	4	5	Happy

2- If a hard of hearing (partially deaf) student, i.e. with HL between 25dB and 69dB, was about to join your classroom, either full-time or part-time, with the additional support of an interpreter, speech therapy unit and clinical psychologist, how would you feel?

Uncomfortable	1	2	3	4	5	Comfortable
Negative	1	2	3	4	5	Positive
Pessimistic	1	2	3	4	5	Optimistic
Uninterested	1	2	3	4	5	Interested
Unhappy	1	2	3	4	5	Happy

Section D

Conative/behavioural Component

How would you cope with DHH inclusion in your classroom?

Please indicate how much you agree or disagree with the following statements about what you would do if a Deaf or Hard of Hearing student was to be integrated in your classroom from the beginning of next term.

Since these are not statements of attitudes but of actions, I will make use of different headings:

1 = Definitely (D)

2 = Probably (P)

3 = Undecided (U)

4 = Probably Not (P N)

5 = Definitely Not (D N).

	Statements	D	P	U	PN	DN
1-	Encourage hearing, D, and HH students to interact and learn together	1	2	3	4	5
2-	Enrol on a specialized training course to learn Arabic Sign Language to teach D and HH in my school	1	2	3	4	5
3-	Collaborate with parents of D and HH students to design an Individualized Educational Plan that suits their child's learning	1	2	3	4	5
4-	Adopt new teaching styles and modify testing methods to match D and HH characteristics	1	2	3	4	5
5-	Avoid using negative labels inside or outside my classroom	1	2	3	4	5
6-	Give equal respect to D, HH and hearing students	1	2	3	4	5
7-	Slow down the pace of lessons to enable D and HH students to learn at the same level as their hearing peers	1	2	3	4	5
8-	Collaborate with the school administration in decision-making relevant to D and HH students	1	2	3	4	5
9-	Make use of technology to assist in teaching D and HH students	1	2	3	4	5
10-	Concentrate on the use of visual stimuli in the education of D and HH students	1	2	3	4	5
11-	Make sure that all D and HH students are wearing their hearing aids, particularly during lessons	1	2	3	4	5
12-	Make sure that D and HH students sit in the front lines	1	2	3	4	5
13-	Take part in D and HH associations and private forums, and advocate their issues	1	2	3	4	5

Appendix B

Second phase of qualitative data collection (interviews)

Instructions for semi-structured interviews

The second phase will be qualitative and cover seven domains: 1- understanding of Deaf, 2- understanding of Hard of Hearing, 3- understanding of inclusion, 4- teaching skills and Arabic Sign Language training, 5- resource-rooms and additional support, 6- barriers to D and HH inclusion, and 7- characteristics and quality of change.

Theme One (T1):

Understanding of Deaf (hearing loss above 70dB and dependent on Arabic Sign Language)

- 1- What does being Deaf mean to you? Do you believe that it is more about medical issues or rather a social/educational matter?
- 2- As far as terminology is concerned, which do you believe is more relevant to Deaf students: Disability or Special Educational Needs?
- 3- Do you believe that **all** Deaf students should be included in mainstream school and why? Could you please explain your answer?
- 4- Do you believe that **all** Deaf students should be included in ordinary classroom and why? Could you please explain your answer?
- 5- Do you believe that Al-Amal Institutes for the Deaf are the most appropriate place for educating Deaf students?

Theme Two (T2):

Understanding of partially deaf/HH (hearing loss between 25dB to 69dB with hearing aid)

- 1- What does being Hard of Hearing or partially hearing mean to you?
- 2- As far as terminology is concerned, which do you believe is more relevant to Hard of Hearing students: Disability or Special Educational Needs?
- 3- Do you believe that **all** Hard of Hearing students should be included in mainstream schools and why? Could you please explain your answer?
- 4- Do you believe that **all** Hard of Hearing students should be included in ordinary classrooms and why? Could you please explain your answer?

Theme Three (T3):

Understanding of Inclusion

- 1- What does inclusion of Deaf and Hard Hearing mean to you?
- 2- Do you believe in equal access to mainstream education for students and access to ordinary classrooms? Please explain.
- 3- From your viewpoint, what are the arguments for and against inclusive education?
- 4- How do you envisage inclusion-friendly schools within the Saudi context?
- 5- Do you believe that there will be no need for special schools in the future because of the movement towards inclusion in Jeddah?

Theme Four (T4): Inclusion Process

Teaching skills and Arabic Sign Language training

- 1- If you are a certified teacher in SEN, have you received **all** of the required pre-service teacher competences for Deaf education?
- 2- If you are not certified teacher in SEN, have you received the required in-service teacher competences for Deaf education?
- 3- Have you ever had experience of teaching Deaf or Hard of Hearing students either in special or mainstream education? And how would you evaluate this experience?
- 4- Do you believe that pre-service and in-service teacher training would successfully bring Deaf or Hard of Hearing inclusion from theory to practice in Jeddah? Could you please explain?
- 5- Are you fluent in Arabic Sign Language? Have you had any certified courses in ASL, and for how long?
- 6- Can you manage a classroom which contains D and/or HH students? Have you had any professional training in how to teach D and/or HH students?

Theme Five (T5): Inclusion Requirements

(Additional support)

- 1- Do you believe that your school meets all the requirements for D or HH inclusion? Please explain.
- 2- Have you received sufficient teaching materials to make your teaching approach more visual for D or HH students?
- 3- Do you think there is a need for assistant teachers/interpreters in your classroom for successful inclusion of D or HH?

Theme Six (T6): Barriers to Deaf inclusion

- 1- What do you think is the main barrier to the inclusion of D or HH students in ordinary schools and in ordinary classrooms in Jeddah?
- 2- Which are more difficult to change: student-related factors, teacher-related factors, or school/environmental-related factors?
- 3- From your personal experience/perspective, how could you overcome these barriers?

Theme Seven (T7): Change needed

- 1- What kinds of change do you think are the most important for bringing D or HH inclusion in Saudi Arabia into practice?
- 2- How could you modify your classroom to accommodate four or five D or HH students?
- 3- How could the curriculum be changed or differentiated to match their needs?
- 4- How could the education assessment and evaluation systems be changed to make them suitable for D or HH students?

2/05_2004 14:16 FAX 0096673211620

IDARA TAILIM JAZAN

0096673211620

إدارة التعليم بجازان



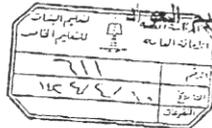
وزارة التربية والتعليم
Kingdom of Saudi Arabia

الرجاء
السادة
المشرفات

ونود التأكيد على ضرورة اتباع الخطة التربوية الفردية ضمن الأساليب التربوية والتعليمية في المعاهد والبرامج لضمان نجاح هذا التوجه .
نأمل الإيعاز بتطبيق الخطة المرفقة وقائمة المعارف والمهارات ، ورفع مرنسات واقتراحات مشرفي التربية الخاصة ومعلمي معاهد وبرامج الأمل (بمنطقكم) بمحافظتكم) إلى الأمانة العامة للتربية الخاصة بوزارة التربية والتعليم ، كما نأمل أن يتم إدراج احتياج طلاب الصف الأول الابتدائي في معاهد وبرامج الأمل ضمن احتياج الكتب الدراسية المطبقة في التعليم العام .
شاكرين لكم جهودكم ، ومتمنين للجميع التوفيق والسداد ،،

وكيل الوزارة للتعليم

د. خالد بن إبراهيم العويش

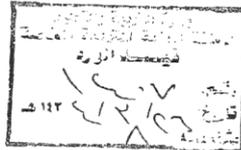


اسمخ الدكتور ناصر الموسى

هل هذا يطبع مع لبقا عليه ام لا

د. خالد بن إبراهيم العويش

التوقيع الرسمي مع الترخيص
الدكتور ناصر الموسى
٣/٥٦



معالي السادة
نعم ليشهد هذا على القطاعين، وقد تم لتسيير
في هذا الشأن مع قطاع الصناعات .
تتميزو السلاطين بالمواصفة على تعليمه على
مناهج وبرامج الأمل للبنات، أو لتوجيه بما ترونه .
نظرا لكم فأقره بحيا في
د. ناصر الموسى
دكتور
ناصر موسى الموسى
٤/٢



مسماة بركن للتعليم

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Appendix E Faculty of Education permission letter:

KINGDOM OF SAUDI ARABIA
Ministry of Higher Education
KING ABDULAZIZ UNIVERSITY
Faculty of Education



الجمهورية العربية السعودية
الوزارة العامة للتعليم العالي
جامعة الملك عبد العزيز
كلية التربية

Ref. :

Date :

Encl :

الرقم ١٣٤١٨ / ٢١ / ٢٠١٨

التاريخ: ١٤٢١ / ٤ / ١٨ هـ

المرفقات: بدون

سعادة مدير إدارة التربية والتعليم بمحافظة جدة (بنين)

الموقر

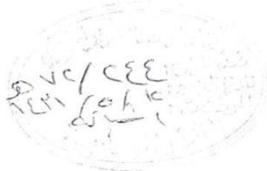
الأستاذ / عبدالله الثقفي

السلام عليكم ورحمة الله وبركاته، وبعد

نفيد سعادتك بأن الأستاذ / محمد بن مبارك الشهراني المحاضر بقسم التربية الخاصة في الكلية، والمبتعث لبريطانيا لدراسة الدكتوراه في التربية الخاصة، يرغب بتطبيق أدوات أطروحة الدكتوراه على برامج التربية الخاصة (الإعاقة السمعية)، وجمع بعض البيانات المتعلقة بذلك.

عليه أمل من سعادتك التكرم بالموافقة وتوجيهه من يلزم.

وتقبلوا خالص التحية والتقدير ،،،



عميد الكلية

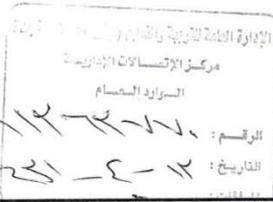
أ.د/ حسن بن عايل احمد يحيى

١٤٢١ / ١٤ / ١٤

لتحضير الأطروحة

الفيد
د/ محمد سالم بن
دايفظ

ص. سعادة وكيل الكلية
ص. سعادة وكيل الكلية لدراسات العليا والبحث العلمي
ص. قسم التربية الخاصة



فاكس : ٦٩١٤٢٨٦
Fax. : 6914286

تليفون : ٦٩١٤٦٢٠ / ٦٩١٦٣٤٣
Tel. : 6916343 / 6914620

ص . ب ١٥٧٥٨ جدة ٢١٥٥٤ المملكة العربية السعودية
P.O.Box 15758 Jeddah 21454 - Saudi Arabia

الموقع الإلكتروني : www.jtc.edu.sa - Website : http://webmail.jtc.edu.sa : البريد الإلكتروني

Appendix F The Arabic version of the questionnaire

المرحلة الأولى من جمع البيانات

الاستبانة (المرحلة الكمية)

اتجاهات المعلمين نحو دمج الصم وضعاف السمع بالفصول الملحقة بالمدارس العادية بجده
أخي المعلم

السلام عليكم ورحمة الله وبركاته ،،،،

أضع بين يديك استبانة تتكون من (48) فقرة تمثل اتجاهات المعلمين نحو دمج الصم وضعاف السمع بالفصول الملحقة بالمدارس العادية، وذلك لأغراض استكمال اطروحة الدكتوراه في التربية الخاصة/اعاقة سمعية.

إن تعاونكم في الإجابة على هذه الاستبانة له بالغ الأثر في نجاحها لما يترتب عليه فيما بعد من الخروج بنتائج هامة ومفيدة للباحثين والمعلمين والمتخصصين في مجال تعليم الصم وضعاف السمع، كما سيتم التعامل مع كامل المعلومات التي تقدمونها بمنتهى السرية، والكتمان، وسيتم حفظها في مكان آمن.

مع جزيل الشكر والتقدير لكم على الاهتمام.

القسم الاول

معلومات عامة

يرجى وضع علامة صح في الفراغ الذي يمثل اختيارك

1- هل سبق لك تدريس الطلاب الصم او ضعاف السمع؟

- () نعم، () لا

2- كم عدد الطلاب في فصلك؟

- أ- 19 او اقل ب- من 20 الي 30

ج- من 31 الي 40 د- اكثر من 41

3- هل طلاب الفصل من؟

- أ- الصم ()، ب- ضعاف السمع ()

4- ما هي الدرجة العلمية التي تحملها؟ يرجى وضع علامة صح في الفراغ الذي يمثل اختيارك

- أ- بكالوريوس في التربية الخاصة/اعاقة سمعية

ب- بكالوريوس في التربية/عام

ج- بكالوريوس مع دبلوم تربية خاصة

د- ماجستير تربية خاصة

هـ- اخرى ارجاء ذكرها (.....)

- 5- هل حصلت على اي دورات تدريبية في التربية الخاصة أثناء الخدمة (للمتخصص فقط)؟
 () نعم، () لا، برجاء ذكرها
- 6- هل حصلت علي اي دورات تدريبية قبل البدء في الخدمة متعلقة بتربية وتعليم الصم او في لغة الاشارة العربية (لغير المتخصصين)؟
 () نعم، () لا، في حالة الاجابة بنعم ارجوا تحديد نوعية هذه الدورات

7- كم عدد سنوات الخدمة/الخبرة التي امضيتها في تربية وتعليم الطلاب الصم أو ضعاف السمع؟

- (أ) خمس سنوات واقل ب- من 6 الي 10 سنوات من 11 الي 15 سنة
 د- من 16 الي 20 سنة هـ- اكثر من 20 سنة

8- كم امضيت من عمل في التعليم بمعهد الامل او المدارس العادية؟

- الخبرة في معاهد الصم اوضعاف السمع () ،

عدد سنوات العمل في التعليم العام/البرامج الملحقة ()

9- في اي مرحلة تعليمية تقوم بتدريسها في الوقت الحالي؟

- (أ) ابتدائي ب- متوسط ج- ثانوي

10- في اي نوع من المدارس تعمل حالياً؟

- (أ) معاهد الامل للصم ب- برامج الأمل للصم

ج- برامج ضعاف سمع د- اخرى ي تحديدها.....)

11- الرجاء تحديد فنتك العمرية؟

- العمر (أ) من 22 الي 30 ب- من 31 الي 40 من 41 الي 50

د- 51 واكثر

12- الرجاء تحديد بوضع دائرة على الرقم الذي يمثل رأيك في درجة التأييد من المعارضه للعبارات الثلاث التالية:

الرقم	العبارات	كبيرة جداً	كبيرة	مقبوله	قليلة	قليلة جداً
1	درجة او مستوى نجاحي في تربية وتعليم الطلاب الصم اوضعاف السمع هي....	1	2	3	4	5
2	تحظى عملية تعليم الطلاب الصم وضعاف السمع بمستوى من الدعم والمساندة الادارية من المدرسة بدرجة....	1	2	3	4	5
3	اتاحة الدعم من التقنيات والوسائل التعليمية المساندة مثل (غرفة المصادر، المعينات السمعية، اخصائي علاج عيوب النطق والكلام، الاخصائي الاكلينيكي) هي....	1	2	3	4	5

القسم الثاني

ما هو رأيك نحو دمج الطلاب الصم اوضعاف السمع في المدرسة العادية؟

الرجاء اختيار الرقم الذي يعبر بشكل اكبر عن رأيك في دمج الطلاب الصم وضعاف السمع، حيث يتدرج هذا المقياس من التأييد بشده وتأخذ الرقم 1، او المعارضة بشده وتأخذ الرقم 5

لا يوجد اجابة صحيحة او خاطئة، ولكن الاختيار الافضل هو الذي يمثل حقيقة رأيك حول الدمج

الرقم	العبارات	اوافق بشده	اوافق	محايد	لا اوافق بشده
1-	الطلاب الصم يحققون مستوي اكايمي افضل في المعاهد بالمقارنة مع فصول الدمج	1	2	3	4 5
2-	وجود التلاميذ الصم اوضعاف السمع في الفصول الملحقة في المدارس العادية يؤثر سلباً في نموهم الاجتماعي والانفعالي	1	2	3	4 5
3-	معهد الأمل للصم هو بالفعل المكان الانسب لتدريس الطلاب الصم	1	2	3	4 5
4-	يجتمع الطلاب الصم وضعاف السمع في فترة الفسحة مع بعضهم البعض بمعزل عن اقرانهم العاديين	1	2	3	4 5
5-	دمج الطلاب الصم اوضعاف السمع يقود الى مقارنة غير عادلة مع اقرانهم السامعين	1	2	3	4 5
6-	يشعر الطلاب الصم اوضعاف السمع بالعزلة اكثر حينما يتعلمون في الفصول الخاصة الملحقة بالمدرسة العادية	1	2	3	4 5
7-	مدارس الدمج لا تزيد من امكانية تكوين اصدقاء جدد للطلاب الصم اوضعاف السمع	1	2	3	4 5

- من المجموعة بالاسفل، ضع علامة صح في المربع الذي تعتقد انه يمثل افضل مكان تعليمي للطلاب الصم وضعاف السمع في مدينة جـسده؟

الرقم	المكان التربوي	الصم	ضعاف السمع
1-	معهد الامل مع خدمة السكن الداخلي		
2-	معهد الامل بنظام اليوم الدراسي العادي		
3-	الفصول الخاصة الملحقة بالمدرسة العادية		
4-	دمج جزئي في الفصل العادي مع خدمة غرفة المصادر واختصاصي علاج عيوب النطق والكلام (تأهيل سمعي)		
5-	الدمج الكلي في الفصل العادي طوال الوقت مع تقديم جميع الخدمات المساندة كترجم لغة الاشارة، وحدة علاج عيوب النطق واكلام، واختصاصي علاج عيوب النطق والكلام (تأهيل سمعي).		

القسم الثالث

ما هو شعورك نحو دمج الطلاب الصم او ضعاف السمع في المدرسة العادية؟

1- إذا كان طالب عنده صمم كامل (فقد سمعي 70 ديسيبل وأكثر) سوف ينضم "يدمج" الي فصلك (طوال الوقت او بعض الوقت) مع وجود الخدمات المسانده من مترجم لغة الاشارة ووحدة علاج عيوب النطق والكلام (تأهيل سمعي) واخصائي نفسي اكلينيكي (معلم التدريبات السلوكية)، فماذا سوف تكون مشاعرك؟

مرتاح	5	4	3	2	1	غير مرتاح
ايجابي	5	4	3	2	1	سلبي
متفائل	5	4	3	2	1	غير متفائل
مهتم	5	4	3	2	1	غير مهتم
سعيد	5	4	3	2	1	غير سعيد

1- إذا كان طالب عنده ضعف سمعي (فقد سمعي من 25 وحتى 69 ديسيبل مع وجود المعينات السمعية) سوف ينضم "يدمج" الي فصلك (طوال الوقت او بعض الوقت) مع وجود الخدمات المسانده من مترجم لغة الاشارة ووحدة علاج عيوب النطق والكلام (تأهيل سمعي) واخصائي نفسي اكلينيكي (معلم التدريبات السلوكية)، فماذا سوف تكون مشاعرك؟

مرتاح	5	4	3	2	1	غير مرتاح
ايجابي	5	4	3	2	1	سلبي
متفائل	5	4	3	2	1	غير متفائل
مهتم	5	4	3	2	1	غير مهتم
سعيد	5	4	3	2	1	غير سعيد

القسم الرابع

كيف تتعامل مع دمج الطلاب الصم او ضعاف السمع في المدرسة العادية؟

الرجاء اختيار الرقم الذي يعبر بشكل اكبر عن سلوكك نحو دمج الطلاب الصم او ضعاف السمع، حيث يتدرج هذا المقياس من التأييد بشده ويقابل الرقم 1، او المعارضة بشده وتقابل الرقم 5

لايوجد اجابة صحيحة او خاطئة، ولكن الاختيار الافضل هو الذي يمثل حقيقة سلوكك نحو الدمج

الرقم	إذا كان طالب اصم او ضعيف سمع مدمج في فصلي، انا سوف....	مؤكد	محتمل	محايد	غير محتمل	مستبعد
1-	اشجع الطلاب السامعين والصم وضعاف السمع لكي يتفاعلوا ويتعلموا معاً	1	2	3	4	5
2-	اسجل في دورات تدريبية متخصصة لتعلم لغة الاشارة العربية لتعليم الطلاب الصم اوضعاف السمع في مدرستي	1	2	3	4	5
3-	اتعاون مع اولياء امور الطلاب الصم اوضعاف السمع لتصميم الخطة التربوية الفردية التي تناسب خصائص ابنهم	1	2	3	4	5
4-	اعدل في اساليب تدريسي وطرق التقييم لتتناسب مع خصائص الطلاب الصم اوضعاف السمع	1	2	3	4	5
5-	ابتعد عن استخدام اي مسميات سلبية داخل او خارج الفصل الدراسي في توصيف الطلاب الصم او ضعاف السمع	1	2	3	4	5
6-	اظهر احترام متساوي لكل من الطلاب السامعين والصم وضعاف السمع	1	2	3	4	5
7-	ابطئ من سرعة القاء الدرس لاتاحة الفرصة امام الطلاب الصم اوضعاف السمع لكي يتعلموا اكبر قدر ممكن من محتويات الدرس	1	2	3	4	5
8-	اتعاون مع ادارة المدرسة في اتخاذ القرارات المتعلقة بالطلاب الصم اوضعاف السمع	1	2	3	4	5
9-	احسن استخدام التكنولوجيا المساعدة في تدريس الصم او ضعاف السمع	1	2	3	4	5
10-	اركز على استخدام المثيرات البصرية في تعليم الصم او ضعاف السمع	1	2	3	4	5
11-	احرص على ارتداء طلابي من الصم اوضعاف السمع على المعينات السمعية	1	2	3	4	5
12-	احرص على ان يجلس الطالب الاصم او ضعيف السمع في الصف الاول من الفصل	1	2	3	4	5
13-	اشارك في الجمعيات والمنديات الخاصة بالصم اوضعاف السمع واهتم بقضاياهم	1	2	3	4	5

Appendix G

- **Extract M1t from interview translated transcript: Theme (7) Not coded**
- Q3 (T7): How could the curriculum be changed or differentiated to match their needs?
- M1t (ST3): I believe that the previous curriculum was designed and constructed particularly for DHH students and it is quite good for them. We should not force the national curriculum for all Deaf and hard of hearing students but rather we should try to develop and enhance their curriculum.

- **Extract A8o from interview translated transcript: Theme (6) Not coded**
- Q1 (T6): What do you think is the main barrier to the inclusion of D or HH students in ordinary schools and in ordinary classrooms in Jeddah?
- A8o (St1): In my viewpoint, the school ecology and all its facilities is the most important aspect to look at before moving Deaf or hard of hearing students into mainstream schools. I should indicate that our school had inadequate facilities to enhance and ease Deaf inclusion.

- **Extract M11s from interview translated transcript: Theme (6) Not coded**
- Q3 (T6): From your personal experience/perspective, how could you overcome these barriers?
- M11s (St3): I believe that mainstream schools should be obliged to provide access to updated training in Deafness and sign language, and it should be compulsory for all who get the SEN benefit. This provision should come through local authority in order to prepare all mainstream schools before launching new Deaf self-contained classrooms. Additionally, the LEA should request mainstream school administrators to attend sign language and Deaf education courses for at least one term. This would ensure full enrolment on such courses.

Appendix H

-Extract (M1t) transcribed translated interview, codes applied for T5 Change, and ST3

ST3: educator's opinion of how curriculum should be modified:	Coded label
(Q3) Researcher: How could the curriculum be changed or differentiated to match DHH needs?	Differentiation of the national curriculum (<i>Curr. Diff.</i>)
(M1t) "...the previous curriculum was designed and constructed particularly for DHH students".	Curriculum at mainstream school should match DHH characteristics (<i>Mat. DHH Char.</i>), emergent code (Silverman, 2000)

-Extract (A8o) transcribed translated interview, codes applied for T6 barrier, and ST1

ST1: educator's opinion of barreirs to DHH inclusion:	Coded label
(Q1) Researcher: What do you think is the main barrier to the inclusion of D or HH students in ordinary schools and in ordinary classrooms in Jeddah?	Major obstacle to better DHH inclusion (<i>Maj. Obst. DHH Incl.</i>)
(A8o) "...the school ecology and all its facilities is the most important aspect to look at before moving Deaf or hard of hearing students".	Environment-related factors (<i>Env. Fact.</i>)

-Extract (I5m) transcribed translated interview, codes applied for T4 barrier, and ST3

ST3: educator's opinion of how to overcome these barriers:	Coded label
(Q3) Researcher: From your personal experience/perspective, how could you overcome these barriers?	Eliminate barriers (<i>Elim. Barr.</i>)
(I5m) "...to updated training in Deafness and sign language... it should be compulsory".	Positive impact of sign language inservice training (<i>In-ser. Post. Impac.</i>)

Appendix I

STUDENT HIGHER-LEVEL RESEARCH



School of Education and Lifelong Learning

Certificate of ethical research approval

STUDENT RESEARCH/FIELDWORK/CASEWORK AND DISSERTATION/THESIS

You will need to complete this certificate when you undertake a piece of higher-level research (e.g. Masters, PhD, EdD level).

To activate this certificate you need to first sign it yourself, then have it signed by your supervisor and by the Chair of the School's Ethics Committee.

For further information on ethical educational research access the guidelines on the BERA web site: <http://www.bera.ac.uk/publications/guides.php> and view the School's statement in your handbooks.

READ THIS FORM CAREFULLY AND THEN COMPLETE IT ON YOUR COMPUTER (the form will expand to contain the text you enter).
DO NOT COMPLETE BY HAND

Your name: Mohammad M. Al-Shahrani.

Your student no: 550000065

Degree/Programme of Study: MSc in Educational Research

Project Supervisor(s): Dr. Philip Bayliss

Your email address: mma205@ex.ac.uk

Tel: 07831898666

Title of your project: What are the issues of transfer of D/deaf pupils from Special to Mainstream education in Jeddah?

Brief description of your research project: This study focuses on two major areas. Firstly, it briefly investigate the complexity of D/deafness as a definition, disability, identity and culture as widely implemented by the Directorate General of Special Education (DGSE) in Saudi Arabia since 1997 (Al-Mosa, 2007). Second, It provides a short review of some latest literature on these two main themes namely D/deafness and inclusion.

Give details of the participants in this research (giving ages of any children and/or young people involved):

The initial phase represents a literature review of D/deafness and inclusion in two perspective global, and Saudi Arabia. The second phase will consist of focus group interviews with headteachers, school supervisors, parents and D/deaf children.

Give details regarding the ethical issues of informed consent, anonymity and confidentiality (with special reference to any children or those with special needs) a blank consent form can be downloaded from the SELL student access on-line documents:

I have indicated in chapter 5 that I will follow all ethical issues that is addressed in BERA, responsibilities to participants, to the sponsor of research (King Abdulaziz University), and to the community of educational researchers (BERA, 2004). All participants in the focus group interviews will be asked for written consent, and procedures for conducting focus group interviews will be explained to participant children and parents through sign. All participants will be given the right to withdraw at any point.

Give details of the methods to be used for data collection and analysis and how you would ensure they do not cause any harm, detriment or unreasonable stress:

In my doctoral thesis, I will make use of a mixed methodology including both quantitative and qualitative approaches. This will be achieved through employing research tools such as semi-structured interviews, focus groups, and Likert scale questionnaires. There will be no mentioning of school or teacher's names, they will be ensured of total anonymity and confidentiality, and they will have the absolute right to reflect or withdrew at any stage of the study. Signed focus group interviews will be recorded using field notes, and all data will be securely stored according to BERA Guidelines.

Give details of any other ethical issues which may arise from this project (e.g. secure storage of videos/recorded interviews/photos/completed questionnaires or special arrangements made for participants with special needs etc.):

All data including questionnaires and recorded interviews will be storage in secure place (my office at the department of SEN at King Abdulaziz University).

Give details of any exceptional factors, which may raise ethical issues (e.g. potential political or ideological conflicts which may pose danger or harm to participants):

As far as I am concerned, there will be no exceptional factors. However, there will be a permission letter from Jeddah LEA to authorise this study from the first place, questionnaires will have no names, and any participants will have the right to withdrawal if he/she felt under potential harm or stress.

This form should now be printed out, signed by you below and sent to your supervisor to sign. Your supervisor will forward this document to the School's Research Support Office for the Chair of the School's Ethics Committee to countersign. A unique approval reference will be added and this certificate will be returned to you to be included at the back of your dissertation/thesis.

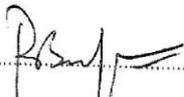
I hereby certify that I will abide by the details given above and that I undertake in my dissertation / thesis (delete whichever is inappropriate) to respect the dignity and privacy of those participating in this research.

I confirm that if my research should change radically, I will complete a further form.

Signed: A. Alammoud date: 11-2-09

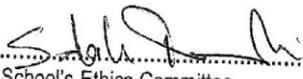
N.B. You should not start the fieldwork part of the project until you have the signature of your supervisor

This project has been approved for the period: Feb 2009 until: July 2011

By (above mentioned supervisor's signature):  date: 11.02.09

N.B. To Supervisor: Please ensure that ethical issues are addressed annually in your report and if any changes in the research occurs a further form is completed.

SELL unique approval reference: 11/08/09/9

Signed:  date: 23/03/09
Chair of the School's Ethics Committee

This form is available from
<http://www.education.ex.ac.uk/students/index.php> then click on On-line documents.

Appendix J

Course Descriptions: DEPARTMENT OF SPECIAL EDUCATION, King Saud University

Up to date detailed description of the Bachelor degree courses content from the Special Educational

Needs Department, Retrieved 2, January, 2014 ([www.http://www.ksu.edu.sa](http://www.ksu.edu.sa)).

SPED100 Introduction to Special Education (4credit-hours)	The goal of this course is to give the student an overview of the historical development of the field of special education and to understand the concept of special education and exceptional children. The content of this course covers different categories of disabilities such as mental retardation, visual impairment, hearing impairment, physical disability, emotional and behavioural disorders, and learning disability and communication disorders. Also, this course provides information regarding modern techniques of services delivery, and education for each category.
SPED151 Assessment and Diagnosis in SEN (4credit-hours)	This course is designed to give the student the skills and the basic understanding of the assessment process. It also covers the conditions required to use the assessment methods and the explanation of their results and how to make appropriate educational decisions.
SPED160 Physical Handicaps (3credit-hours)	This course is designed to introduce students to the area of physical disability; its causes, classification, and the unique characteristics and needs of physically disabled individuals.
SPED170 Emotional Disturbance for Exceptional Children (3credit-hours)	The course is designed to give students a basic knowledge of the area of emotional disturbance among exceptional children and its causes, classification, and diagnosis. It also covers certain aspects of emotional disturbance such as aggressive behaviour, hyperactive behaviour, and autistic behaviour as well as services for these children.
SPED180 Introduction to Rehabilitation of the Handicapped (3credit-hours)	This course is designed to introduce students to the concept of rehabilitation and its relationship with special education. It covers subjects such as the importance of rehabilitation, the role of the rehabilitation specialist, and new developments and trends in the area of rehabilitation.
SPED201 Behaviour Modification (3credit hours)	This course is designed to introduce the student to the concept of behaviour modification, its historical background, and its theoretical basis. It teaches how to use different behaviour modification methods that can be used to teach new behaviours or reduce inappropriate behaviours.
SPED202 Speech Disorders (3credit-hours)	This course is designed to introduce students to the concept of speech disorder; its types, characteristics, diagnosis, and treatment.
SPED260 Public Awareness of Handicapping Conditions (3credit-hours)	This course aims to provide the student with the following: the media used in the transmission of awareness among different sections of society. The focus will be mainly on early diagnosis and assessment procedures
SPED295 Aids and Prosthesis for the Handicapped (3 credit-hours)	This course aims to provide students with the following knowledge: 1) The different aids and prosthetics suitable for the various types of handicapped conditions, 2) The principles of selection, and 3) The methods of utilization.
SPED371 Curriculum Development for Exceptional Children (3credit-hours)	This course is designed to provide students with theoretical and practical background in the area of curriculum development for exceptional children.

SPED385 Educating Exceptional Children in Regular Schools (3credit hours)	This course aims to provide students with the main principles of educating certain types of handicapped students in regular schools. This could include such topics as; 1) The concept of mainstreaming and its different methods and problems, 2) The programmes by which special education services can be introduced in regular schools for example resources rooms, peripatetic teachers and teacher consultants, 3) The advantages and limitations of different systems, 4) The specific role of each regular and special classroom teacher in educating handicapped students.
SPED390 Working with Families of Exceptional Children (3credit-hours)	This course is designed to give students a background concerning the reaction of families toward different disabilities, guidance and counselling methods, and the needs of families.
SPED392 English Texts and Terminology (2credit-hours)	This course aims to provide the student with the basic terminology used in the field of special education. This would be achieved by reading selected English texts.
MAJORS COURSES	
SPED251 Introduction to Visual Impairment (3credit hours).	This is designed to introduce students to the visual system; what it is, what it does and how it works. It familiarizes them with the terminology, aetiology, incidence, prevalence, prevention and treatment of visual impairment. It also helps students achieve a better understanding of visually impaired children through the exploration of the physical, intellectual, motivational, emotional and social characteristics of these children throughout their different stages of growth and development. The needs of visually impaired children are highlighted together with the approaches available to meet such needs. This course provides a good theoretical background on the impact of visual loss on the individual and his life in society, so that students are better able to study the educational and rehabilitative programs related to visually impaired children.
SPED261 Braille(1) (3credit hours)	This course has the following purposes: 1) To provide students with the basic skills in Braille reading and writing so that they can communicate in writing with the blind child, read his written work and correct it. 2) To familiarize students with the equipment and devices used in Braille writing. 3) To provide a brief history of the development of reading and writing for the blind. 4) To introduce some of the problems associated with teaching Braille reading and writing to the blind, and offer some suggestions for dealing with such problems.
SPED301 Braille(2) (3credit-hours)	This course is designed to help the student achieve the following objectives: 1) Mastery of Arabic Braille symbols. 2) Mastery of Braille reading and writing with simple as well as complex contractions. 3) Mastery of mathematical symbols use in elementary grades in the Institutes of Light according to the British code. 4) To become familiar with the new methods used in Braille reading, writing and production. 5) To become familiar with the problems commonly encountered in teaching Braille reading and writing to the blind, and also to become familiar with the suggestions offered to overcome such problems.

SPED351 Orientation and Mobility and Daily Living Skills for the Visually Impaired (3credit hours)	The purpose of this course is to provide students with a basic understanding of the process involved in helping visually impaired individuals develop orientation and mobility skills, as well as daily living skills. Techniques and factors influencing this process are discussed and, in the meantime, practical training is provided in this course.
SPED401 Teaching Methods for the Visually Impaired (3credit-hours)	This course has the following purposes: 1) To familiarize students with the different educational approaches, programs, strategies and theories along with thorough examination of their efficiency in teaching various subjects. 2) To train students to use the new technological devices used in the field of visual impairment. 3) To familiarize students with the problems and difficulties encountered by teachers in teaching visually handicapped children. 4) To help students acquire the necessary skills which not only enable them to assess and critique available materials, but also provide them with the ability to engage in innovative and creative activities that can ultimately lead to more effective methods, approaches and programs, and offer useful solutions, suggestions and alternatives which can be utilized in teaching visually handicapped children.
*MINORS	Specialized in DHH Education:
SPED252 Introduction to Hearing Impairment (3credit-hours)	This course aims at introducing students specializing in this area to the concepts and nature of hearing impairment, its classification, causes, and identification and diagnosis methods. Special emphasis is put on the characteristics and needs of the hearing impaired, in addition to appropriate care services offered for them.
SPED262 Language Development for the Hearing Impaired (3credit-hours)	This course aims to introduce students to the basic concepts and definition of language and its development, together with the processes of language acquisition, development stages, and their implications for helping the hearing impaired acquire language skills. Special emphasis is put on the psycho-educational theories of language development, and consideration of system in both oral and total communication philosophies.
SPED302 Oral Communication Methods (3credit-hours)	This course aims at realizing the following: The understanding of the communication process and its components with concentration on techniques for aiding development of intelligible speech in individuals with severe and profound hearing losses.
SPED352 Total Communication Method (3credit-hours)	This course emphasizes the development of skills in total communication for use in educational service delivery systems. It provides practice in simultaneous use of speech, finger spelling and the language of signs.
MINORS COURSES	
SPED253 Introduction to Mental Retardation (3 credit-hours)	The course aims to provide students with basic knowledge in the field of mental retardation that includes basic definitions, causes, classification system as well as characteristics and needs. The course also focuses on increasing students' understanding of various services delivery systems and their historical development.
SPED263 Mental Retardation in the Perspective of Different Theories (2credit-hours)	This course is designed to discuss the concept of mental retardation from the perspective of different theories. Emphasis is placed on learning theories and their application in educating and training mentally retarded students.

SPED303 Educating the Educable Mentally Retarded (EMR) (2credit-hours)	This course aims to introduce students to special curricula, and educational programs for EMR with emphasis on the current trends of such programs.
SPED313 Educating the Trainable Mentally Retarded (TMR) (2 credit-hours)	The main goal of this course is to emphasize the rights of this group in educational and rehabilitational process through the introducing the students to the types of appropriate educational alternatives as well as educational and vocational curricula for TMR.
SPED353 Adaptive Behaviour Skills for Mentally Retarded (2credit-hours)	Topics covered in this course include the concept of adaptive behaviour and the dimensions of adaptive behaviour skills as well as types of maladaptive behaviour problems and treatment procedures. The other purpose of this course is to train students on the application of adaptive behaviour scales to identify the degree and level of adaptive behaviour of mentally retarded children.
SPED403 Teaching Methods for the Mentally Retarded (3credit-hours)	This course aims to provide students with the learning principles as they relate to instruction processes for the mentally retarded. Emphasis is placed on the individualized education programme for MR as well as other teaching strategies such as behaviour modification, and task analysis.
SPED254 Introduction to Learning Disabilities (3credit-hours)	The goal of this course is to study the field of learning disability from a historical point of view, introduce students to the characteristics and needs of students with learning disabilities including physical developmental, psychological, emotional, social, and academic characteristics of these students.
SPED264 Learning Disabilities in Reading and Writing (3credit-hours)	The goal of this course is to introduce the student to the nature of reading and writing, the types of learning disabilities in reading, writing and their connections.
SPED304 Developmental Learning Disabilities (2credit-hours)	The goal of this course is to introduce the student to the developmental learning disabilities in preschool level, and its different types (cognitive, social, emotional and motor). It also covers the methods used to evaluate the disabilities and take remedial action.
SPED314 Learning Disabilities in Perspective of Different Theories (2 credit-hours)	This course presents the historical development of theories related to learning disabilities and the effect these theories and the consequent research have on understanding the nature of learning disabilities. It also presents the concept of learning disabilities in the light of theory and the applications of these theories to teaching students.
SPED354 Case Study in Learning Disabilities (2credit-hours)	The goal of this course is to: 1. Study in a comprehensive and precise way a student who has learning disabilities. 2. Evaluate and identify his disabilities. 3. Analyse the student's skills and develop an educational plan.
MINORS: SPED254, 252, 264, 263.	Further courses tackle behavioural and emotional disorders are:
SPED256	Introduction to Behavioural and Emotional Disorders (3credit-hours).
SPED266	Behavioural & Emotional Disorders in Perspective of Different Theories (3credit-hours).
SPED306	Behaviour (3credit-hours).
SPED357	Case study in Behavioural Emotional Disorders (3credit-hours).
SPED406	Teaching Methods for children with Behavioural and Emotional Disorders (3credit-hours).
SPED480	Field Experience in the area of Behavioural & Emotional Disorders (3credit-hours).
SPED 404	Teaching Methods For Learning Disabled Students (3credit-hours).