TRANSITION SERVICES FROM SCHOOL TO WORK FOR STUDENTS WHO ARE DEAF OR HARD OF HEARING IN SAUDI ARABIA: TEACHERS’ PERCEPTIONS

A DISSERTATION

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The purpose of the present study was to examine teachers’ perceptions of the transition services from school to the work force for students who are Deaf or hard of hearing (D/hh) in Saudi Arabia. The importance of this study was to gain a better understanding of the perceptions of teachers with the objective of identifying the implications and practices for vocational training related to post school success. The study investigated how teachers of students who are D/hh perceive their readiness and preparation to plan and implement transition services, what challenges they may encounter while they plan and implement such services, and the work opportunities that students who are D/hh may have after receiving the transition services. The study also examined the impact of the teaching environment, years of teaching experience, educational background, grade levels taught, and family experiences with disability on the teachers’ perceptions of the issues under study. Also owing to the educational achievement issues and transitional challenges faced by students who are D/hh, this study expanded the existing knowledge and contributed to successful formulation of transition services by disability service providers so they could design programs and effectively support students who are D/hh.
Such programs and support should aim to increase the employment rate or transition to employment not only in Saudi Arabia, but also within the Middle East region. The study found that teachers in Saudi Arabia have low perceptions with regard to transition services. The same low perceptions were found with regard to the teachers’ opinions as to their own preparedness to plan and implement transition services for students who are D/hh. A similar low awareness and hence, perception, was found with regard to implementation challenges associated with transition services. Furthermore, the individual characteristics of teachers such as years of teaching experience, educational background, grade levels taught, and family experiences with disability, did not affect their low perceptions towards school-based transition services. Challenges and barriers highlighted and findings offered recommendations and suggestions for policy makers and researchers.
DEDICATION

I dedicate this dissertation to the memory of my father, Nasser, who worked hard for me but couldn't see this thesis completed,

To the soul of my mother, Sarah who lost her eyesight for me, whose genuine love and kindness made me who I am today,

To my wonderful wife, Thamraa for being there for me, and for her endless love, sacrifice, loyalty and her ongoing support,

To my lovely girls Sarah, Retag, Jumana and Ameerah; you are the source of happiness in my life, and I have accomplished this because of you,

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To all the instructors of hard of hearing and Deaf students and all the professionals in the special education field,

To all my loyal friends who have supported me throughout my doctoral years.
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TABLE OF CONTENTS

ABSTRACT.................................................................................................................................................................................................................................................. iii

DEDICATION.................................................................................................................................................................................................................................................. v

ACKNOWLEDGMENTS.......................................................................................................................................................................................................................... vi

LIST OF TABLES................................................................................................................................................................................................................................. xiii

LIST OF FIGURES .................................................................................................................................................................................................................. xvi

CHAPTER ONE ................................................................................................................................................................................................................................. 1

Introduction ............................................................................................................................................................................................................................................... 1

Statement of the Problem................................................................................................................................................................................................................ 6

Purpose of the Study..................................................................................................................................................................................................................... 8

Significance of the Study....................................................................................................................................................................................................... 9

Research Questions................................................................................................................................................................................................................... 11

Delimitations of the Study.................................................................................................................................................................................................... 12

Limitations of the Study....................................................................................................................................................................................................... 13

Definition of Terms.............................................................................................................................................................................................................. 13

Summary.............................................................................................................................................................................................................................................. 15

CHAPTER TWO ................................................................................................................................................................................................................................. 17

Literature Review................................................................................................................................................................................................................. 17

Overview of the Nation of Saudi Arabia............................................................................................................................................................................. 17

The General Education System in Saudi Arabia......................................................................................................................................................... 18

History of Special Education in Saudi Arabia................................................................................................................................................................. 19

Education of Children who are D/hh in Saudi Arabia.................................................................................................................................................... 21
Educational Options for Students who are D/hh in Saudi Arabia.................................................. 24
  Preparatory.................................................................................................................................. 27
  Primary education......................................................................................................................... 28
  Intermediate education............................................................................................................... 28
  Secondary education.................................................................................................................. 29
Vocational Rehabilitation Programs in Saudi Arabia................................................................. 30
  Stages of Vocational Rehabilitation Programs in Saudi Arabia.............................................. 34
    Intermediate vocational stage................................................................................................. 34
    Vocational training stage....................................................................................................... 34
Efficacy of Vocational Rehabilitation Programs................................................................. 35
General Information about Hearing Impairment......................................................................... 38
The Effects of Hearing Loss on Different Aspects of Development.......................................... 40
Transition Services in the United States..................................................................................... 41
Provision of Equal Employment Preparation and Opportunities for Career Advancement ...... 43
Provision of Functional Academics Including Self-determination and Personal Social Skills .... 44
Research Findings About Employment of Individuals with Disabilities................................. 46
  Postsecondary education......................................................................................................... 51
  Productive engagement........................................................................................................... 52
  Household circumstances........................................................................................................ 52
  Social and community involvement....................................................................................... 52
  Secondary Transition.............................................................................................................. 53
  The Pathways Approach......................................................................................................... 54
  Collaboration............................................................................................................................. 58
Transition Evidence-Based Predictors ................................................................. 59
Types of Transition Services .............................................................................. 60
  School to Work Transition Services ................................................................. 61
  Family, Community, and Institutions of Learning Collaboration with Transition Services .. 62
  Professional Transition Services ..................................................................... 63
Supported Work Environment Versus Other Options ............................................. 63
Challenges in Providing Transition Services ...................................................... 65
Teacher Transition-Related Competencies and Preparation ................................. 67
Teacher Preparation in Saudi Arabia for Transition Planning .............................. 69
Perceptions of Special and General Education Teachers ..................................... 71
Summary ........................................................................................................... 75
CHAPTER THREE ................................................................................................. 78
Method ............................................................................................................. 78
Overview of Research Design ............................................................................ 78
Variables of Study ............................................................................................ 81
Research Questions ........................................................................................... 82
Target Population ............................................................................................... 83
Sampling ........................................................................................................... 84
Sample Size ....................................................................................................... 85
Approvals ........................................................................................................... 85
Instrumentation ................................................................................................. 85
  Pilot Study ...................................................................................................... 86
Reliability and Validity ....................................................................................... 87
Translation of the Survey Instrument .................................................................88
Data Collection Procedures ...........................................................................89
Data Analyses .................................................................................................89
Summary ..........................................................................................................91

CHAPTER FOUR ...............................................................................................92
Results .............................................................................................................92
Response Rate .................................................................................................92
Demographic Data ..........................................................................................92
Screening the Data ..........................................................................................94
Answering Research Questions ......................................................................101
  Research Question One ................................................................................101
  Research Question Two ................................................................................103
  Research Question Three ............................................................................112
  Research Question Four ..............................................................................120
  Research Question Five ..............................................................................126
The Open Question Analysis .........................................................................133
Summary ..........................................................................................................137

CHAPTER FIVE .................................................................................................141
Discussion .......................................................................................................141
Discussion of Findings .....................................................................................143
Teachers’ overall perceptions toward school-based transition services for students who are D/hh .................................................................143
Teachers’ overall perceptions toward their preparation to plan and implement transition services for students who are D/hh .................................................................144

Teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh .................................................................146

Teachers’ perceptions toward work experience prior to and after leaving schools for individuals who are D/hh ....................................................................................148

Differences in teachers’ perceptions regarding school-based transition services and post-school employment ..................................................................................................................149

Differences based on educational background ..........................................................................................................................150

Differences based on level of education ..........................................................................................................................152

Differences based on years of teaching experience .............................................................................................................153

Differences based on family history of disability ..................................................................................................................154

Differences based on grade levels taught ..........................................................155

Challenges and barriers that hinder the transition services for student who are D/hh in Saudi Arabia ..........................................................156

Practical Implications ..................................................................................................................................................159

   Ministry of Education ..................................................................................................................................................160

   Teachers ..................................................................................................................................................163

General Implications ..................................................................................................................................................165

Study Limitations ..................................................................................................................................................166

Implications for Future Research ........................................................................................................................................167

Conclusion ..................................................................................................................................................168

References ..................................................................................................................................................170
Appendix.................................................................................................................................................189

Appendix A - Map of the location of Saudi Arabia ..............................................................................190

Appendix B - The transition services survey. English version .........................................................192

Appendix C - The transition services survey. Arabic version .........................................................199

Appendix D - Reliability analysis Cronbach’s alpha analysis ..........................................................205

Appendix E - Permission from ministry of education Arabic version .............................................210

Appendix F - Permission from ministry of education English version...........................................212

Appendix G - Survey permission English version .................................................................................214
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reliability analysis for the subscales of the study</td>
<td>88</td>
</tr>
<tr>
<td>2. Demographic data of the participants</td>
<td>93</td>
</tr>
<tr>
<td>3. Descriptive statistics for Total Score of Teachers' Perception</td>
<td>95</td>
</tr>
<tr>
<td>4. Tests of normality for the Total Score of Teachers' Perception</td>
<td>96</td>
</tr>
<tr>
<td>5. Descriptive statistics for Total Score of Teachers' Perception after removing the outliers</td>
<td>97</td>
</tr>
<tr>
<td>6. Tests of normality for the Total Score of Teachers' Perception after removing the outliers</td>
<td>97</td>
</tr>
<tr>
<td>7. Tests of normality for the Total Score of Teachers’ Perception based on education level</td>
<td>98</td>
</tr>
<tr>
<td>8. Descriptive statistics for Total Score of Teachers’ Perception based on education level</td>
<td>99</td>
</tr>
<tr>
<td>9. Overall perceptions of teachers toward school-based transition services for Students who are D/hh in Saudi Arabia</td>
<td>102</td>
</tr>
<tr>
<td>10. Teachers’ perceptions toward their preparation to plan and implement transition services for Students who are D/hh in Saudi Arabia</td>
<td>104</td>
</tr>
<tr>
<td>11. Tests of normality for the Score of Teachers’ preparedness to implement transition services</td>
<td>104</td>
</tr>
<tr>
<td>12. Tests of normality for the Score of Teachers’ preparedness to implement transition services after removing the outliers</td>
<td>106</td>
</tr>
</tbody>
</table>
13. Tests of normality for the Score of Teachers’ preparedness to implement transition services by school level they taught……………………………………………………107

14. Tests of normality for the Score of Teachers’ preparedness to implement transition services by school level they taught after removing the outliers.........................109

15. Mann-Whitney U test………………………………………………………………..111

16. Teachers’ perceptions toward potential implementation challenges of school-based transition services for Students who are D/hh in Saudi Arabia..................................112

17. Tests of normality for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services..........................113

18. Tests of normality for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services after removing the outliers.................................................................114

19. Tests of normality for the score of teachers’ perceptions toward potential implementation challenges of school-based transition services by grade level taught.............116

20. Tests of normality for the score of teachers’ perceptions toward potential implementation challenges of school-based transition services by grade level taught after removing the outliers.................................................................118

21. Mann-Whitney U test......................................................................................120

22. Teachers’ perceptions toward work experience prior to and after leaving school for Students who are D/hh.................................................................121

23. Tests of normality for the Score of Teachers’ perceptions toward work experience.....122

24. Descriptive statistics for the Score of Teachers’ perceptions toward work experience. 123
25. Tests of normality for the Score of Teachers’ perceptions toward work experience after removing the outliers.................................................................124

26. Independent Samples t test for differences in teachers’ perceptions toward work experience prior to and after leaving school for Students who are D/hh.............125

27. Independent Samples t test for differences in teacher’s perception based on educational background.................................................................127

28. Levene's Test for the Dependent Variable: Perception....................................128

29. Brown-Forsythe test for differences in teacher's perception based on their education level.................................................................129

30. Descriptive statistic of education level and Post HOC (Games-Howell) results........129

31. Levene's Test for the Dependent Variable: Perception.................................129

32. One Way ANOVA for differences in teacher's perception based on teaching experience.................................................................130

33. Descriptive statistic of teacher’s perception based on teaching experience........131

34. Independent Samples t test for differences in teacher's perception based on family history of disability.................................................................132

35. Independent Samples t test for differences in teacher's perception based on grade levels taught.................................................................132
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figures</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Histogram of the Total Score of Teachers' Perception</td>
<td>94</td>
</tr>
<tr>
<td>2. Boxplot of the Outliers for Teachers’ Perception Scores</td>
<td>95</td>
</tr>
<tr>
<td>3. Histogram of the Total Score of Teachers' Perception after removing the outliers</td>
<td>96</td>
</tr>
<tr>
<td>4. Illustrate outliers in the Total Score of Teachers' Perception after removing the outliers</td>
<td>98</td>
</tr>
<tr>
<td>5. Boxplot of the Outliers for Teachers’ Perception Scores by education level</td>
<td>100</td>
</tr>
<tr>
<td>6. Histogram of the Total Score of Teachers' Perception according to those who hold a bachelor’s degree</td>
<td>100</td>
</tr>
<tr>
<td>7. Histogram of the Total Score of Teachers' Perception according to those who hold a master's degree</td>
<td>100</td>
</tr>
<tr>
<td>8. Histogram of the Total Score of Teachers' Perception according to those who hold other education degree</td>
<td>101</td>
</tr>
<tr>
<td>9. Illustrates overall perceptions of teachers toward school-based transition services for Students who are D/hh in Saudi Arabia</td>
<td>103</td>
</tr>
<tr>
<td>10. Histogram of the Score of Teachers’ preparedness to implement transition services</td>
<td>105</td>
</tr>
<tr>
<td>11. Boxplot of the Outliers for the Score of Teachers’ preparedness to implement transition services</td>
<td>105</td>
</tr>
<tr>
<td>12. Histogram of the Score of Teachers’ preparedness to implement transition services after removing the outliers</td>
<td>106</td>
</tr>
</tbody>
</table>
13. Boxplot of the Outliers for the Score of Teachers’ preparedness to implement transition services after removing the outliers

14. Histogram of the Score of Teachers’ preparedness to implement transition services by those who teach at general schools

15. Histogram of the Score of Teachers’ preparedness to implement transition...

16. Boxplot of the Outliers for the Score of Teachers’ preparedness to implement transition services by education area

17. Histogram of the Score of Teachers’ preparedness to implement transition services by those who teach at general schools after removing the outliers

18. Histogram of the Score of Teachers’ preparedness to implement transition services by those who teach at special schools after removing the outliers

19. Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services

20. Boxplot of the Outliers for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services

21. Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services after removing the outliers

22. Boxplot of the Outliers for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services after removing the outliers

23. Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach in general schools
24. Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach at special schools……………………………………………………………………………………………117

25. Boxplot of the Outliers for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services by education area……117

26. Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach at general schools after removing the outliers…………………………………………………………………….118

27. Histogram of the score of teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach at special schools after removing the outliers……………………………………………………………………119

28. Histogram of the Score of Teachers’ perceptions toward work experience………………122

29. Boxplot of the Outliers for the Score of Teachers’ perceptions toward work experience…………………………………………………………………………………………123

30. Histogram of the Score of Teachers’ perceptions toward work experience after removing the outliers……………………………………………………………………124

31. Boxplot of the Outliers for the Score of Teachers’ perceptions toward work experience after removing the outliers……………………………………………………………………125

32. Descriptive statistic of teacher’s perception based on teaching experience………………131
CHAPTER ONE

Introduction

Many nations are faced with the challenge of providing relevant and meaningful education for all their citizens including those with disabilities. In tracing the history of special education, the education of individuals with disabilities has progressed from segregated institutions to integrated or inclusive education settings (Osgood, 2005). Clark and Joyce (1981) stated that in the early stages of integration, many students with disabilities were only physically present in the general education classrooms, but they did not benefit from instruction. As a result, the United States of America enacted laws to guide the delivery of relevant education to all citizens including students with disabilities. One such law is the Individuals with Disabilities Education Improvement Act (IDIEA). The IDIEA (2004) requires that students with disabilities in public schools be provided with an Individualized Education Program (IEP) stating the child’s educational needs and goals. The IDIEA also requires that by age 16, students with disabilities should have a transition plan in place before they exit high school. The law states that the transition plan should be based on the student’s preferences, needs, strengths, and interests, and should be reviewed annually thereafter with the involvement of the student and parents.

The concept of transition was brought to the forefront of special education by Will Madeleine of the Office of Special Education and Rehabilitative Services (OSERS). Through such initiatives, the field of special education changed its focus on issues regarding transition (Iron, 1999). OSERS recognized the need to help adolescents with disabilities to transition from life at school to the community, and from post-secondary education to work life (Bullis, Bull, Sendelbaugh, & Freeburn 1987). According to Brolin (1995), schools needed three main components to make such a transition a success: (1) career/functional development curriculum;
(2) a collaboration consisting of employers, parents, and community agencies; and (3) follow-up and support systems to enable individuals to be able to adapt to the work environment.

Transition services for students with disabilities, including those who are Deaf or hard of hearing (D/hh), are based on individual needs of students. As explained by Alnahdi (2013a), this is a collaborative process that requires active participation from students, teachers, parents, related agencies, and community organizations. Individual needs are determined not only by special education teachers, but also by others involved in individualized education planning. Based on the definition of transition services, it is a planned set of activities that entails a number of steps.

According to Alnahdi (2013a), there are five steps that have to be followed in transition planning: (1) establish the student’s desired post-education outcomes; (2) establish the present level of the student’s educational performance; (3) establish an outline of transition service needs; (4) develop the definition of transition services, and (5) formulate yearly goals and objectives. Alnahdi (2013) added that throughout these steps, school administrators play a key role in working together with special educators to monitor the manner in which these steps are implemented and how each transition plan is carried out. Teachers’ competencies in career development as well as academic planning certainly come into play at this period.

Currently, although transition programs exist in Saudi Arabia as an educational policy, such programs are inadequate. However, students with disabilities are educated in both segregated and integrated institutions just like their peers without disabilities. Consequently, these students are supposed to continue to post-secondary institutions, or employment, or live independently in their communities as young adults capable of taking care of themselves and contributing to the development of their communities.
In Saudi Arabia the transition of students who are D/hh is facilitated via vocational and technical programs that focus on employability skills to enable them to enter work and community life. These programs are provided by the Ministry of Education in Saudi Arabia. There are specific subjects that are provided on vocational skill development. These subjects are expected to help students who are hearing impaired to access jobs in careers including graphic arts, ceramics, hair dressing, car repair, cooking, batik making, and agriculture among others (Alnahdi, 2013). The courses and skills that are offered via the vocational education programs are meant to help students get jobs as semi-skilled and skilled workers in trade, industrial and agricultural sectors.

There are a number of special education schools in Saudi Arabia that provide a vocational curriculum in addition to elective vocational subjects for students who are D/hh. In addition, there are also a number of technical secondary schools for students who are D/hh (Ministry of Education of Saudi Arabia, 2012). For example, students may take secondary level education in technical schools and then, upon completion, they are awarded an intermediate school certificate Shahadat Al-Kafa’at Al-Mutawassita (Ministry of Education of Saudi Arabia, 2012). When these students graduate, they can be employed in technical fields.

It is worth mentioning that a large percentage of students who are D/hh have parents who also have hearing impairment. Moreover, they receive their education from teachers who are not hearing impaired. According to Hindley and Van Gent (2002), some communication problems may arise because those who are D/hh mostly depend on their vision and visual orientation compared to their peers who can hear. Consequently they end up missing or misinterpreting some parts of the information (Marschark & Hauser, 2008).
The age that an individual experiences loss of hearing greatly impacts his/her ability to acquire language. Language is often acquired via repetition and frequently being exposed to speech, which normally starts in infancy. Learning a language and being exposed to speech patterns at an early age has a huge impact on people later on as they are able to maintain those patterns, even if they develop hearing impairments in the future. Developing a speaking skill may be more difficult for those who are born deaf because it is hard to learn from the lips of a speaker and produce sounds that cannot be heard.

Minority ethnic status, which is clearly reflected in an individual’s native language, has a negative effect on his/her social skills (Allen, 1986). Power and Hyde (2003) stated that this is key when assessing the perceptions of social achievements of students who are D/hh in Saudi Arabia where Arabic is the main language used at homes and in the schools. Those students do not use English as their main language in their academic discourse. Most of the students that sign tend to have limited proficiency in the English language. This causes difficulties to communicate. In addition, spoken language is like a second language for these students, also causing difficulties to communicate.

It is difficult for some students who are D/hh to express their knowledge properly if they are tested using signs that are based on English. Generally the ability of students who are D/hh to learn spoken language is limited despite the existence of amplification devices (Bosso, 2008).

A study that was done to look at the academic achievement of students who are D/hh showed they are far behind their counterparts in similar grades and ages in Western countries (Traxler, 2000). Students who are D/hh who get instruction in general education classrooms tend to have higher academic achievement compared to such students educated in classrooms that are self-contained (Kluwin & Stinson, 1993).
In addition, the type of school placement, whether special or mainstreaming programs, tends to affect the social interactions of students who are D/hh which in turn, affects their social and emotional functioning. According to Kluwin, Stinson, and Colarossi (2002), it was found that students who were D/hh in general education programs felt more secure emotionally compared to other students with hearing loss. Stinson, Whitmire and Kluwin (1996) showed in another study that D/hh adolescents who were in special programs perceived themselves as having more anxiety, withdrawn behavior, or depression than their peers who were deaf and were in integrated programs with those capable of hearing (Eldik, 2005). Another study concluded that there was not enough research to show definitive claims on social and emotional wellbeing affected or influenced by the type of school placement (Kluwin, Stinson, & Colarossi, 2002).

Two research studies showed that students who were D/hh tended to drop out of college due to less personal resources in addition to lacking socialization (Arnold, 2000; Boutin, 2008). In these studies, the focus was on personal factors such as attitude and motivation. The majority of students with hearing loss who entered college were not personally socially or emotionally prepared for life after secondary school.

Research by Tross, Harper, Osher and Kneidinger (2000) was among the studies that focused on the role of informal social interaction and communication in attaining social integration. This study demonstrated the difficulties in facing the isolation and feelings of separateness in an integrated setting, which could be minimalized if there were enough support services. In addition, the development of commitments and goals are important to students who are D/hh. For students who lack a clear career goal upon entry to college, persistence is necessary in order to set a goal by the end of the initial year (Foster & Brown, 1988).
University life is a great opportunity to get exposed to new ideas and life styles away from family restrictions. Brown and Foster (1989) demonstrated that the high score of loneliness by students who were D/hh in college were reflective of their differences in lifestyle and not so much on their loneliness due to a hearing loss. According to Luckner and Muir (2001), this showed that individuals who are D/hh tend to experience the world in a way that is neither worse nor better than those with the capacity to hear; meaning that their personal challenges are not different from their hearing counterparts. According to Murphy and Newlon (1987), some of the variables that contributed to the success of students with hearing impairment were their determination to succeed, good family, and good life. This too, is not different from students without a hearing disability.

The above-mentioned variables have a complex connection, thereby making it difficult to discuss the impact of each variable in isolation. The degree of hearing loss associated with students’ ability to communicate impacts their classroom participation. This in turn, affects their academic success. In a study of co-enrollment with students who were D/hh and students with hearing ability, Eccles, Templeton, Barber, and Stone (2003) reported that both sets of students developed friendships that continued to grow outside of the classroom and in these friendships, all students were able to communicate with each other with ease.

**Statement of the Problem**

Employment data indicates that the number of employees who are D/hh in Saudi Arabia is well below the number of individuals who are D/hh and have completed school. The government, through the Ministry of Education, has been trying to advocate for employers to hire people who are D/hh. However, some employers fear that employees who are D/hh may not
yield the desired performance they seek for their organizations. Indeed, this observation was supported by Alnahdi (2013), who noted that both employment and achievements of people with disabilities were still lower than expected. In addition, Alnahdi (2013) underscores the fact that the number of people with special needs who get paid is still low in spite of efforts being made by the Saudi government to increase these numbers. Similarly Alnahdi (2014) has explained that other than the challenges in getting employed, students with disabilities face an additional employment challenge: that of being employed in positions that do not match their skills.

Over the recent past, there has been an increase in educational research that focuses on transition experiences of students who are D/hh. The Ministry of Education in Saudi Arabia (2012) has indicated that people who were D/hh faced several constraints and challenges that hindered them from participating fully in economic activities. The main challenges that this group of people faces include inadequate education and training, limited sign language interpreters, lack of awareness by employers, and lastly, challenges in modifying the workplace to suit them (Ministry of Education of Saudi Arabia, 2012).

Constraints faced by people who are D/hh are not only related to the job market (Alnahdi, 2013). This could be due to the fact that the current educational system in Saudi Arabia does not offer transition programs that match the workplace environments. Additionally, there is a lack of effective cooperation between relevant ministries such as the Ministry of Labor and the Ministry of Education.

A study done by Al-Mousa, Al-Saratawi, Al-Abduljabbar, Al-Batal, & Al-Husain (2008) established that people with special needs face more barriers and challenges in vocational and career competencies because of difficulties interacting with fellow employees. Although a clear and general philosophy used in special education is meant to create independent people who are
well skilled, implementation of such programs is still needed. One of the challenges related to school-based vocational training for students who are D/hh is the perception of special education teachers. Some of the special education teachers seem to have negative attitudes and perceptions about transition services. It is against this understanding that the current research becomes pertinent.

**Purpose of the Study**

The purpose of the present study was to examine teachers’ perceptions of the transition services from school to the work force for students who are D/hh in Saudi Arabia. The importance of this study is to gain a better understanding of the perceptions of teachers with the objective of identifying the implications and practices for vocational training related to post school success. The study investigated how teachers of students who are D/hh perceive their readiness and preparation to plan and implement transition services, what challenges they may encounter while they plan and implement such services, and the work opportunities that students who are D/hh may have after receiving the transition services. The study also examined the impact of the teaching environment, years of teaching experience, educational background, grade levels taught, and family experiences with disability on the teachers’ perceptions of the issues under study. Also owing to the educational achievement issues and transitional challenges faced by students who are D/hh, this study expanded the existing knowledge and contributed to successful formulation of transition services by disability service providers so they could design programs and effectively support students who are D/hh. Such programs and support should aim to increase the employment rate or transition to employment not only in Saudi Arabia, but also within the Middle East region.
Many people believe that students with hearing impairments cannot do serious academic work and search for decent jobs. It is generally believed that these students can only perform vocational and technical careers. As demonstrated by Al-Humaid (2013), students who are D/hh can aspire to any level of the academic ladder and acquire gainful employment.

With over ten years of teaching experience, it this author’s view that if students who are D/hh are provided with adequate training, they can perform like comparably to their hearing peers and would be able to achieve any level of education as well as employment after leaving school. In the long run, these individuals would be able to contribute to the workforce development in their communities and in the nation as a whole.

**Significance of the Study**

The present study could significantly contribute to post college outcomes for students who are D/hh to better understand how college transition experiences relate to academic adjustment and to determine the general effect of academic performance as students who are D/hh pursue their education. Indeed, understanding how effective the transition experience is, could act as a foundation for developing and carrying out transition services that contribute to post college employment success. Moreover, the findings of this study could assist disability experts and colleges to restructure transition programs and improve the adjustment of students who are D/hh in post college environments. These efforts could increase the employment rate for individuals who are D/hh. Special education teachers, rehabilitation counselors and other professionals in the field of special education will get information to advance educational goals, career development, and student transition.
The present study is titled the *Transition Services from School to Work for Students who are D/hh in Saudi Arabia: Teachers’ Perceptions*. Accordingly, this study is significant because it assists educators in special education to understand the various types of transition services offered in schools for students who are D/hh. Certainly, there are different transition services offered but the effectiveness of these services have not been well examined. Therefore, the present study analyzed and identified the most effective transition services for these students.

The study is also important because it directly contributes to a better understanding of how and why even after transition services offered, they would still face issues in transiting to employment. It is equally important to identify the main causes of this problem so that appropriate measures, policies, and services may be developed and implemented to assist these students. For example, it has been noted that communication is the biggest challenge that hinders many who are D/hh to access jobs. If such an observation is ascertained by the study, it will be possible to offer recommendations on how best to address this issue.

Similarly, the study helps establish the various perceptions that teachers have regarding the transition services for students who are D/hh. This is important because through this understanding it will be possible to address the positive and negative perceptions of the teachers. Accordingly, this can assist in understanding the effect of the perceptions on these students in regards to transition. It also helps in understanding the role that these teachers play, and how they can develop the right perceptions that will assist these students positively. This has to be based on best practices that will be discussed in the study. This implies that the study is important to both teachers and policy makers in determining the right perceptions that a teacher should have, bearing in mind that they play a very important role in the transition services.
This study is also important to teachers working with students who are D/hh in the transition service. Such services include career assessment, course planning, and college planning as well as establishing the strengths and weakness of the students, all important factors in enabling those students to have a successful transition. Because some teachers lack important assessment skills needed to support transition planning, the study will identify these skills and the assessment types that can be used by those teachers to effectively carry out their work. Moreover, owing to the cultural and linguistic uniqueness of Saudi Arabia, teachers are also required to develop a degree of cultural competence so that they can respond appropriately to the special needs of these students as well as to their families. The recommendations drawn from this study could greatly assist counselors in improving the transition services that they offer.

**Research Questions**

The research questions addressed by this study were:

1. What are the overall perceptions toward school-based transition services for D/hh students in Saudi Arabia among teachers who work at specialized institutes for D/hh students and teachers of D/hh students who work in general public schools?

2. What are teachers’ perceptions toward their preparation to plan and implement transition services for D/hh students in Saudi Arabia? Are there differences between teachers who work at specialized institutes for D/hh students and teachers of D/hh students who work in general public schools?

3. What are teachers’ perceptions toward potential implementation challenges of school-based transition services for D/hh students in Saudi Arabia? Are there differences between teachers...
who work at specialized institutes for D/hh students and teachers of D/hh students who work in general public schools?

4. What are teachers’ perceptions toward work experience prior to and after leaving school for D/hh individuals? Are there differences between teachers who work at specialized institutes for D/hh students and teachers of D/hh students who work in general public schools?

5. What are the differences in teachers’ perceptions regarding school-based transition services and post-school employment for D/hh in Saudi Arabia based on their educational background, level of education, years of teaching experience, family experiences with disability and grade levels taught? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

**Delimitations of the Study**

As stated above, the present study is meant to investigate transition services from school to work for students who are D/hh in Saudi Arabia based upon teachers’ perceptions. Therefore the study was limited to teachers of students or individuals who are D/hh in Saudi Arabia. In addition, the study only aimed at examining transition services offered in institutes where these students were attending and does not include other institutions. Another area addressed is the perception of Saudi teachers in regard to the transition services. Here the study limited itself to the different attitudes that these teachers had in regard to the transition services for these students.
Limitations of the Study

In examining the findings of this study, it is important to acknowledge the limitation of the study arising from the methodology and the variables used. First, the study was limited to Saudi Arabia, meaning that the findings may not be completely applicable in other regions in the Middle East because of the cultural aspects that may be unique to Saudi Arabia. For example, the schools that were used as case studies and the teachers participating in the study were Saudis and the results may not be applicable for other countries in the region. The research also focused only on teachers who worked with students who were D/hh. This of course limits the findings to be used for these groups only and not other teachers who work with students with other disabilities. In addition, the main focus of this research study was not on examining the families’ backgrounds, which could play an important role in students’ transition from school to employment.

Definition of Terms

1. Individuals with Disabilities Education Act (IDEA)

The Individuals with Disabilities Education Act (IDEA) is an American federal law that regulates the way states and public bodies offer early intervention, special education, and services to those children with different disabilities.

2. Deaf or Hard of Hearing (D/hh)

Deaf refers to those people who cannot hear well enough to depend on their hearing to communicate with others. Hard of hearing (hh) refers to those with mild to moderate hearing disability causing communication difficulties.

3. Special education programs
Education programs founded on and changed by the results of continuous evaluations that include a plan comprising of specific objectives and goals outlined by educational services that address the needs of the special student.

4. Special education teacher

A teacher who is trained and qualified to offer special education per provisions defined by a recognized special education training body. Such a teacher is normally assigned to classes of students with special needs e.g. deaf students.

5. Special institutes or special education institutes

Facilities that provide students with special needs with education that meet their special needs and differences. Such facilities provide special teaching to help students with special needs achieve their educational goals.

6. Transition services

Planned activities designed according to outcome-oriented processes that advance movement from school to the outside world. Such activities include, but are not limited to, vocational training and integrated employment, and daily living skills.

7. Vocational rehabilitation program

A program that offers personalized vocational rehabilitation and supportive services to help eligible students with disabilities to find and keep jobs or employment that match their skills and competencies.
Summary

The present research, as indicated above, aims at examining transition services from school to work for students who are D/hh in Saudi Arabia and teachers’ perceptions. This is important because of the increasing number of individuals who are D/hh in Saudi Arabia. They continue to complete their studies, but are having problems in transitioning to employment. Presently, there are a number of vocational and transition services being offered for students who are D/hh in Saudi Arabia, but they seem to be ineffective. This conclusion is based on the low number of students who are D/hh who are able to obtain employment following the completion of school.

The statement of problem is derived from the fact that employment data have shown that the number of employees who are D/hh in Saudi Arabia is lower than those who complete their education process. Accordingly, this study aims at gaining a better understanding as to the perceptions of teachers in Saudi Arabia regarding students who are D/hh. The objective of understanding teachers’ perceptions is to identify the practices in educational institutes (both special and general) where these students learn, identify the implications of such practices, and move forward in identifying what is necessary in order to adequately prepare them for post school success.

This study will assist special education schools, counselors, educators, special education teachers, rehabilitation counselors and other professionals in the field of special education in order to get information and to advance educational goals, career development and student transition into the workforce. To achieve this, the study has formulated five research questions that were used to achieve the set objectives of the research. However, the delimitation of the study is on transition services for students who are D/hh in Saudi Arabia and the perceptions of
their teachers. Accordingly, this study has a number of limitations that include the fact that the study is only based in Saudi Arabia; therefore the results may not be applicable to other Gulf countries.
CHAPTER TWO

Literature Review

This chapter constitutes a brief review of the relevant literature of the study and focuses on an overview of Saudi Arabia as a modern nation, the history of special education, and related services designed to prepare students for their transition from school to work. Additionally, it focuses on professional literatures related to transition services for students with disabilities and the practices, challenges, and teachers’ preparation for these services in Saudi Arabia based on professional literature from the United States.

Overview of the Nation of Saudi Arabia

Saudi Arabia is located in the Middle East. It is bordered by the Arabian Gulf to the east, the Red Sea to the west, Jordan and Iraq to the north, and Yemen to the south, with a land area of 2,250,000 square kilometers. According to the Central Department of Statistics & Information (2014), the country’s population is more than 30 million people. Most of the citizens are Muslims. Saudi Arabia was founded in the year 1932 by King Abd Al-Aziz bin Abd al-Rahman. Aljabber (2004) indicated that the official language of the country is Arabic, although English is being used in healthcare professions and hospitals. According to Salloom (1995), the Saudi culture is famous for its Islamic culture and its solid family and tribal relationships.

According to Aljabber (2004), the country’s economy has evolved considerably since the oil discovery in 1950. Before that date, the Saudi people lived a very simple life with a very minimum level of education and technology. Since its oil discovery and the prosperity of its economy, the country has shown rapid growth and progress in many different fields.
Understanding the importance of education to its overall development, the country has decided to invest profoundly in education. To this end, it is worth mentioning that the citizens of Saudi Arabia receive free education and free healthcare services.

The General Education System in Saudi Arabia

The education system in Saudi Arabia is under the supervision of the Ministry of Education. The Saudi education system is based on the Islamic religion and all levels of education are segregated by gender. Until 2002, the Ministry of Education has been responsible only for the education of males; the General Presidency of Girls became responsible for the education of females, with some differences between the curricula (Ministry of Education, 2008). However, in 2002 when the Presidency of Girls’ education was integrated with the Ministry of Education, the Ministry of Education provided the same curriculum, teaching methods and instruction, and assessment processes for both males and females.

The Saudi education system is divided into four levels namely, kindergarten, primary, intermediate, and secondary (Ministry of Education, 2008). Children aged three to five years attend the first level - kindergarten. However, attendance at this level is not a requirement for enrollment to the next level of education. Primary education in Saudi Arabia begins when pupils become six years old, and it consists of six years of learning, providing students with basic knowledge and skills in mathematics, arts, science, religion, health, and social science. Intermediate education consists of three grades, and secondary education also takes three years. Students finish high school usually by the age of nineteen. In order to receive a high school certificate, all students sit for the national General Secondary Test (GST). Those who pass the test are enrolled in universities or other higher education institutions (Ministry of Education, 2008).
History of Special Education in Saudi Arabia

As pointed out by Brownell, Ross, Colon, and McCallum (2005), special education has undergone great transformation across the world over the past century. A similar view is shared by Nougaret, Scruggs, and Mastropieri (2005) who observed that the general trend has moved from segregation to integration. Unlike many other countries, education for children with special needs in Saudi Arabia started in the form of regular schools before being changed to separate schools as done in other countries. Still, as noted by Al-Ajmi (2006), children with special needs did not receive special education until 1958.

Al-Ajmi (2006) explained that the care of children with disabilities was left to their parents. However, as stated before, in 1958, the Saudi government started to offer special education services. Visually impaired students were the first group who attended special education schools referred to as scientific institutes. Accordingly, Al-Ajmi (2006) pointed out that Al-Noor Institute for the Blind was the first one to admit students with visual impairment in 1960. Salloom (1995) noted that in 1962, the Saudi government, through the Ministry of Education, founded the Department of Special Learning with the objective of improving learning as well as offering rehabilitation services. This department was to target students with blindness, deafness and mental disabilities (Al-Mousa, 2004). This initiative resulted in the building of three institutions for children with visual impairment in the cities of Mecca, Alhofouf and Aneaza (Al-Mousa, 1999). In addition, Al-Mousa (1999) stated that students with deafness and mental disabilities were not left behind, and in 1972, the first special school for the deaf and mentally disabled were established in Saudi Arabia.

Al-Mousa (1999) stated that since 1958, special education has spread across the whole country in terms of the number of institutions built for students with special needs. Additionally,
the number of children with special needs being integrated in the regular public schools continues to increase. Saudi Arabia was one of the first nations to implement mainstream education for students with disabilities in its regular schools based on the scientific concept (Al-Mousa, et al., 2008). The first successful attempt at mainstreaming was done in Hufuf city in 1984 (Al-Mousa, et al., 2008). Similarly, a kindergarten for children with special needs was also opened in 1989 at King Saud University in Riyadh (Al-Mousa, et al., 2008). In 1990, the Ministry of Education started to implement mainstream learning of children with special needs in many of its public schools on a limited scale. A great success was achieved in 1996 following the implementation of this educational strategy developed by the Ministry of Education. This educational strategy had ten main points; the first point emphasized the role played by public schools in special education, with the objective of promoting integration of children with special needs into general public school classes.

In regard to legislation and laws relevant to people with disabilities, there have been joined efforts by the Ministries of Education, Health and Social Affairs to develop bylaws and policies that enhance the education of people with special needs. For example, in 2000, the Provision Code for Persons with Disabilities was passed (Al-Mousa, 2010). Al-Mousa (2010) explained that this law underlines the rights of people with disabilities, which include free and suitable public education. The law, under Article 8, outlines the formation of a supreme council to address issues affecting people with disabilities (PCPD, 2000). In addition, Article 9 of this law gives powers to the supreme council to fully take charge of developing polices and supervision of activities carried out in the area of disability in Saudi Arabia.

Arabia, together with the Arab League, organized a regional convention to assist Arab countries to formulate a work plan that would be used in the implementation of the *Arab Decade of Disabled Persons and the Convention on the Rights of Persons with Disabilities* (Al-Mousa, 2010).

Currently, special needs education in Saudi Arabia has entered a new and fruitful era. By setting an example for developing educational policies and programs with great focus on integrating students with special needs into general public school classes within the region. Therefore, educating these children in the regular education system is no longer a future dream, but a current reality. Indeed, as noted by Al-Mousa (2010), this is underlined by the latest data that indicated that the number of children with special needs admitted in regular schools are more than those admitted in special learning institutions. Al-Mousa (2010) asserted that this has created hope for improving the learning environment for these children with special needs, As a result these children will have the opportunity to advance like typically developing students and achieve their potentials.

**Education of Children who are D/hh in Saudi Arabia**

According to Shaira (2013), students with disabilities in Saudi Arabia have the right to a number of services (Disabled Care System in Saudi Arabia No/37, dated 12/20/2000), the most important of which are educational services. The General Statistics Authority (2011) stated that the number of individuals with hearing impairments may be as high as 100,000 (Allen, 2008). Official records indicated that the education of students who are D/hh in Saudi Arabia began in 1972, when the first school, the Al-Amal Institute, was established (Al Mousa, 1999).
Shaira (2013) pointed out that the establishment of this institute was a clear demonstration of the segregation policy towards individuals who were D/hh from their hearing counterparts.

Since the establishment of the Al-Amal Institute, the education of students who are D/hh in Saudi Arabia has developed remarkably in both quantity and quality. In quantitative terms, the number of schools/programs for students with hearing impairments (both special schools and programs in public schools) has increased to more than 230 schools. In terms of quality, the Ministry of Education has adopted modern methods for educating students who are D/hh such as bilingual and inclusive programs as opposed to the traditional system of segregated schooling (Aryies, 2006; Aturky, 2005; Shaira, 2013).

In 1990, Saudi Arabia began to educate students who are D/hh in conventional public schools in response to pressure from the public to include individuals with special needs in traditional public schools (Aturky, 2005; Shaira, 2013). The Ministry of Education generalized the inclusion experience in public schools to increase academic standards for students who are D/hh and to minimize the academic and communication gap between students who are D/hh and their hearing counterparts. These measures were intended to help students who are D/hh attain higher levels of education (Al-Omari, 2009; Shaira, 2013). Students with hearing impairment account for 11.9% of all children with disabilities in conventional schools. Thus, learners with hearing impairments are the third largest group of students with disabilities in Saudi Arabia (Al-Khashrami, 2004; Shaira, 2013).

The ability to hear is considered one of the most important means of communication with the world around us and is an important factor for learning spoken language. The hearing process helps in the intellectual, psychological and social development of humans, whereas loss of hearing adds some special educational needs and some difficulties in daily life. It is difficult to
have accurate numbers and rates of individuals who are D/hh worldwide, but according to the World Health Organization (2016), it is approximately 360 million; in the Arab world there are approximately 17 million, and in Saudi Arabia, about 720 thousand (Evan, 2012).

In 2000-2001 the number of Al-Amal Institutes and programs reached 90, with a 45% growth rate, and 35 programs for hearing classes and programs with a 47% growth rate. The number of beneficiaries of programs and institutes for students who are D/hh in the same year reached 4,122 students. This program continued in 2001-2002, reaching 110 institutes and programs by Al Amal, and 47 programs for hard of hearing classes (Al-Mousa, et al., 2008).

In 2012, the number of institutes for students who were D/hh in the Kingdom of Saudi Arabia reached 598, which is considered a high rate of students whose disabilities are D/hh. According to statistics in 2012-2013 by the Administration of Hearing Disability, about 2230 students are enrolled in day schools and evening education classes at Al-Amal institutions for D/hh students, which is not a small number relative to other disabled students (Administration of Hearing Disability, 2012).

According to a statistical survey in the United States, 10% of children who are D/hh are born within families where one of the parents is D/hh (Mitchell & Karchmer, 2004). Much of the research on students who are D/hh has resulted in many definitions and classifications of individuals who are D/hh. Nonetheless, Moores (2002) defined D/hh as a loss of hearing starting at 70 decibels or more after or before using hearing aids and not depending on the sense of hearing in understanding conversation. Moores (2002) provided an educational classification for students with loss of hearing based on levels. Level one is defined as loss of hearing from 35 - 54 decibels. These students do not need a specialized school or a class, but are in need for a special aid in hearing and vocalization. Level two is defined as loss of hearing from 55 - 69 decibels.
These students require a special education class or school, and a special aid to assist with hearing, vocalization and language. Level three is defined as loss of hearing from 70 - 89 decibels. These students need a special education class or school in addition to help in linguistic, academic, hearing, and vocalization. Level four is defined as loss of hearing more than 90 decibels. Students in this category also need a special education class or school and special aids for vocalizing, hearing, linguistic, teaching and education.

**Educational Options for Students who are D/hh in Saudi Arabia**

Special needs education, in particular, for students who are D/hh in Saudi Arabia, has entered a new and fruitful period. The Saudi government, under the Ministry of Education, has set a precedent in crafting educational policies that greatly focus on the concept of integrating students who are D/hh into normal schools in the country (Al-Moua et al., 2008). Alquraini (2010) noted that as far back as 1962, the Ministry of Education passed and approved Resolution Number 674/34/40 that established the Department of Special Education as a General Directorate. During this period, students with disabilities received special education in two different programs. The first program was through residential institutes, a form of special education program that offers facilities where students can reside and be educated. The second program was through day institutes where students with disabilities commuted to these institutions on a daily basis.

The common practice today is to educate students who are D/hh in conventional schools with typically developing students. This new trend has changed the educational perspective, placing children who are D/hh in public schools with hearing children who may assist the
children with hearing loss to learn in a hearing environment and to improve their socialization as well as academic skills.

As pointed out by Khashoggi (2014), the General Secretariat of Special Education upgraded three other educational placements for children who are D/hh in public schools. These three programs included self-contained classes and day classes started in public schools. Although sufficient learning materials and special education were provided for these classes, Alnahdi (2014) noted that these classes required at least five children who were D/hh in order to be held. Moreover, children who were D/hh were allowed to take part in extracurricular activities with typically developing students (Khashoggi, 2014).

Al-Mousa (2004) also noted that resource room was another option available for children who were D/hh. In this system, students with hearing disabilities spent 50% of their school day in conventional classes with hearing students, while the other 50% was spent in special classes for children with hearing disabilities. Al-Mousa (2010) stated that these educational programs offer special material, equipment, and certified teachers to offer personalized services for these students. These students are also educated in general classes with other students when not in the resource rooms. Studies have also shown that inclusion of students with disabilities brings more positive outcomes not only to the students with disability but also to the typically developing students who shared their classes. For example, a study by Kluwin and Stinson (1993) revealed that educating children with severe disabilities in a general education environment can help them attain their goals in regard to education, social life and communication skills, while also addressing their special needs. Similar studies done in Saudi Arabia by Alquraini (2010) also underlined the same views, stating that the emphasis on the part of the government should be on
inclusion where the children with hearing disabilities should be placed in the public schools and not in special schools, for better support and development of these students.

According to Paatsch and Toe (2014) general education provides children who are D/hh with a chance to establish good social relationships with typically developing children. Children who are D/hh get a chance to learn skills required of them to function as responsible citizens when learning in general education classes or public schools.

Having discussed the benefits that arise from learning in general or public schools, it is apparent that children who are D/hh who join these institutes are bound to gain more than their counterparts who end up in special schools for the deaf. Accordingly, the researcher concluded that it would be better for the parents of children who are D/hh to take them to general or conventional classes where they can be integrated into general education classes. However, owing to the fact that there are several other options, the final choice rests with the parents and the children themselves.

According to Khashoggi (2014), Saudi Arabia has a complex educational system. In the past there were five parallel educational systems, excluding international and private schools. Nonetheless, the Ministry of Education was responsible for overseeing males’ education across the Kingdom. The Ministry of Education is also in charge of elementary, intermediate, and secondary education as well as the higher and vocational education systems.

As noted by Al-Mousa (2010), there has been a dramatic change in the educational system in Saudi Arabia over the past several years. At the start, education in Saudi Arabia was solely the privilege of children from rich families. Presently, there has been a big growth in the education sector in terms of the number of schools, colleges and even universities. This growth has seen the number of students enrolled in middle and high school increase. Indeed, education is
free and universal in Saudi Arabia because the Saudi government pays all the fees for all children in school (Al-Mousa, 2010). The curriculum provided in Saudi schools has integrated traditional Islamic teaching with secular lessons in different fields. Khashoggi (2014) explained that the curriculum taught in Saudi schools follows that of the United States and the United Kingdom.

Al-Mousa (2010) observed that education in the Saudi Kingdom is segregated by gender, where males and females learn separately. In addition, it is classified into three different administered systems. These include general education for boys, general education for girls, and lastly, traditional Islamic education (given only to the boys). Al-Mousa (2010) stated that the Ministry of Education, founded in 1952, oversees the general education for boys, while the General Presidency for Girls’ Education oversees the education for girls. However, both the boys and girls follow one curriculum and sit for the same national exams. According to the Ministry of Education of Saudi Arabia (2012) education in middle and high school is arranged in the following manner. In Saudi Arabia, the education system has four educational stages for students who are D/hh: preparatory, primary, intermediate, and secondary education. We can also add these two stages: intermediate vocational, and vocational training for adults after secondary education.

**Preparatory.** This is the initial stage (kindergarten) and takes two years to complete. Many children in special education schools, both girls and boys, are aged between four and six (Al-Ajmi, 2006). These children are given special instructions meant to prepare them for elementary school. At this stage, the entire curriculum emphasizes the child’s language development and how they can use residual hearing by training them in continuous speech. Furthermore, a basic academic program for this stage contains disciplines such as reading,
writing, mathematics, science, physical education, Islamic education and art, with the most preferred method of teaching by teachers being play therapy.

**Primary education.** This stage lasts for six years, and is meant for children aged between six and 12. The curriculum offered at this level includes Arabic, geography, history, mathematics, science and Islamic studies. Upon completing this level the students are awarded the General Elementary School Certificate (Shahadat Al Madaaris Al Ibtidaa'iyyah, Ministry of Education of Saudi Arabia, 2008). Curriculums for general education are taught gradually at this stage in institutes of Al–Amal for students who are D/hh, beginning in 2003-2004. This began after adjusting the educational plan and establishing a list of skills and concepts for each class (Ministry of Education, 2001). In this primary stage, the curriculum is implemented for six years with hearing students in general schools, but some adjustments are done for students who are D/hh to suit their needs and abilities, in addition to some helping aids as language interpreters. The first educational plan was done for Al-Amal primary institutes in 1964 to suit 34 classes per week. Regarding the curriculum, they are the same as those for the general schools, but with some adjustments according to the special needs of each student who is D/hh (Al-Mousa, et. al 2008).

**Intermediate education.** The next level is the intermediate schools for students aged between 12 and 15 (Ministry of Education of Saudi Arabia, 2012). The curriculum at this level is similar to that offered at the primary level. It should be noted that home economics is offered for girls at both primary and intermediate school, while physical education is given to the boys. At the completion of this course, the learners are awarded the Intermediate School Certificate (Shahadat Al-Kafa'at Al-Mutawassita) (Ministry of Education of Saudi Arabia, 2008).
This stage lasts for three years and students are taught curricula similar to those in general schools, where curricula for first intermediate stage were applied in 2009-2010, and curricula for the second intermediate stage were taught in 2010-2011, according to a new plan that included 35 classes per week, with a list of instructions and guidelines in addition to subjects planned. General schools curriculums are presently applied in all intermediate classes in the intermediate stage (Administration of hearing disability, 2012).

**Secondary education.** This is the next level after intermediate school; the students attending this level are aged between 15 to 18. Al-Mousa (2010) explained that secondary education comprises of General Secondary School. In the first year, students learn common subjects, but in the second year, they chose either scientific or literary subjects. However, to select scientific subjects, a student is required to score over 60% (Al-Mousa, 2010). Students who successfully complete this level receive the General Secondary Education Certificate *(Shahadat Al-Marhalat Al-Thanawiyyat)* (Ministry of Education of Saudi Arabia, 2008).

Students who are D/hh started this stage in 1999, studying special educational curricula that were concerned with professional aspects. The approved curriculum plan recommended 11 classes out of 33; the remainder of these classes covers 16 educational courses that stress educational topics represented in Islamic education, Arabic language, social studies, math, English language, and physical education. It is important to note that the educational plan for the first secondary class is different from that of the second and third classes, due to the new educational plan for the secondary stage implemented for students who are D/hh in 2012-2013 (Administration of Hearing Disability, 2012).

The other option at the secondary level of education is religious secondary school, which also takes three years for those aged 15 to 18. These schools teach Arabic language, religious
studies, literature, history, geography and English. The Ministry of Education awards the
Religious Institute Secondary Education Certificate (Shahadat Al Thanawiyah Al
'Aama lil Ma'aahid Al Ilmiyya) for students who complete this secondary level option. Upon
graduation, students can enter universities to pursue humanities and religious studies
degrees (Ministry of Education of Saudi Arabia, 2012).

Another option given at the secondary level is technical schools. These schools offer
technical education, with options of vocational/technical, commercial, and agricultural majors.
Students admitted to the technical schools have to possess the Intermediate School Certificate
(Shahadat Al-Kafa'at Al-Mutawassita). However, technical and vocational training is under the

According to the Ministry of Education (2001), the enrollment percentage for boys stands
at 99% while that of girls is at 96.3% in primary middle schools. The percentage of girls falls to
an average of 93% at the secondary level. Looking at these figures, it is clear that middle and
secondary education in Saudi Arabia is a great success.

Vocational Rehabilitation Programs in Saudi Arabia

In developed countries such as the United States, one important law that protects
individuals with disabilities in the areas of employment and equal opportunity is the Perkins Act
the federal law that authorizes the formula grant programs for vocational rehabilitation,
supported employment, independent living, and client assistance. It also authorizes a variety of
training and service discretionary grants administered by the Rehabilitation Services
Administration. The Rehabilitation Act authorizes research activities that are administered by
the National Institute on Disability and Rehabilitation Research and the work of the National Council on Disability. The Rehabilitation Act also includes a variety of provisions focused on rights, advocacy and protections for individuals with disabilities. Then on July 26, 1990, President George H. W. Bush signed the Americans with Disabilities Act (ADA) into law. The ADA is one of America's most comprehensive pieces of civil rights legislation that prohibits discrimination and guarantees that people with disabilities have the same opportunities as everyone else to participate in the mainstream of American life, i.e., to enjoy employment opportunities, to purchase goods and services, and to participate in state and local government programs and services. Modeled after the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, religion, sex, or national origin, and section 504 of the Rehabilitation Act of 1973, the ADA is an "equal opportunity" law for people with disabilities.

This Act authorizes federal funds to support vocational education programs. More specifically, the Perkins Act advocates for improved access to individuals in need of further education due to having underperformed in the past or having special needs. In accordance with the Perkins Act, not only individuals with disabilities are included, but also students who are disadvantaged or have limited English skills. Of these, individuals with disabilities are entitled and should “be provided with a full range of services including equal access to recruitment, enrollment, and placement activities in vocational education” (The Vocational Education Act of 1984, para 2). Moreover, individuals with disabilities should also be provided with vocational education programs such as specific courses of education or study, cooperative education, apprenticeship programs, and all other available programs deemed appropriate for individuals with disabilities.
Like any other rehabilitation program, the vocational rehabilitation programs for students who are D/hh aims at restoring the useful lives of individuals or groups of people that are affected in one way or another, in this case, referring to individuals who are D/hh. As provided by Al-Ajmi (2006), the essence of vocational rehabilitation programs for students who are D/hh within the society of Saudi Arabia is to optimize the specific abilities of such students, and aid them in the maximization of their functional skills. Therefore, vocational rehabilitation programs are one of the most important strategies with which the Saudi Arabian educational systems use to enhance the delivery of better and productive transition services for students who are D/hh in the country.

The vocational rehabilitation programs for students who are D/hh are run when the school programs are on a break (Alquraini, 2010). This implies that these rehabilitation programs do not run simultaneously with the general education school schedule. This arrangement aims at making sure that the students with disabilities are not disadvantaged in their education. The parallel arrangement between the general educational programs and the vocational rehabilitation programs enables students who take part in the rehabilitation programs to attend all their classes during school time, and go to the rehabilitation centers during holidays. Al-Ajmi (2006) stated that the rehabilitation programs in Saudi Arabia are run by several rehabilitation centers throughout the country, with some centers offering boarding services where the students live at the centers throughout the periods of the programs, and others offering daily services where the students visit the centers at stipulated times and go back to their residential areas at the end of the day.

Within the vocational rehabilitation programs for students who are D/hh, the students are taken through thorough and careful evaluation systems to determine the specific needs for each
student, and then the best set of programs to help him or her get over the challenges (Al-Mousa, 2010) is determined. Moreover, with the aid of medical, educational, and therapeutic specialists for different disorders, the vocational rehabilitation programs for the students with disabilities in Saudi Arabia developed a set of objectives as well as treatment plans for each of the students in order to make the process of rehabilitation better. In addition, each of these goals and individualized treatment plans are designed based on extensive consultation with the student with the intent to ensure they comply with the specific needs and wishes of the student in the programs (Bassett, Kochhar-Bryant & Webb, 2008).

Furthermore, students who are D/hh are taken through a health care plan in the rehabilitation centers in order to improve their disability situations. Medical practitioners who are fully qualified in providing therapy to people who are D/hh facilitate all the health care plans in the vocational rehabilitation centers in Saudi Arabia. According to Bassett, Kochhar-Bryant and Webb (2008), qualified people are employed to run the rehabilitation programs in different rehabilitation centers within Saudi Arabia in order to ensure that the delivery of services are of high quality. By doing so, it is indisputable that the transition process for students with disabilities, including those who are D/hh, from school to work, is hastened. The researcher believes this definitely helps in making the vocational rehabilitation programs effective, productive, and efficient for the students with disabilities in Saudi Arabia.

According to Barkan and Bryjak (2011), the rehabilitation programs for students who are D/hh in Saudi Arabia include psychological services. It is certain that many of the students with disabilities have experienced psychological trauma due to discrimination, prejudice, and stigmatization from other students, especially those without disabilities, as well as the general society. A majority of the Saudi Arabian population considers students with disabilities as having
lesser abilities, and those who cannot perform their responsibilities ranging from social to professional responsibilities, with the required levels of efficiency. This makes those students have lower self-esteem and lack self-belief. Because of that, it follows automatically that those students need psychological assistance, which will help them accept themselves as they are, and boost their self-esteem as persons with equal abilities as their counterparts without disabilities.

Stages of Vocational Rehabilitation Programs in Saudi Arabia

Intermediate Vocational Stage

Here, students study both theoretical and vocational disciplines that include Islamic education, Arabic language, science, physical education, mathematics, and social sciences. The vocational studies that are more practical take up close to 67% of the total time in a week in order to enhance their technical skills (Ministry of Education of Saudi Arabia, 2008). The male students concentrate more on one field of specialization while female students are encouraged to study typing on the Arabic typewriter, tailoring, manual and machine knitting, and other technical and cultural disciplines. As of 2008, over 1000 students had graduated from the intermediate school program (Ministry of Education of Saudi Arabia, 2008).

Vocational Training Stage

For students who are D/hh, the vocational training lasts two years. This training includes both the vocational training and the rehabilitation of these students to assist them into the job market. This is the mandate and duty of the Ministry of Labor and Social Affairs as part of its overall responsibility to set programs for persons over the age of 15. Despite efforts by the Ministry of Education to start providing special education training for adults at the Al-Amal institutes, these functions and responsibilities were eventually transferred back to the
Ministry of Labor and Social Affairs that additionally went ahead to open five vocational rehabilitation centers for people who are mentally, physically and emotionally challenged in Riyadh, Damman and Taif. Students who are D/hh have been allowed to choose one among several disciplines including electrical work, typewriting, reading water or electricity meters, tailoring, carpentry, or manual and machine knitting (Ministry of Education of Saudi Arabia, 2008). To date, 300 students have graduated in one of these fields. Currently, the vocational training department at the Al-Amal institutes is allocated to students who are D/hh between the ages of 12 and 15 who did not get the opportunity to join formal education from the elementary stage.

**Efficacy of Vocational Rehabilitation Programs**

The efficacy of any rehabilitation program is one of the paramount factors considered by relevant authorities. Vocational rehabilitation programs for students who are D/hh in Saudi Arabia are not an exception (Alnahdi, 2013a). Such programs involve the assessment of how efficient the programs are in helping students with disabilities go through the transition process with ease. It includes evaluations of the level of professionalism the human resource teams of these rehabilitation centers deliver their services to the students with disabilities. According to Heymann, Moreno, Moreno and Stein (2014), efficiency in vocational rehabilitation programs for students with disabilities is also determined by assessing how satisfied the students are with the assistance they received from the rehabilitation centers. This feature demands that efficient rehabilitation programs ought to have a consultative process of decision making between the specialists of different therapy programs in the rehabilitation centers with the students who take
the programs to ensure that all programs they offer to individual students are in line with the students’ needs and wishes.

The efficacy of vocational programs for students who are D/hh in Saudi Arabia is measured by the levels to which the programs help such students cope with the challenges they face in the outside world, that is, in their lives after graduating from secondary schools. Among the prime purposes for the vocational programs in Saudi Arabia is to equip students who are D/hh the same as those with any other forms of disabilities, meaning with the necessary job skills, mental preparation, and social character to get into the competitive labor markets of the country. The rehabilitation programs should equally give them the courage and techniques with which to win employment positions in their respective areas of specialization for which they compete with their peers including those without disabilities. With all the above in place, then it follows that the vocational rehabilitation programs are efficient (Barkan & Bryjak, 2011).

The researcher contends that vocational rehabilitation programs for students who are D/hh in Saudi Arabia must have excellent quality of professionalism in the delivery of the services to the students with disabilities. The Ministry of Education in Saudi Arabia has trained many professionals who deal with persons with disabilities, and employed them in different institutions such as schools for students with disabilities and rehabilitation centers. The employment of competent personnel to run the vocational rehabilitation programs for students who are D/hh is a strong pillar for efficacy of the programs. This is because professionals are rich in skills and knowledge that help these students. They have the techniques and strategies with which to communicate with such students in order to identify their specific individual needs and wishes. Together, the professionals and the students come up with a scheme to help them achieve what they want (Al-Ajmi, 2006). For instance, a vocational rehabilitation program that
has professionals with specific skills to communicate with students who are D/hh is able to extract all the required information from them. Because communicating with people who are D/hh requires high levels of professionalism, and because the vocational rehabilitation centers in Saudi Arabia have many professionals who have these required skills, it is undeniable that the programs have high levels of efficacy. In addition, the vocational rehabilitation programs for persons with hearing disabilities incorporate the services of psychologists. As suggested by Al-Ajmi (2006), low-esteem, lack of self-belief and lack of self-determination are the leading challenges among students who are D/hh. Therefore, psychologists are important figures in vocational rehabilitation centers for such students. The educational system of Saudi Arabia has invested heavily in equipping the educational rehabilitation centers for persons with disabilities. They have achieved this by employing adequate numbers of competent psychologists who advise these students on what they should do to be as good as their peers who are free from disabilities. The lessons for psychology intend to make students with disabilities accept their situation, but simultaneously, to believe that they have abilities equal to those without disabilities. This eventually raises their self-esteem, self-belief, self-trust, and self-determination. Because of that, it is a given that the vocational rehabilitation programs of Saudi Arabia are efficient, especially when it comes to professionalism in delivering services to the students with disabilities (Ministry of Education, 2001).

Additionally, the vocational rehabilitation programs for individuals who are D/hh have employed the services of behavioral specialists. These are professionals who study the general behaviors of people, particularly why people behave the way they do in their respective situations (Berens & Weed, 2009). These specialists are able to identify a number of behaviors and practices that persons with disabilities embrace such as cowardice, loneliness, and many
more. They identify such behaviors among students with disabilities and the reasons for such conduct, and then work in collaboration with other professionals in the rehabilitation centers to find appropriate solutions for each of them. Additionally, behavioral specialists advise students with disabilities on social and professional conduct. This includes such factors as how to interrelate with others at both the social and professional levels. It also includes teaching students who are D/hh ethical practices. This training serves to equip students with the skills of effective communication, respect for one another and oneself, conflict resolution measures, and appropriate etiquette in their social and professional activities.

**General Information about Hearing Impairment**

Due to the universal newborn hearing screening, there has been an increase in identifying the number of infants and toddlers who are D/hh in the U.S (The Virginia Department of Education, 2012). Currently, 0.15 percent of the student population has a hearing impairment. The majority of the children who are born deaf have hearing parents. Between the years 1989 and 1999 there was an increase from 11,000 to 20,000 students who were D/hh who attended colleges and universities in the U.S. (The Virginia Department of Education, 2012).

There is variation within the population of students who are D/hh including type of hearing loss, degree of hearing loss and possible progression, age of onset, age at which intervention began, the effectiveness of intervention services, the family system, cultural and linguistic background, and additional cognitive and/or physical disabilities (The Virginia Department of Education, 2012). These variables influence students’ progress in the general education curriculum. This variation among students who are D/hh makes it very difficult to adopt a single communication or instruction strategy that meets all their needs.
The most recent comprehensive survey of students who were D/hh in postsecondary education was conducted in 1994. According to National Center for Education Statistics, (1994) the study covered four years from 1989 to 1993 and included about 5,000 two-year and four-year institutions nationwide. The number of students who were D/hh rose from 17,000 in the academic year of 1989-1990 to about 20,000 in the academic year of 1992-1993. Of these students, 90% were undergraduate students and the remaining students were graduate students or enrolled in professional programs.

From a survey conducted by the U.S. Census Bureau and in response to questions about the difficulty of hearing normal conversations, approximately 0.2% of adults between the ages of 18 and 44 are deaf, and approximately 1% are hard of hearing (Mitchell, 2005). The National Center for Health Statistics also conducted a study about hearing levels (Cawthon, Nichols, & Collier, 2009). Respondents could choose one of the following responses to describe their children’s hearing: “good,” “a little trouble,” “a lot of trouble,” or “deaf.” Parents reported that 0.09% of their children were deaf and that 0.44% of their children (ages six to 17) have “a lot of trouble” hearing (Cawthon, Nichols, & Collier, 2009, p. 451).

According to the IDEIA (2004), new students should undergo audiological screening within 60 days of enrollment. Additionally, the IDEIA states that students must be screened for hearing loss when they are evaluated for determining eligibility for special education services.

Individuals who are D/hh can communicate by the American Sign Language (ASL), English as a first Language (ESL), auditory-oral, oral, auditory-verbal, cued speech, and total communication. There is no single mode of communication that is effective for everyone. However, children who are D/hh have to always be exposed to proficient language models and
they should always be provided with opportunities to communicate with others such as their families, teachers, and peers.

A report from the National Longitudinal Transition Study-2 (NLTS2) was compiled about youth with disabilities aged 13 to 16 during the years 2000 to 2009. The goal of the report was to provide descriptions about the post high school experiences of youth with disabilities and to compare them to their peers without disabilities. The report was compiled using data from Wave 1 parent interviews or mail surveys, Waves 2 through Wave 4, conducted in 2003, 2005, and 2007, respectively, and which used youth telephone interviews and mail surveys or parent telephone interviews for young adults who were out of high school then. Additionally, the report used Wave 5 youth telephone interviews and mail surveys or the Wave 5 parent telephone interview. Data about youth in the general population were obtained from sources such as the National Longitudinal Survey of Youth, 1997 (NLSY97) and Current Population Survey (CPS) 2009, which was conducted by the Census Bureau.

The Effects of Hearing Loss on Different Aspects of Development

Hearing is one of the most important senses that individuals depend on in their daily interactions with others. It is the receiver of all external stimuli and experiences with others, and is considered to be one of the most difficult impairments that a human can experience. Hearing loss may lead to an inability to communicate through speech in addition to deafness. Children who are D/hh may find it difficult to learn spoken language. The effects from home rearing before starting school becomes stronger due to the lack of knowledge of some parents in dealing with their child who is D/hh.
Al Khateeb (2008) indicated that there were different factors affecting the growth aspects of students who were D/hh represented in the age of the child when diagnosed as D/hh, the degree of hearing loss, its kind, the cause, and whether or not there was early treatment.

Linguistic characteristics, the effect of hearing loss is significant on the linguistic growth of students who are D/hh. The degree of this delay is clear when the degree of deafness increases, and when the student is diagnosed earlier in age. In a study by Al-Sartawi, Al-Samadi and Al-Qaryouti (2008) with others in the U.S., the authors found that 15.4% of those who experience hearing loss speak fluently, 29% speak perfectly, while 21.9% show obvious mistakes in speech, and 20.5% speak with difficulty in understanding their speech, and 12.8% are unable to use speech for communication. The study reflects findings on all categories of individuals who are D/hh and also indicates that a large percentage of D/hh speak perfectly. This study proves that the term “deaf and dumb” was not correct.

**Transition Services in the United States**

Oswald (2010) defined transition as any kind of change, but more specifically, as a milestone in life when a person changes from one stage to another. According to research (Gillan & Coghlan, 2010; Knott & Asselin, 1999), transition from childhood to adulthood is one of the most important milestones in life. For individuals with disabilities, this transition may require additional assistance. As defined by the U.S. Office of Special Education and Rehabilitation Services (OSERS), the transition from school to the working world is a process that is focused on outcomes that include training in the form of services and experiences that will prepare the person for future employment (Will, 1984, p. 1). According to Oswald (2010), the definition of transition services for individuals with disabilities was elaborated upon in the IDEA
of 1990 (PL 101-476). As defined by the IDEA, transition services must (a) promote movement from high school to successful participation in post-secondary education, vocational training, integrated employment (including supported employment), continuing and adult education, adult services, independent living, or community participation; (b) consider the student’s interests and preferences and be focused on the student’s particular needs; and (c) include experiences in the community and other post-school objectives as well as instruction and assistance in obtaining daily living skills (IDEA 20 U.S.C. § 1401 118, 2004).

According to Yuen (2012), the IDEA defines transition services as a coordinated set of activities for students with disabilities, which aims at providing the relevant assistance and information that meet the particular needs of such students, including students who are D/hh. Yuen (2012) pointed out that the enactment of transition-related legislation for students with disabilities within the United States came about due to an increasing concern that students with disabilities often get into postsecondary training, or even employment, at rates that are far below that of their typical peers. Hence, the primary purpose of the transition service for students with disabilities intends to ensure uniformity and indiscrimination in three vital post-school domains, namely, postsecondary training, unemployment, and independent living.

According to Webb and Wehmeyer (2012), the IDEA included provisions related to transition. Yuen (2012) observed that the IDEA focuses on a number of effective transition practices that essentially aim to curb any form of discrimination among students with disabilities in the U.S. The IDEA equally targets to ensure that students with disabilities have opportunities equal to those without disabilities. By so doing, the IDEA requires that students with disabilities in the U.S. enjoy equal employment opportunities and are entitled to appropriate rates of remunerations, and equal opportunities to advancement in their education, especially in
institutions of higher learning for more specialized careers (Bassett, Kochhar-Bryant & Webb, 2008). With that, it is intended that such students have an opportunity to cope in American society and live independently within the shortest time possible just as it is with their counterparts who are without disabilities.

As illustrated by Brownell, Lignugaris, McCray and Sindelar (2014), some of the major transition services for students who are D/hh include provision of equal opportunities for work experience in both the paid and unpaid positions of employment. It is undeniable that many employers in the US have discriminated against persons with disabilities over time. They had a notion that such persons, mindless of their academic qualifications, could not deliver the best for their customers. As a result, students who are D/hh have had tremendous challenges in getting opportunities for competent professional attachments and employment positions (Drew, Egan & Hardman, 2013). However, the IDEIA provides that all students with such disabilities have legal rights equal to their peers without disabilities to get into any production firm or employment arena, and to receive an appropriate position for professional attachment or even employment without bias.

**Provision of Equal Employment Preparation and Opportunities for Career Advancement**

Like any other students, students with disabilities require adequate preparation for employment after school (Drew, Egan & Hardman, 2013). It is the role of the educators in the learning institutions of students with special needs to provide them with the necessary information, techniques, and strategies that would enable them to become competent professionals in their careers who can deliver the best results for their employers (Gabel & Danforth, 2008). Additionally, the transition services in the U.S. for students who are
D/hh require that such students receive chances equal to typically developing students for positions in institutions of higher learning such as colleges and universities. Gabel and Danforth (2008) noted that the rate of intake for students with disabilities in the institutions of higher learning in the U.S. is considerably lower compared to their peers without disabilities. This is due to inadequate numbers of professional trainers in such intuitions and lack of necessary facilities to train students who are D/hh. Nonetheless, through the provisions of the IDEA, the U.S. government has a transition service program that will ensure all students with disabilities have an opportunity to advance in their professional knowledge through further studies in colleges and universities.

**Provision of Functional Academics Including Self-determination and Personal Social Skills**

According to Hauser and Marschark (2011), the U.S. federal government is supporting transition service programs for students who are D/hh in order to ensure that they receive functional academic knowledge relevant to their lines of professionalism. Hauser and Marschark (2011) added that the IDEA, through the education sector of the U.S., has developed a syllabus for students who are D/hh that provides them with the required professional skills in their careers. Apart from the professional skills, the transition services require that the educators of such students have programs that encourage the students to be self-determined, as well as to develop personal social skills, which enables them to interact with others appropriately at workplaces, and in the society at large. This program also helps in building their self-esteem by getting them to accept their situation, while still believing that they have professional abilities equal to their hearing peers. Due to that, it follows that such students are able to develop the
courage and self-belief necessary in the delivery of the best services in the highly competitive U.S. employment market.

Students with disabilities usually face a unique set of challenges in addition to managing their academic coursework (Getzel & Thoma, 2008). Self-determination skills are essential for students with disabilities, as these skills help the students adjust to college life and maintain transition. In addition, self-determination skills in high school significantly predict successful higher education and independent living (Wehmeyer & Palmer, 2003). Self-determination skills include understanding one’s disability, accepting it, and having the determination to succeed despite obstacles. In a focus group that Getzel and Thoma (2008) organized, 34 college students with disabilities identified the following skills as essential for staying in school and for obtaining the needed supports: problem solving, learning about oneself and one’s disability, goal setting, self-management, and seeking services on campus (Wehmeyer & Palmer, 2003). When the same focus group was asked to provide the self-determination skills that are essential for staying in college and for obtaining the supports they needed, they identified the following: seeking services on campus, forming relationships with professors and instructors, developing support systems on campus, and self-awareness.

Zhang (2005) examined how parents promote self-determination behaviors among their children. He surveyed Caucasian, Asian, African American, and Hispanic parents of children with and without disabilities. He found that parents of children without disabilities provided their children with more opportunities to practice self-determined behaviors than parents of children with disabilities. Zhang (2005) also found that parents with a higher level of education tended to involve their children more with self-determination activities such as household chores and decisions.
Students who are D/hh are no exception in relation to the above study; they also need these self-determination skills in order to stay in college and to obtain the supports they need. Specifically, students who are D/hh usually need the following services: sign language interpreters, telecommunication devices for the deaf (TTY), videophones, flashing alerting devices, scribes, open or closed captioning for media displays, C-Print (live captioning), note-taking services, assistive listening devices, hearing aid-compatible telephones, and hearing aid-compatible sound systems (Cawthon, Nichols, & Collier, 2009).

Research Findings About Employment of Individuals with Disabilities

As a result of the IDEA and other laws, most students who are D/hh attend public schools. Attending public schools does not guarantee that students who are D/hh will learn transition skills. Transition skills are not developed within middle school and high school students for several reasons. One of the reasons is because educators themselves have not had sufficient training about transition. Another reason is that there is a big emphasis on academic outcomes, which leaves little time for attending to transition skills. The emphasis on academic outcomes also reduces the value of transition skills.

The Individuals with Disabilities Education Improvement Act Amendments (IDEIA, 2004) requires that schools use transition assessments that are based on research, that are age appropriate, and that utilize the outcomes. Luft and Huff (2011) used the Transition Competence Battery (TCB) to explore the transition skills and knowledge among students who are D/hh in middle school and high school. The TCB meets the requirements of the IDEIA. It consists of six subtests that measure various skills: job seeking skills, work adjustment skills, job-related social and interpersonal skills, money management skills, health and home skills, and community
awareness skills. It was standardized on 181-230 adolescents and young adults who are D/hh from 14 different regions in the US. The recommended passing score for each subtest is 85%. In their study, Luft and Huff (2011) presented the test items to participants through videos. Each item was signed and then participants had the chance to read the item and to choose one answer out of three choices. The items were written at a third grade reading level. The study recruited 53 participants both from middle schools and high schools in a Midwestern state. The participants were both male and female students who are D/hh. Luft and Huft (2011) used the TCB to answer three questions.

The first question of the researchers was whether students who are D/hh in public schools have transition skills that are research based. Using the TCB, the results of the study indicated that the participants had difficulties in acquiring skills in the areas of employment and independent living. The high school participants scored higher than the middle school participants, as the mean scores of high school participants, which ranged from 56% to 76%, were higher than those of the middle school participants, which ranged from 37% to 53%. None of the participants achieved a score of 85% across all six subtests. A few participants achieved a score of 85% or better. Of all the 159 subtests completed by high school students, 37 subtests (23.3% of the subtests) reached a score of 85% or better. As for middle school students, 4 out of a total of 130 (3.1%) completed subtests reached the score of 85% or better. It is worth indicating that high school students who had a reading level higher than a third grade level performed better at the TCB and passed two or more of the subtests.

The second question of the research was about the differences in performance between middle school and high school participants. The results indicated that the two groups performed in a similar pattern, but that there were significant differences in achievement between the two
groups across all six subtests. High school participants achieved higher scores than middle school participants. The mean difference between them was 22.84 percentage points. The largest difference between the two groups was on the Community Awareness Skills subtest. This suggests that high school students improved the most in this area. The smallest difference between the two groups was on the Money Management Skills subtest. There were large effect sizes (above 1.0), which imply meaningful differences in the scores of the two groups. In general, the participants, especially middle school students, found the independent living subtests more difficult than the employment skills subtests. Even though the difference in performance between the two groups indicates an improvement in achievement, the fact that none of the participants reached the 85% level on all six subtests shows that more efforts are needed to improve transition.

The third question of the Luft and Huff (2011) research was whether there were areas of strength or weakness in the transition competencies of the participants. The results showed that both middle school and high school participants had the lowest scores on the Money Management Skills subtest across all subtests. This result suggests that money management constitutes one of the transition barriers for students. Participants also did poorly on the Health and Home Skills subtest. Both groups did better on the employment related subtests than on the independent living subtests.

The study showed that participants did relatively poorly on the Job-Seeking Skills subtest. This suggests that students who are D/hh are in need of help in this area. Ideally, instruction in the area of job seeking for students who are D/hh should be given at a later stage in high school when students need these skills in real life for finding a job. Issues such as hygiene
and communication accommodations should be taught earlier. Participants also did poorly on the Money Management Skills subtest and on the Health and Home Skills subtest.

The study conducted by Luft and Huff (2011) had two main limitations; the population of the study came from one region in a Midwestern state and it consisted of students who were D/hh from public schools. These two limitations make it hard to generalize the results to students from other areas and other types of schools and with different special needs. Therefore, other research studies should be conducted with a more representative sample. Moreover, the sample size of the study was very small, which also makes it difficult to generalize the results.

A shorter computerized version of the TCB was made and proved to be helpful. Also, a CD version of the TCB was made and it has benefits over the regular one. In summary, the TCB is a useful tool that can be used with students who are D/hh as well as with hearing students. The results of the TCB should be included in the IEP and in the documents relevant to transition planning.

The TCB is an excellent tool for assessing the transition skills and knowledge of individuals who are D/hh. It has also been found to be useful with hearing students. It provides educators and relevant entities in the field of special education with invaluable information about the level of preparedness of students to transition. The TCB consists of six subtests that provide educators with helpful information about the strengths and weaknesses of students regarding their knowledge and skills related to transition. Educators can plan the transition programs and services according to the needs of students as reflected in their achievement on the TCB. Alternatively, educators can adapt existing transition programs and activities to meet the needs of students who are D/hh. The TCB is a comprehensive tool that covers most of the transition issues students who are D/hh need for successful transitioning to adult living. Therefore, it is a good
guidance tool for educators. The TCB tool is a good outcome measure, because educators can compare students’ achievements at different points in their life and can learn about their own performance.

According to the information stated above, the TCB is very useful for students and for educators. It raises the awareness of issues that students who are D/hh will encounter in their adult life and that they may have not considered. On the other hand, it provides educators with information about the needs of students who are transitioning to adult life. They can use this information to plan or to adopt transition activities that meet the transition needs of students and improve their knowledge about transition. The TCB is an invaluable tool for providing educators with feedback about their own performance if they have students take it at different stages. This information, in turn, helps educators learn about their professional performance and helps them grow professionally.

Adaptation of the TCB would be very useful with students who are D/hh in Saudi Arabia. The use of the TCB assisted the researcher by providing information about the strengths and weaknesses of the students. This, in turn, guided the planning of remedial activities and programs aimed at improving the transition knowledge and skills of students with special needs. Improving the transition knowledge and skills of students with special needs will help the community at large, as the students will be better prepared for their adult life either in the academic field or in the employment field. In both cases this means that students with special needs will contribute to society in the long run and will not constitute burdens on it.

According to the National Center for Special Education Research (2011) NLTS-2, the rate of youth with disabilities who were employed at the time of the interview was 60% as opposed to 66% among youth without disabilities. The rate of youth who were D/hh who were
employed at the time of the interview was 57%. Whereas the average hourly wage of youth with disabilities was $10.40, the average hourly wage of youth in the general population was $11.40. The rate of youth who were D/hh who received benefits was 60%, of those who received paid vacation or sick leave was 50%, of those who received health insurance was 40%, and of those who received retirement benefits was 42%. Thirty nine percent of youth who were D/hh reported that they liked their job very much and 44% reported that they liked their job fairly well. Seventy three percent of youth who were D/hh reported that their education and training were put to good use, and 55% reported that they had many chances to work their way up in their area of work. The rate of youth who were D/hh who found a job by themselves was 49%.

**Postsecondary Education**

According to NLTS2, young adults with disabilities who enroll in postsecondary education constitute 60% as opposed to 67% among young adults in the general population. Additionally, more youth with disabilities attend 2-year or community colleges and vocational, business, or technical schools (44% and 32%, respectively) as opposed to 21% and 20% amongst youth without disabilities. However, more youth without disabilities attend 4-year colleges (40%) than youth with disabilities (19%). Students who were D/hh enrolled in any postsecondary school was 75% from which 52% were enrolled in 2-year community colleges, 43% attended vocational, business, or technical schools, and 34% attended 4-year colleges. In comparison with youth with other disabilities, youth who were D/hh had the highest enrollment in any postsecondary schools (75%), 2-year or community colleges (52%), and vocational, business, or technical schools (43%). Only in 4-year college youth with visual impairment had a higher enrollment (40%) than youth who were D/hh (34%). The completion rate of students with hearing impairment in current or most recently attended postsecondary school was 53%. Bullis,
Bull, Johnson, and Peters (1995) found a similar pattern when they compared hearing young adults who were D/hh; they found that more hearing young adults were involved in postsecondary education, especially 4-year universities.

**Productive Engagement**

According to the NLTS-2, 95% of youth who were D/hh were engaged in education, employment, or training for employment. Among youth with disabilities, only youth with learning disabilities and with speech/language impairment had a higher rate of productive engagement (97% and 96%, respectively) than youth with hearing impairment.

**Household Circumstances**

The rate of youth with hearing impairment who lived independently was 51% and the rate of youth who lived semi-independently was 6%. Among youth who were D/hh, 72% of them expressed satisfaction regarding living independently or semi-independently. The rate of youth with hearing impairment who had ever had or fathered a child was 21% as opposed to 28% of young adults in the general population. Eleven percent of youth who were D/hh were married as opposed to 19% of youth in the general population. Regarding financial independence, 65% of youth who were D/hh had a savings account as opposed to 63% of youth in the general population; 74% had a checking account, as opposed to 74% of youth in the general population, and 53% had a credit card, as opposed to 61% of youth in the general population. In comparison with youth in the general population, when it comes to financial management, youth who were D/hh did very similarly to youth in the general population.

**Social and Community Involvement**

Young adults with hearing impairment seem to function very well socially. Seventy six percent of them reported seeing friends outside of school or work at least weekly and 51% of
them reported communicating with friends by computer at least daily. In the past year, 84% of youth who were D/hh had a driver’s license or learner’s permit and 71% registered to vote. A very low percentage of youth who were D/HH (8%) were involved in fights in the year prior to the study and 11% of them reported carrying a weapon in the past 30 days.

**Secondary Transition**

Several laws exist that relate to secondary transition such as the IDEIA 2004 that requires that students with special needs receive transition services before age 16. The IDIEA (2004) requires that students at the age of 16 or above have IEPs (Bangser, 2008). These IEPs should include appropriate measurable postsecondary goals that are based on transition assessments. According to IDEIA (2004), the transition requirements are (1) assessment that identifies one or more postsecondary goals; (2) specifying one or more postsecondary goals in the areas of education/training, employment, and/or independent living; (3) specifying one or more annual IEP goals that aim at assisting students to achieve their postsecondary goals; and (4) specifying transition services in the IEP that are supposed to assist students in transitioning from school to post school life and to achieve post school goals. Regarding students who are D/hh, the IDIEA states that these students should have an IEP including transition services no later than age 16 and every year after that. Also, transition services should start at the age of 14 or younger, if it is appropriate for the student.

The U.S. government has legislated other laws that aim at improving the living quality of individuals with disabilities. For example, the Assistive Technology Act of 2004, which aims at benefiting individuals with disabilities with technology and engaging them more in life. Another law that was legislated to ensure equal rights for individuals with disabilities is the Americans with Disabilities Act (ADA) of 1990. The ADA aims at protecting the legal rights of individuals
with disabilities and securing services for them. It prohibits discrimination against individuals with disabilities in employment, access to public services, public accommodations, and commercial facilities (Bell, 2010).

Yet another law that was legislated to ensure equality for all is the No Child Left Behind Act (2001). The Carl D. Perkins Career and Technical Education Act of 2006-Perkins IV emphasized the academic achievement of career and technical education students, strengthens the ties between high school and postsecondary education, and improves the accountability of state and local institutions.

Ideal transition is developmental in nature. One secondary transition model that is developmental is the Pathways Model. The next section will introduce the Pathways model and give detailed information about it.

**The Pathways Approach**

The Pathways Approach is a developmental transition process (Kochhar-Bryant & Greene, 2009). It relies on the strengths, capabilities, and needs of youth rather than on their problems. This approach assumes that if youth receive the appropriate support from adults and peers and appropriate planning for their future, they can transition successfully into adulthood and can gain resilience throughout their life.

The Pathways Model of successful transition is special because students with any disability can use it. It consists of four pathways that provide students with disabilities and their families with educational program options regardless of the severity of their disability. Students with disabilities can choose one of the four pathways that best serves their future goals and dreams and that matches their cultural values. Kochhar-Bryant and Greene (2009) recommended students and their families to be involved in self-determination activities and, together with the
IEP team, choose one of the pathways as early as possible. Because the Pathways Model is flexible, it allows students to choose components from more than one pathway. Each pathway contains the following information: (a) recommended assessments; (b) general education curriculum access or effective school foundation, including self-determination and self-advocacy skills; (c) instructional setting; (d) related services and support; (e) transition planning recommendations; and (f) transition culmination considerations, including recommended transition services agencies (Kochhar-Bryant & Greene, 2009). For example, if students choose pathway one, they will be engaged in a high school curriculum that will lead them to pass the high school exit examination. They will receive a high school diploma and will enter into a 2- or 4-year college or university. In addition, the curriculum will prepare them to function independently in the community.

During high school, students engaged in pathway one will be involved in career exploration activities and paid work. These students will obtain a college degree and find a full-time competitive job with salary and benefits. Finally, these students will be able to live independently as adults. Students who plan to attend college after high school and who choose pathway one need to take one or all of the following tests: Preliminary Scholastic Aptitude Test (PSAT), Scholastic Aptitude Test (SAT), American College Test (ACT), and Advanced Placement (AP) Examinations. Students are recommended to prepare for these tests.

In addition, students with disabilities choosing pathway one are supposed to meet with counselors from the high school career center to learn about the application process to universities and to learn about the requirements of each university. For example, for admission, the University of California requires two years of history and social science, four years of English, three years of math, two years of laboratory science, two years of foreign language, one
year of visual and performing arts, and one year of college-preparatory electives. In addition to meeting these requirements, most universities also require a minimum grade point average of 3.0 and require that students pass the high school exit examination.

Students with disabilities who choose pathway one can also benefit from other services such as the study Skills and Strategies Intervention Model (SIM). This model includes exploration of careers depending on their interests, aptitudes, values, and career strengths; exploration of universities; training in self-determination and self-advocacy skills; locating services for students with disabilities on campus; and development of a portfolio to use in the process of college applications and job searches.

Transition assessment is essential in the transition process, as it helps individuals with disabilities plan for their future (Kochhar-Bryant & Greene, 2009). Transition assessment helps individuals with disabilities obtain answers for several questions and concerns; it helps them learn about their interests, aptitudes, and capabilities in different realms such as school, work, and community. It also provides them with ideas about where they can live, work, or go after graduation from high school. In addition, transition assessment helps individuals with disabilities know what courses they are required to take in order to graduate from high school and in order to prepare for their future. Additionally, transition assessment provides individuals with disabilities with insight about their strengths and informs them about transition skills still needed for improvement. Transition assessment teaches individuals with disabilities how to be successful community members.

Finally, transition assessment informs individuals with disabilities about the support and resources they need in high school and in the post-school stage in order to achieve their goals.
former places more emphasis on what individuals with disabilities can do whereas the latter emphasizes their disability.

Bullis, Reiman, Davis, and Reid (1997) developed a shortened version of the TCB (Mini TBC) for adolescents and young adults who were deaf. It consisted of six subtests of 48 items that were related to employment (skills in job seeking, work adjustment, and job-related social/interpersonal skills) and to independent living (money management, health and home, and community awareness). The items were selected from the original TCB, and each item was a three-option multiple choice question. The items were written in simple English and accompanied by illustrations and by a videodisc that included Pidgin Signed English (PSE). Following are examples of items from the shortened TCB: (1) You are at a job interview using an interpreter. The interpreter’s job at your job interview is to:____; (2) You are at the airport. You see a sign, “departure gates.” “Departure gates” are where:___. Examination of the psychometric characteristics of the Mini TCB revealed acceptable reliability and validity (Bullis, et. al 1997), and thus, it can be used as a screening instrument. Performance on the Mini TCB can inform whether use of the more comprehensive TCB is needed. In addition, this assessment can be conducted before and after interventions to examine their effectiveness.

Assessment tools such as the TCB are essential in guiding both educators and students with disabilities regarding the best interventions that are needed for the students in order to make their transition process effective and beneficial. It provides feedback about the strengths and issues that still need further work. Also, if given again after interventions, the TCB gives educators further information about the effectiveness of their interventions.

When assessing the general intellectual skills of students who are D/hh, it is recommended to use nonverbal intellectual tests (The Virginia Department of Education,
Maller (2003) recommended the use of the Universal Nonverbal Intelligence Test (UNIT) with students who are D/hh, as it does not have any items that are biased against this population. Other nonverbal intellectual tests that are recommended for use with students who are D/hh are the Comprehensive Test of Nonverbal Intelligence, Second Edition (CTONI-II), the Kaufman Assessment Battery for Children-Nonverbal Scale (KABC), and the Wechsler Nonverbal Scale (The Virginia Department of Education, 2012).

**Collaboration**

Transition planning involves interagency collaboration among local agencies that are involved in providing transition services, school staff members, postsecondary representatives, and other entities that are partners in the transition planning and programming in addition to students and parents Miller, & Corbey, (2010). Collaboration among the various entities involved in transition is very important in ensuring the success of transitioning. For example, collaboration between high schools and colleges ensures that the curricula and the assessments answer the requirements of colleges, and this in turn increases the rate of student enrollment and success in college. In the North Carolina School for the Deaf, Vocational Rehabilitation (VR) agencies are part of the interagency team that collaborates with students with disabilities and provides them with transition services in various areas such as employment, training, postsecondary education, and independent living. In the area of employment, VR agencies provide services such as assessment, job shadowing, job skills development, and pre-employment training. The VR agencies help students finalize their career plans through conducting aptitude tests with eighth graders and in-depth vocational assessment profiles for juniors.
Among the population of students who are D/hh, it is highly recommended that educators collaborate with communication specialists and other service providers in order to better understand the special needs of these students. By collaboration, educators can differentiate whether the language delay is a result of hearing loss, a linguistically different background, or of speech or language disorders (The Virginia Department of Education, 2012). This understanding will benefit students, as it will result in the best intervention for students who are D/hh.

**Transition Evidence-Based Predictors**

Test et al. (2009) reviewed 22 correlational studies to identify evidence-based “in-school predictors of improved post-school outcomes for students with disabilities” (p. 162) in the outcome areas of education, independent living, and employment. Test et al. (2009) included only studies that reported a significant relationship between the predictors and the post-school outcome areas. They identified 16 evidence-based in-school predictors of post-school outcomes for students with disabilities: career awareness, community experiences, exit exam requirements/high school diploma status, inclusion in general education, interagency collaboration, occupational courses, paid employment/work experience, parental involvement, program of study, self-advocacy/self-determination, self-care/independent living, social skills, student support, transition program, vocational education, and work study. Four of the predictors indicated better outcomes in the three areas of outcome, the rest of the predictors indicated only one or two of the outcome areas. All 16 predictors, however, indicated improved post-school employment.

Similarly, Landmark, Ju, and Zhang (2010) conducted a literature review and identified empirically substantiated transition best practices. These substantiated transition best practices
are paid and unpaid work experience, employment preparation, family involvement, general education inclusion, social skills training, daily living skills training and self-determination skills training, and community or agency collaboration. Using the appropriate communication means for students who are D/hh, they can also benefit from these substantiated transition best practices. Thus, it is highly important to prepare these students for transition so they can gain transition skills and become an integral part of the community.

**Types of Transition Services**

Essentially, the transition services for students who are D/hh intend to comprehensively prepare such students to move from the world of schooling into the world of adulthood and employment. As suggested by Hunter and Storey (2013), the process of transition planning is formalized as a fundamental part of the IEP for each student with a disability. Therefore, when planning what type of transition services a particular student needs in his or her preparation for getting into adulthood, it is paramount to consider such factors as postsecondary education/vocational training, employment opportunities and the associated remunerations and benefits, independent living, and most importantly, community participation (Hunter and Storey, 2013). According to Webb and Wehmeyer (2012), in choosing which type of transition services to embrace for any student who is D/hh, it is paramount to consider his or her specific needs, and take into account his or her professional preferences and interests, especially in matters to do with professionalism.

As illuminated by the Office of the Federal Register (2010), several types of transition services are meant to achieve different objectives. However, despite this diversity in the types of
transition services for students who are D/hh, they all aim at a common goal, which is to prepare the movement of such students from high school into the world of employment.

**School to Work Transition Services**

With reference to Lewis and McLoughlin (2008), the school to work transition services is among the most important transition services for students who are D/hh as well as for all the other forms of disability. This type of transition service works to prepare students with disabilities to develop from the world of schooling, particularly secondary levels of education, into the world of employment. This transition entails the provision of appropriate professional skills, personal-social skills, and self-determination skills that are necessary for workplaces.

School to work transition services are certainly pivotal for students who are D/hh, more so, in preparing them to face the diverse challenges that come with independence or self-reliance in society after graduating from secondary levels of schooling. It includes the designing of best syllabi, which equips students with disabilities with the needed knowledge to handle a number of professional responsibilities that are in line with their career interests. Moreover, this type of transition service includes such programs as advisory tutorials that help students who are D/hh accept themselves as they are while at the same time developing high levels of self-esteem. As indicated by Nastasiow, Coleman, Gallagher, & Kirk (2011), among the main functions of school to work transition services for students with disabilities is to make them win over an inferiority complex, which is a feeling that they are less efficient or productive than their counterparts who are without disabilities. This eventually plays an enormous role in encouraging such students to work hard in their academics with a belief that they can do as well as those who
are free from any forms of disability. Definitely, this important motivational factor prepares students who are D/hh for the challenges in the highly competitive labor markets.

**Family, Community, and Institutions of Learning Collaboration with Transition Services**

According to Bassett et al. (2008), in order to attain the best out of students with disabilities, it is important that all stakeholders in the education fraternity take part in the transition services of such students. Some of the key stakeholders in the transition process of students who are D/hh are the families of the students, the communities within which such students live, and the institutions of learning for such students. In order to help students with disabilities cope easily and faster with the challenges of developing from secondary school life into adulthood, their parents have a role to play. Parents should keep encouraging their children to work hard in their education while simultaneously making them know that they are equally important and entitled to the same opportunities as their peers.

The community also has a role to play in the transition process of students who are D/hh. It should view such students as important members of society who have the same abilities as students without disabilities. This will help the students with disabilities students feel appreciated and accepted in society (Hunter and Storey, 2013). The government, through such sectors as the educational department and the legislature, equally has a responsibility to play in enhancing better transition services for students with disabilities. This comes in the form of building more and better institutions of learning for students with special needs, and equipping them with the required facilities and human resources to ensure the delivery of high quality education for them (Lewis and McLoughlin, 2008).
Professional Transition Services

This type of transition service includes the preparation of students who are D/hh to take up various professional positions for their careers. Fundamentally, it involves providing disabled students with the required professional ethics, including good workplace relations, good communication skills, good personal-social skills, and other features that are important for professional success. With such skills, it is evident that the students with disabilities will be able to fit into the labor markets and compete for various professional positions with their peers.

Supported Work Environment Versus Other Options

As stated by Bakken and Obiakor (2008), the transition services for students who are D/hh purposes to ensure that various learning institutions for students with special needs collaborate extensively with families as well as with agencies to ensure that all students with disabilities access a diversity of services, which promotes their successful movement from school life into adulthood. This consequently helps in curbing the challenge of having students with disabilities in society take much longer to live independently after their secondary education. It achieves this by facilitating a favorable work environment for persons with disabilities where they have equal employment opportunities with their peers, are entitled to equal or better remunerations at workplaces, and equal opportunities to attend to higher levels of education as those without disabilities.

According to Yuen (2012), the IDEA has made dramatic steps in enhancing the work environment and employment opportunities for students who are D/hh. Together with the relevant government arms, more so the education sector, IDEA has supported the creation of favorable work environments for students with disabilities. Collectively, they have provided
equal opportunities for students who are D/hh in the employment arena (Bakken and Obiakor, 2008). The provisions of this act values the fundamental rights of persons with disabilities including issuing them with legal rights to get employment positions and remuneration packages equal to their peers who are free from any disabilities. As a result, there exists a neutral and unbiased workplace environment for all students regardless of whether or not they are disabled (Bakken and Obiakor, 2008). It equally provides a neutral environment and an equal platform for all persons who have graduated from their various educational institutions to effectively compete for work opportunities in the labor markets without any form of discrimination.

In addition, the U.S. government has invested heavily in the transition services for students who are D/hh with the intent to help them cope with their new lives (Bakken and Obiakor, 2008). The investments include construction of more educational institutions for students with special needs and equipping them with the necessary facilities that are vital for the delivery of high quality education. It has also trained and employed more professionals who take students who are D/hh through the relevant education systems, which consequently make them competent and fit for the world of employment. Moreover, the U.S. government has developed good educational support systems for students with such disabilities that give them the right professional knowledge, life skills, and ethical requirements necessary for the labor markets.

Due to that, it is clear that the education system for students who are D/hh should have diverse options of livelihoods at their disposal. Having the required professional knowledge, good self-discipline and self-acceptance, appropriate internal motivation to do better in their professional responsibilities, and high levels of self-determination and self-esteem, it is undeniable that disabled students have all it takes to get into the labor markets and compete
effectively for the available positions. They have the option to seek employment from firms that require their specific professional skill, and the option to venture into the world of entrepreneurship and self-employment. Furthermore, with good personal-social skills, students who are D/hh can interact with their peers in society, share professional and life experiences, capitalize on different options that are available in the employment and self-dependent world.

As provided by Hardman, Egan, and Drew (2016), students who are D/hh also have an option to advance their education after graduating from secondary schools. With the U.S. government investing heavily in equipping various institutions of higher learning with the required facilities and human resource teams for students with disabilities, it is among the most viable options that students who are D/hh advance in their education. They can join colleges and universities that support the particular professional programs of their choice, and enhance their professional knowledge and skills through more specialized education (Johnson and Seaton, 2011). This further enhances their competence in the labor markets, and subsequently makes them eligible for the limited opportunities of employment available.

**Challenges in Providing Transition Services**

As indicated by Pierce and Zand (2011), the provision of transition services to students who are D/hh is an evolving process, which includes numerous challenges. Among the major challenges encountered in the provision of transition services to students with disabilities is the lack of appreciation of such students by the larger society. It happens in many occasions that many of the students who are D/hh face extreme discrimination and stigmatization. Society looks at them as lesser humans who cannot deliver services with equal efficiencies as those without disabilities. This prejudice makes students with disabilities feel unappreciated by society.
Moreover, the labor markets demonstrate high levels of discrimination toward students who are D/hh. According to Brownell et al. (2005), the unemployment rates of persons who are D/hh are much higher compared to their counterparts without disabilities. This results from the assumption on the part of the majority of employers that individuals who are D/hh are less efficient and productive in the workplace.

This lack of appreciation and belief in the abilities that lies within persons with disabilities provides a huge challenge in the provision of transition services to them. Lack of adequate support from the relevant authorities is equally a challenge faced by people in the provision of transition services. Hunt and Marshall (2012) asserted that the transition services for students with disabilities are quite involved and require massive support from different stakeholders in society. For instance, educational institutions that offer professional knowledge and life skills to students with disabilities need to be constructed in large numbers and then equipped with the required facilities.

The construction of such facilities in different parts of the country to enhance ease in accessibility of the transition services by students with disabilities regardless of which part of the country they come from, requires many resources. More so, Johnson and Seaton (2011) argued that for the purposes of efficiency in service delivery, these facilities ought to be well equipped with all the necessities including adequate numbers of competent educators and resources for learning. Similarly, Johnson and Seaton (2011) added that inadequate support from the government authorities, especially the education sectors, in investing appropriately in construction of learning institutions for students with special needs, equipping the institutions with the required facilities, and training and employing many professionals who teach such students would no-doubt pose a challenge in the provision of transition services.
Lack of support from parents is also a challenge in providing transition services to students who are D/hh. Parents have a foundational role in encouraging their disabled children to develop the sense of self-acceptance, self-belief, self-esteem, and self-determination (Johnson & Seaton, 2011). All these features are paramount for successful transition services to students with disabilities, as they form the motivational pillars for the movement from school life to adulthood. Internal motivation for a student with a disability to achieve the very best results in his or her academic work is a significant driving force for successful transition process among them. However, this self-motivation is contributed to by supportive parents who value their children, regardless of their disabilities, making them feel they are as important and mentally powerful as their peers without disabilities.

There are very few studies on the topic of transition services in Saudi Arabia and this makes it difficult to review professional literature in the area. Therefore opportunities for this topic to be reviewed comprehensively in Saudi Arabia are minimal. Again, transition services have been an evolving area of the special education discipline in the U.S. during the past two decades (Knott and Asselin, 1999), so it is clear to see that it takes time for new ideas to be adopted and replicated elsewhere.

**Teacher Transition-Related Competencies and Preparation**

As stated by Webb and Wehmeyer (2012), several procedures of transition services for students who are D/hh are teacher-related. This implies that educators at learning institutions for students with disabilities play a great role in ensuring successful transition services to the students. For example, the larger part of school to work transition services is entirely dependent on the teachers. As pointed out by Webb and Wehmeyer (2012), the teachers have a duty to
provide the necessary academic knowledge to students with disabilities, a factor that equips them with the needed professional skills for the workplaces. Alnahdi (2013) argued that a competent team of teachers who are determined to get the very best out of their students with disabilities will take them through the required syllabi with great professionalism in order to make them more productive and competent for the highly competitive labor markets.

Brownell et al. (2005) noted that the feeling of self-belief, self-determination, and self-motivation is an important one for successful transition process for students with disabilities. Nonetheless, this feeling comes from the mentors, role models, and advisors of such students, a group to which their teachers belong. According to Brownell et al. (2005), it is the role of teachers of students with disabilities to facilitate numerous motivational and encouragement talks at all times on the verge to make their students believe in themselves. This helps them to have the morale to face competition in the highly competitive labor markets (Alnahdi, 2013).

In addition, teachers are pivotal in the transition process for students who are D/hh from secondary school graduates to independent adults. Essentially, they are responsible to provide their students with the personal and social skills that are necessary in the competitive world of employment (Alnahdi, 2013). Personal and social skills include the ability to relate with other members of society with etiquette, respect, and accountability. It is a given that good relations are fundamental for any operations that involve more than one person. It involves good communication skills, good strategies of conflict resolution, adherence to the rules and regulations at places of work, and compliance with the relevant professional ethics that relate to their areas of operations. According to the Office of the Federal Register (2010), teachers who work to prepare students with disabilities to become competent professionals after various levels of academic graduations have a role to ensure they are socially prepared to take up the available
positions in the labor markets. With that, it is undeniable that teachers are paramount stakeholders in ensuring a successful and productive transition process for students who are D/hh as well as all other forms of disabilities from school life into independent adulthood.

**Teacher Preparation in Saudi Arabia for Transition Planning**

There is a particular level of knowledge or competence that all researchers who have handled this particular line of research have stressed that all teachers who provide transition services must attain (Yuen, 2012). Transition services are defined in the IDEIA (section 300.18) as a coordinated set of activities for a student with a disability that is formulated within an outcome-oriented process. According to Yuen (2012), in order for these transitions to be entirely successful, teacher preparation should be done in a way that convinces the very teachers who undertake them as convincing and efficient.

Additionally, according to Bakken and Obiakor (2008), there is a visible and clear relationship between a teacher’s level of preparation, satisfaction, and how often these transitional services are put into practice. Finally, educators more often use some of these teacher preparation services to gather knowledge they need (Yuen, 2012). In his research, Alnahdi (2013) visited 557 middle and high school special education teachers in Saudi Arabia and reached a general conclusion that these teachers ranked their satisfaction for their training for these transition services far below their experience in this field. Alnahdi (2013) then came to discover that there is a relationship between the teacher’s level of preparation and how often they deliver these services; the more knowledge they had, the more confidence they got to deliver more of these transitional services.
There were 30 transitional service competencies identified in the study and as such, Alnahdi (2013) sought to find how teachers rated these competencies. Bassett et al. (2008) also found that the following six competencies were regarded highly by the teachers and they were given more importance by the teachers: (1) assessing social skills, (2) teaching social skills, (3) teaching job-seeking skills, (4) teaching daily living skills, (5) involving employers and (6) providing career education and exploration. Bassett et al. (2008) found that around 30% of the teachers rated some of the competencies as less important, among them being providing education, providing case management, providing medical care, scheduling training, assessing family supported leisure activities, and creation of a plan for student participation in the recreation activities. More than 50% of the teachers participated in the following fields: participation in a multidisciplinary team, assessing vocational training, managing maladaptive behavior, teaching daily living skills, and teaching money management skills.

Niemann (2007) conducted research on 204 special education teachers and the types of students they handle with their different types of disabilities. From the research, it was found that 106 of the students were affected by learning disabilities, 51 with intellectual disabilities, 30 with emotional disabilities, and about 15 had a combination of both emotional disturbances and learning disabilities. The remaining 12 students were classified as others, but the qualification for this category was not defined. For these transitions to be successful, teachers working with these students suggested that in addition to the trained skills and knowledge, teachers are also required to have additional skills depending on the type of students they handle. The teachers went ahead to classify the involvement of the family and the students themselves as the most effective ways to deal with these transitions. These results helped the researcher to arrive to more logical conclusions including showing that there is a significant relationship between one’s involvement
in these transitional services, the level of knowledge of the teachers involved, and how these teachers view these studies. Of interest to note is that in the statistics taken on the teachers, their years of experience did not matter. The statistics consisted of teachers with no experience at all and those with experience of up to 30 years.

**Perceptions of Special and General Education Teachers**

In his works in 1998, Wolfe compared response outcomes from special education teachers with those responses by general secondary school teachers. It was evident from the results that special education teachers and general education teachers held different perceptions on which competencies should be given importance in transition services. In the research, at least 90% of the regular education teachers ranked the following competencies as being most important: (a) employment concerns, (b) communication concerns (c) interpersonal skills and (d) residential concerns (Wolfe, 1998). Special education teachers on the other hand gave much higher importance and higher ratings to these competencies than regular teachers except for the importance of the ability to assess adaptive behavior, which they gave very low importance.

Webb and Wehmeyer (2012) observed that special education teachers and vocational specialists gave different rankings to these competencies related to transition services. In a more recent study by Wandry, Webb, Williams, Bassett, Asselin, & Hutchinson (2008), both graduate and undergraduate practitioners that provide special education held a general opinion that their preparedness to give transition services was much better than that of the general teachers. In conclusion, there is a great difference regarding the way special education teachers view the transitional services and the way other educational practitioners view them.
In a survey conducted in Riyadh, Saudi Arabia by Alnahdi, 2012 on the distribution of teachers regarding their preparation, the estimated number of teachers chosen on a voluntary basis to undertake this exercise was 600 teachers in special education schools whose students had intellectual disabilities. The researcher developed a study instrument that could rate the way teachers perceived their preparation to plan and deliver transition services. According to the instrument, the teachers, on average, rated themselves as acceptably reliable meaning that they believed they were well prepared to plan and deliver transition services. In this study, the researcher also wanted to know if there was any relationship between men and women and their educational backgrounds regarding their perceptions. Additionally, the researcher looked for any notable mean difference according to the number of years’ experience in the field. To do this, the researcher conducted an ANOVA to get these mean differences of how teachers perceived transition services.

Paatsch and Toe (2014) did a study in which the teachers responded to eight items from a survey and they were rated on a Likert scale that ranged from one to five. In case a question was negatively phrased, it was coded positively. The research showed that teachers felt well prepared to conduct the transitional services. This study was conducted in order to find out the mean perceptions of preparations by various demographic variables such as the gender of the participants, their educational backgrounds, their schooling level and the number of years of experience in the field (Paatsch & Toe 2014). According to these statistics, 75% of the teachers reported that there were still some notable aspects that were lacking in their preparation for transitional services. However, close to 58% of the teachers had strong faith in the university education system and believed it could very well prepare teachers for these transitional services. It was surprising that, more than 54% of the participating teachers admitted to the fact that this
was the very first time they were exposed to the idea of providing transition services to students with disabilities (Paatsch & Toe, 2014). In addition to that, there is a general belief by 74.5% of the participants that there are a very low number of courses on how students with disabilities are to choose their goals (Paatsch & Toe, 2014).

Barkan and Bryjak, (2011) described the cornerstone of effective transition services as the transition planning process written in the IEP. IDEA does not formally define transition planning, but the law emphasizes the importance of student and family involvement in the process and taking into account a student’s preferences and interest in developing post-school goals (Hunter & Storey, 2013).

Transition services for all students with disabilities, more so students who are D/hh, require the employment of best strategies in order to bring about efficiency and success. As suggested by Barkan and Bryjak, (2011), on employing the best practices in transition services for students with disabilities, it is indisputable that all stakeholders in the educational system work together, including educators in institutions for students with disabilities, professionals at the vocational rehabilitation centers, the disabled students, and the employers in the labor markets. This mutual gain for all stakeholders comes about from the fact that best practices in transition services for such students lead to efficiency and successful transition processes from school life to adult life among the students. Apparently it is a common goal for all stakeholders in the education system of Saudi Arabia that students who are D/hh get through the transition process from secondary schools to the world of employment (Alnahdi, 2013). This implies that students with disabilities are able to get the required professional, social, psychological, and ethical skills to get into the world of employment and compete for the limited positions available.
With that, they are able to cope with life out of school, and live independently, especially financially.

As documented by Bakken and Obiakor (2008), a transition service is the construction of more educational institutions for people who are D/hh. Constructing more schools for students with disabilities in different parts of the country of Saudi Arabia, and then equipping them with the required quality of facilities and human resource teams, is definitely a good practice for transition service for students with disabilities. This is because it improves the levels of education for such students by making their education more accessible and reliable. As outlined by Niemann (2007), good teaching facilities, as well as qualified educators in such institutions, bring about efficacy in the delivery of educational services or programs to disabled students. In addition, making education programs for students who are D/hh more affordable is equally a practice that would improve the transition services for such students (Niemann, 2007). With affordable education programs for disabled students, many of the parents of such children are able to take their children to school to gain the professional, ethical, and social skills to go through the transition process with ease.

Referring to Alnahdi (2013), the Ministry of Education in Saudi Arabia should also develop the best syllabi for educational institutions of students with disabilities. Good syllabi that are comprehensive often provide the students with disabilities with the necessary skills to get into the world of employment and financial independence. Therefore, the adoption of the best syllabi and perfect educational programs for such students is also a practice that enhances swift and successful transition process.

Alquraini (2010) underlines that the construction of more vocational rehabilitation centers in different parts of the country of Saudi Arabia is also a practice to better the transition
services for students who are D/hh. After constructing them, they should proceed to equip them with the required facilities ranging from competent professionals to the purchase of needed facilities. The vocational rehabilitation programs plays a massive role in encouraging the students to develop the sense of self-belief, self-trust, self-motivation, and self-esteem among them, factors that are important for successful transition services for students with disabilities. According to Johnson and Seaton (2011), the vocational rehabilitation programs also teaches students with disabilities about social conduct and interpersonal skills, which includes good communication skills, etiquette, self-respect and respect for others, and self-acceptance among others. With that, it is clear that the construction of more vocational rehabilitation centers that are well equipped is also a practice that enhances better transition services among students with disabilities.

**Summary**

From this study, it is clear that special needs education has greatly been transformed all over the world over the last century. As noted by Nougaret, Scruggs, and Mastropieri (2005), education systems across the world have moved from segregation of children with special needs to integrating them into the general education system where they learn with other students without disabilities. However, there are a few cases where the students with special needs still learn in special schools. Special education in Saudi Arabia began in 1958, and since then, the number of students in special education schools and mainstream schools has greatly increased because of successful plans carried out by the Saudi government. Today, parents know the importance of taking their children with special needs to different institutes to educate them. The fact the education in Saudi Arabia is free and compulsory is another key factor in boosting
education for children with special needs. In addition, laws have been passed that promote education for children with special needs.

In Saudi Arabia, education for students who are D/hh is grouped into four stages: preparatory, primary, intermediate, and secondary education. To pursue this education, Saudi Arabia has a complex educational system that includes public and private schools. The Ministry of Education had been given a duty of overseeing boys’ education across the Kingdom. The Ministry is also in charge of elementary, intermediate, and secondary education as well as the higher and vocational education.

The purpose of vocational rehabilitation programs for students who are D/hh in Saudi Arabia is to optimize the specific abilities of such students, and to aid them in the maximization of their functional skills. The efficacy of rehabilitation programs in Saudi Arabia involves the assessment of how efficient the programs are in helping students with disabilities go through the transition process with ease.

Transition Services in the U.S. are services and activities for students with disabilities that aim at providing the relevant assistance and information that meet the particular needs of such students, including students who are D/hh. Accordingly, there are different transition services offered in the U.S. However, there are a number of challenges that face the provision of transition services such as the lack of support from key bodies and a lack of resources. Still, it has been noted that teachers offering transition services must have certain competencies to successfully carryout these services. In Saudi Arabia, like many other countries, teachers need the following competencies to offer effective transition services: assessing and teaching social skills, teaching job-seeking skills, daily living skills, involving employers and providing career education and exploration. Lastly, as noted by Barkan and Bryjak, (2011) the cornerstone of
effective transition services is the student and family involvement in the process and taking into account students’ preferences and interests in developing post school goals. Best practices also entail construction of more educational institutions for people who are D/hh.
CHAPTER THREE

Method

The main purpose of this study was to examine teachers’ perceptions toward school-based transition services for students who are D/hh in Saudi Arabia. The study investigated how teachers of students who are D/hh perceive their readiness and preparation to plan and implement transition services, what challenges they may encounter, and the work opportunities that students who are D/hh may have after receiving the transition services. Additionally, the study examined the impact of the teaching environment, years of teaching experience, educational background, grade levels taught, and family experiences with disability on the teachers’ perceptions of the issues under study.

This chapter presents the following topics: (1) research design, (2) study variables, (3) research questions, (4) target population, (5) sampling plan, (6) approvals, (7) instrumentation, (8) pilot study, (9) reliability and validity issues, (10) translation of the survey instrument, (11) data collection procedures, and (12) data analysis procedures.

Overview of Research Design

Research processes have changed over time; new ideas, concepts and techniques are being utilized in evaluating an accurate and appropriate result. Bergh & Ketchen (2009) mentioned that researchers try to ensure that every aspect of their study is valid and authentic and hence utilize the best means available to them. This study used a descriptive, non-experimental research design. Data were collected via a structured questionnaire. The survey included questions about teachers’ perceptions toward transition services, work experiences, and potential
challenges. The descriptive design is a tool that is utilized by researchers who want to describe certain events, phenomena, attitudes, and behaviors in a certain environment (Crouch & Pearce, 2012). It includes several methods including observation, interview, case study, and survey (Crouch & Pearce, 2012).

This study employed an online survey to collect data. Bryman (2006) observed that survey method was one of the best way for the respondents to provide information and therefore, has evolved into one of the most commonly used processes in research (Bryman, 2006). Both academic and business researchers have confirmed the utility of survey methods in their respective fields (Bryman, 2006). Ellis & Levy (2009) stated that surveys are one of the easiest processes of uncovering answers and gathering a genuine response from the research participants. Survey processes present the questions of the researcher to the respondents in a simple manner in order to help them understand exactly what is being asked. Huxham & Vangen (2008) noticed that questionnaire surveys segregate the research aims and objectives in various levels and presents them to the respondents in clear and objective language. This creates a platform for the participant to understand the requirements of the question and answer appropriately. In addition, the survey method is a discrete process and keeps the identity of the respondents safe and secure. Bergh and Ketchen (2009) supported that often security of identity is the biggest concern for the respondents, which can cloud their decisions and divert their answers from the questions. In some cases, it has been observed that respondents tend to provide false answers in fear of security or leakage of classified information. This also harms the progress of the research and reduces the efficacy of the research process. This fear on the part of respondents has also increased the trend of conducting online surveys or mobile surveys and reduces the risks of identity leakage, unlike a face-to-face survey.
Toloie-Eshlaghy, Chitsaz, Karimian, and Charkhchi, (2011) stated that a survey was most useful for evaluating specific data and converting them into quantifiable numbers. This helps the researcher in assessing the significance of the study and also justifies the data collection and analysis process. Researchers also consider that surveys allow a larger sample size and increase the scope of the study (Morgan, 2007). Due to advances in technology, surveys can be conducted across geographical boundaries with the help of online or e-mail surveys (Leedy & Ormrod, 2012). Moreover, as the process is less time consuming, participants often would be more willing to participate in the process for gathering information from the subject matter.

Dul and Hak (2012) noted that quantifying the results of a study is the best process for reflecting the effectiveness of a study to the target audience. Likewise, Toloie-Eshlaghy et al. (2011) stated that surveys are most useful for evaluating specific data and converting them into quantifiable numbers. This helps researchers in assessing the significance of the study and also justifies the data collection and analysis process. Therefore, this study used numbers to describe the topic under investigation.

Participants in the current study were teachers of students who are D/hh. Data were collected through an online survey. A questionnaire was sent to teachers through email and there was sufficient time to complete the questionnaire. The responses were anonymous. The respondents were ensured confidentiality of their responses. The questionnaire was developed to meet the objectives of the study. The Statistical Package for the Social Sciences, Version 20.0 (SPSS, IBM Corp., 2011) was used to analyze the data.

The current study measured teachers’ perceptions of transition services that students need in order to move from school to work, and to determine the differences between the perceptions of teachers at the special education institutes and general schools for students who are D/hh in
Saudi Arabia. These teachers have first-hand experiences with the challenges that students who are D/hh usually face.

This study was also designed to compare the special education teachers’ different perceptions regarding the transition services that students who are D/hh would need for their transition from school to work. The study examined professional perceptions of teachers at both special education institutes and general schools in order to determine differences in their perceptions.

**Variables of Study**

**Dependent/Response Variables**

The dependent variables in this study were: (1) overall perceptions toward transition services and the subscales, (2) teachers’ preparedness to implement transition services, (3) teachers’ perceptions toward work experiences, (4) teachers’ perceptions regarding potential challenges of transition services, and (5) teachers’ perceptions toward their professional preparation to appropriately plan for and implement transitional services.

In order to evaluate participants’ perceptions toward transition services, teachers rated items to explain their perceptions of the need and the importance of implementing transition services to prepare students for school to work. One of the questions rated teachers’ preparedness to implement transitional services. A high mean on the relevant items on the survey indicated that teachers felt well prepared to implement transition services. From the questionnaire, question numbers 1, 3, 4, 5, 6, 9, 10, 12, 15, 16, 17, 18, 19, 20, 32 and 37 were related to this variable.

To evaluate teachers’ perceptions toward work experience for students who are D/hh, participants indicated their opinions on the effectiveness of administering and implementing
transition services for students who are D/hh and people in the workforce. From the questionnaire, questions 2, 6, 7, 8, 9, 11, 12, 13, 14, 31, 34, 35, 36, 37, and 38 were related to this variable.

To evaluate teachers’ perceptions regarding potential challenges in providing transition services, participants described their perceptions by rating a series of challenges Saudi Arabia may encounter while beginning transition services. From the questionnaire, questions 31, 32, 33, 34, 35, 36, 37, and 38 were related to this variable.

To evaluate teachers’ perceptions toward their professional preparation to appropriately plan for and implement transition services, participants rated the items that described their satisfaction toward their pre-service preparation and how they felt about their competence to plan and implement transition services in schools. From the questionnaire, questions 21, 22, 23, 24, 25, 26, 27, 28, 29, and 30 were related to this variable.

**Independent/Predictor Variables**

The independent variables included teaching experiences, academic qualifications, major of education, school type of the teacher and teacher family history of disability.

**Research Questions**

The research questions addressed by this study were:

1. What are the overall perceptions toward school-based transition services for students who are D/hh in Saudi Arabia, among teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?
2. What are teachers’ perceptions toward their preparation to plan and implement transition services for students who are D/hh in Saudi Arabia? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

3. What are teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

4. What are teachers’ perceptions toward work experience prior to and after leaving school for individuals who are D/hh? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

5. What are the differences in teachers’ perceptions regarding school-based transition services and post-school employment for individuals who are D/hh in Saudi Arabia, based on their educational background, level of education, years of teaching experience, family experiences with disability and grade levels taught? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

**Target Population**

The population of the study was comprised of teachers of students who are D/hh working in different schools or programs in the capital city, Riyadh, Saudi Arabia. The total numbers of
teachers working in programs or institutions for students who are D/hh was 441 teachers (Administration of Hearing Disability, 2012).

**Sampling**

The sample of this study included male teachers who taught male students who are D/hh in Saudi Arabia, specifically selected from Riyadh. This was a convenience sample because their e-mail addresses were made accessible once permission was obtained from the education authorities in Saudi Arabian special and integrated institutions in Riyadh.

Riyadh was chosen as the study location for several reasons. According to Central Department of Statistics and Information of Saudi Arabia, almost one fourth of the country’s population lives in Riyadh. In addition to this, the researcher presumes that teachers in other parts of Saudi Arabia were not significantly different from the teachers in Riyadh with respect to the factors under study, as most of the Saudi teachers working in special education programs throughout the country graduated from the same teacher education program. According to Alnahdi (2012), until 2002, there was only one university program in the country that prepared special education teachers to work with students who are D/hh. Another reason for choosing Riyadh was due to the better internet accessibility in Riyadh, superior to other regions of the country.

Teachers included in this sample were from three levels of schools: elementary, middle, and high school. The researcher selected all schools with special education programs for boys spread over all regions in Riyadh. The questionnaire was forwarded to all teachers of those schools requesting them to participate in the survey.
Sample Size

The researcher intended to capture at least 200 participants in the sample purposively with a view to covering approximately 50% of all teachers working with students who are D/hh in Riyadh. Assuming at least 45% response rate, the researcher sent emails to all 441 teachers leaving some margin for missing and incomplete surveys.

Approvals

Prior to beginning the study, the researcher needed two institutional approvals after getting approval for the study by the researcher's dissertation committee. First, the Ministry of Education in Saudi Arabia’s approval to collect data from special education programs for male students had to be obtained; and secondly, the Ball State University Institutional Review Board’s (IRB) approval had to be obtained. Participation in this study was voluntary and participants reserved the right not to complete the survey.

Instrumentation

The survey covered four distinct areas: (a) teachers’ perceptions towards transition services for students who are D/hh; (b) teachers’ perceptions towards work experiences for students who are D/hh; (c) teachers’ perceptions for potential challenges for the transition services for students who are D/hh, and (d) the socio-demographic background of the teachers.

Questions in Section 1 were used to derive scores for perceptions of the participants towards transition services, work experiences and potential challenges of transition planning and services relating to students who are D/hh. A five point Likert scale was used with 5 = strongly agree, 4 = agree, 3 = neither agree nor disagree, 2 = disagree, and 1 = strongly disagree, and vice versa for the negative statements, in which as the following: 5 = strongly disagree, 4 = disagree, 3 = neither agree nor disagree, 2 = agree, and 1 = strongly agree.
Section 2 of the survey consisted of some basic questions divided into two areas: demographic information and educational background and experiences of participants.

The validity of an instrument refers to the appropriateness, meaningfulness, and usefulness of specific inferences made from scores (Gall, Borg, & Gall, 1996). An existing survey had not been identified that specifically addressed the issues to be investigated in this study. The development of the survey instrument was done involving several processes. In the first process, the researcher developed questions using the key skills and information found in the literature review.

The questions took the concepts found in the literature and presented the information in a manner that assessed participant perceptions of the concepts, their rating of the importance of the concepts of strategies to increase student success and strength in the skill sets, and allowed the teachers to provide their ratings on how they can better prepare students who are D/hh to move smoothly from school to work.

Pilot Study

In order to test the instrument constructed for this study, 30 teachers were included in a pilot study as recommended by Johanson and Brooks (2010). The majority of participants in this pilot study were teachers with bachelor’s degrees in special education (n = 20), while eight participants had a master's degree in special education, and two participants had a degree in another area. For the majority of participants (n = 27), their major was in special education programs in Saudi Arabia, and the remaining number (n = 3) had other majors with special education certificates. The participants received an Arabic version of the survey that was created as an online survey tool. Participants were asked to rate the items, as well as indicate any items
that appeared to be unclear, and provide suggestions to improve the content or make up of the survey.

**Reliability and Validity**

The questionnaire that was developed by Alnahdi (2012) was used as the basis for the development of this questionnaire. It was modified based upon a comprehensive literature review pertaining to teachers’ perceptions towards transition services for students who are D/hh, teachers’ perceptions towards work experiences for students who are D/hh, and teachers, perceptions of potential challenges related to transition services for students who are D/hh.

Content validity is partly supported by the use of existing literature to develop the survey questions. “Reliability of Likert scales tend to be good and, partly because of the greater range of answers permitted to respondent” (Oppenheim, 1992, p. 200); therefore; a Likert scale was used in the construction of the items. The survey reliability was tested first by pilot data (n = 30).

Cronbach's alpha coefficient (Cronbach, 1951) was utilized to determine item consistency (reliability) across the four subscales of teachers’ perception toward transition services, teachers’ preparation, potential challenges, and work experience (Oppenheim, 1992).

Table 1 shows the results of the reliability analysis for the subscales using Cronbach’s alpha. All the scales' reliability calculations are over .60, except for the subscale of the teachers’ perceptions regarding potential challenges in providing transition services which had a reliability value less than .60. This may have resulted from the overlapping statements between subscales. According to Polit and Hungler (2001), an instrument with reliability ≥ .6 is safe to use. In the current study the reliability for the total tool was .81.
Table 1

*Reliability analysis for the subscales of the study*

<table>
<thead>
<tr>
<th>Items</th>
<th>No. of items</th>
<th>Cronbach’s Alpha coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ perceptions toward transition services</td>
<td>16</td>
<td>0.65</td>
</tr>
<tr>
<td>Teachers’ perceptions towards work experience</td>
<td>15</td>
<td>0.61</td>
</tr>
<tr>
<td>Teachers’ perceptions regarding potential challenges in providing</td>
<td>8</td>
<td>0.52</td>
</tr>
<tr>
<td>transition services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers’ perceptions toward professional preparation to</td>
<td>10</td>
<td>0.64</td>
</tr>
<tr>
<td>appropriately plan for and implement transition services</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total reliability</td>
<td>38</td>
<td>0.81</td>
</tr>
</tbody>
</table>

*Note:* Overlapping statements: statements No. (6, 9, 12) were found in subscales 1 and 2; statements No. (31, 34, 35, 36, 38) were found in subscales 2 and 3; statement No. (32) were found in subscales 3 and 1; statement No. (37) were found in subscales 3, 2 and 1

**Translation of the Survey Instrument**

First, the researcher obtained permission to use a survey questionnaire that was developed by Alnahdi (2012) in English, and then translated it to Arabic. Second, the Arabic version of the survey was given to a native Arabic speaker, who had expertise in education and teaching certificates in both Arabic and English, to translate it back into English. At the end, the researcher compared the translated version from Arabic to English with the original English version, and made some slight changes to the Arabic version after this process.
Data Collection Procedures

The data for this study were collected by the researcher, who personally forwarded the online link to the teachers in each selected school. The data collection period was one month. While emailing to the teachers, an early reply was solicited. If no feedback was obtained within 15 days, then an additional request was sent to the participants. A consent form and proof of approval from the Ministry of Education were provided with the questionnaire as per instructions from the Internal Review Board (IRB). Confidentiality of participants’ responses was ensured. The researcher inputted the data into Qualtrics (an online survey tool) to transfer the data to files that could easily be used in the statistical software SPSS for analysis.

Data Analyses

The data analysis was divided into two main parts. In the first part the researcher did some exploratory analysis such as descriptive statistics, graphing, tables, measures of location and dispersion. The second part of the analysis consisted of t-test and ANOVA. The demographic data (i.e., education background, level of education, school level, having relatives with disability, and years of teaching experience) were reported using descriptive statistics (i.e., frequencies and percentages) and presented in tables and graphs. All the responses were examined on the basis of participants’ different educational backgrounds (special education degree, non-special education degree), level of education, school level, having relatives with a disability, and years of teaching experience. The procedures as the following:
Question one: This question was answered through producing means, standard deviations, and maximum and minimum range to test the overall perception of teachers toward school-based transition services for students who are D/hh in Saudi Arabia.

Question two: This question was answered through both descriptive and inferential statistics. For descriptive data means, standard deviations, and maximum and minimum range for the variable teachers’ perceptions toward their preparation to plan and implement transition services for students who are D/hh in Saudi Arabia. And used non parametric test, which was Mann-Whitney U test to compare the difference between those two groups’ teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools.

Question three: This question was answered through descriptive and inferential statistics. For descriptive data means, standard deviations, maximum and minimum range for the variable teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia. And used non parametric test, which was Mann-Whitney U test to compare the difference between those two groups’ teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools.

Question four: This question was answered through descriptive statistics and inferential statistics. For descriptive data means, standard deviations, and maximum and minimum range for the variable teachers’ perceptions toward work experience prior to and after leaving school for students who are D/ hh. And used parametric test, which was t test to compare the difference between those two groups’ teachers who work at specialized institutes for students who are D/ hh and teachers of students who are D/ hh who work in general public schools.
Question five: This question consisted of a few independent variables. The following variables educational background, grade levels taught, and family experiences with disability had two groups, and thus Independent Samples t test was appropriate, whereas the teaching experience and education level variables had more than two groups, therefore, One Way ANOVA was appropriate.

Summary

This chapter constitutes the core of the data analysis process of the research. It discusses a statement of the research questions and the means of exploring them have been outlined. Instrument administration and data collection strategies have also been discussed. Finally, the methods of data analysis have also been outlined.
CHAPTER FOUR

Results

This chapter presents the overall survey results of examining teachers’ perceptions toward school-based transition services for individuals who are D/hh in Saudi Arabia. The following summary provides a comprehensive quantitative data analysis of the key findings of the research on the basis of primary and secondary data collected.

Response Rate

The questionnaires were distributed to 441 male teachers in programs or institutions for students who are D/hh in Riyadh, Saudi Arabia. The number of surveys returned was 317, resulting in a response rate of 72%. Of the 317 surveys that were returned, 269 was analyzed, but 58 surveys had missing data (that they did not fill more than 50% of the questionnaire so were excluded.). Therefore, only 211 surveys were used for data analysis.

Demographic Data

Table 2 contains demographic data on the 211 participants who returned fully completed surveys. Their personal characteristics included education background (major in university), level of education, years of teaching experience, family history regarding disability, and school level currently teaching. The majority of participants (n = 183, 86.7%) majored in special education in the university, while 13.3% (n = 28) had other majors with a special education certificate. The majority of participants (n = 155, 73.5%) were teaching in general schools, but 26.5% (n = 56) were teaching in specialized schools.

Regarding family history of disability, the results revealed that 68.2% (n = 144) of participants had no family history of disability, whereas 31.8% (n = 67) reported that someone in their family had a disability.
In terms of education, the highest percentage of the teachers had a bachelor's degree 67.3% (n = 142), only 28.4% (n = 60) had a master's degree, and 4.3% (n = 9) reported having other educational levels.

Finally, the years of teaching experience of teachers in the scope of participants revealed that 36.02% of them (n = 76) had experience ranging from 5 to less than 10 years, 33.65% had experience ranging between 1 to less than 5 years, while 30.33% of them had 10 years of experience or more.

Table 2

Demographic data of the participants

<table>
<thead>
<tr>
<th>Variables</th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational background (major in university)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Special education major</td>
<td>183</td>
<td>86.7</td>
</tr>
<tr>
<td>Other majors with special education certificate</td>
<td>28</td>
<td>13.3</td>
</tr>
<tr>
<td>Level of education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor’s degree</td>
<td>142</td>
<td>67.3</td>
</tr>
<tr>
<td>Master’s degree</td>
<td>60</td>
<td>28.4</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>4.3</td>
</tr>
<tr>
<td>Years of teaching experience</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to less than 5</td>
<td>71</td>
<td>33.65</td>
</tr>
<tr>
<td>6 to less than 10</td>
<td>76</td>
<td>36.02</td>
</tr>
<tr>
<td>11 years and above</td>
<td>64</td>
<td>30.33</td>
</tr>
<tr>
<td>Do you have a relative with any disability?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>67</td>
<td>31.8</td>
</tr>
<tr>
<td>No</td>
<td>144</td>
<td>68.2</td>
</tr>
<tr>
<td>What school level do you currently teach?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>General</td>
<td>155</td>
<td>73.5</td>
</tr>
<tr>
<td>Specialized</td>
<td>56</td>
<td>26.5</td>
</tr>
</tbody>
</table>
Screening the Data

Prior to analyzing the data in order to answer the research questions, data screening was conducted to check the following: (1) information was correctly entered, (2) out-of-range values, (done by using frequencies for all variables), (3) missing values that were dealt with by deletion, (4) outliers, and (5) normality. Normality was done by a histogram procedure so as to determine the tests that could be used for the inferential statistics (parametric tests or non-parametric tests).

A histogram was obtained by using SPSS with the superimposed normal curve for the total perception. In the histogram below, it seems that all samples deviate somewhat from normal distribution.

![Figure 1 Histogram of the Total Score of Teachers' Perception](image-url)
Table 3

Descriptive statistics for Total Score of Teachers' Perception

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Statistic</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.3409</td>
<td>.01965</td>
</tr>
<tr>
<td>95% Confidence Interval for Mean</td>
<td>Lower Bound</td>
<td>2.3021</td>
</tr>
<tr>
<td>Mean</td>
<td>Upper Bound</td>
<td>2.3796</td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>2.3508</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>2.3421</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>.081</td>
<td></td>
</tr>
<tr>
<td>Total perception</td>
<td>Std. Deviation</td>
<td>.28539</td>
</tr>
<tr>
<td>Minimum</td>
<td>1.11</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>3.13</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>2.03</td>
<td></td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>.37</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-.659-</td>
<td>.167</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.697</td>
<td>.333</td>
</tr>
</tbody>
</table>
Table 4

Tests of normality for the Total Score of Teachers' Perception

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>total perception</td>
<td>.064</td>
<td>211</td>
</tr>
</tbody>
</table>

<sup>a</sup> Lilliefors Significance Correction

As shown in Table 3, there are descriptive statistics regarding the variable of total perception as well as the value of skewness and kurtosis, with accompanying standard error for each. Both skewness and kurtosis are not zero indicating non-normal distribution. Figure 2 shows that there are 3 outliers, cases 161, 201 and 47. Table 4 shows that the significant values of the Kolmogorov-Smirnov test and the Shapiro-Wilk test are less than .05 and .01. These two tests were significant in indicating non-normal distribution. When the three outliers, 61, 201 and 47, were removed, the results were as follows:

![Histogram of the Total Score of Teachers' Perception after removing the outliers](image)

Figure 3 Histogram of the Total Score of Teachers' Perception after removing the outliers
Table 5

*Descriptive statistics for Total Score of Teachers’ Perception after removing the outliers*

<table>
<thead>
<tr>
<th></th>
<th>Statistic</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.3477</td>
<td>.01803</td>
</tr>
<tr>
<td>95% Confidence Interval for Mean</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower Bound</td>
<td>2.3121</td>
<td></td>
</tr>
<tr>
<td>Upper Bound</td>
<td>2.3832</td>
<td></td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>2.3538</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>2.3421</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>.068</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.26003</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>1.63</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>2.97</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1.34</td>
<td></td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>.37</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-.322</td>
<td>.169</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>.033</td>
<td>.336</td>
</tr>
</tbody>
</table>

Table 6

*Tests of normality for the Total Score of Teachers’ Perception after removing the outliers*

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>Total perception</td>
<td>.051</td>
<td>208</td>
</tr>
</tbody>
</table>

<sup>a</sup> Lilliefors Significance Correction
As shown in Table 6, when the three outliers, 61, 201 and 47, were removed, the significant values of the Kolmogorov-Smirnov test and the Shapiro-Wilk became greater than .05, meaning that these two tests were not significant in indicating normal distribution. However, when conducting additional distribution (Figure 5) for the dependent variable without deleting the outliers by education level was found to be normal by using histograms, there was no need to remove the outliers because there was no significant change in the mean of the total perception 2.34 before deletion and 2.35 after deletion. It was determined that the distribution was close to a normal distribution. Therefore, the total perception was valid for further analysis using parametric tests One Way ANOVA and t test.

Table 7

<table>
<thead>
<tr>
<th>Your level of education</th>
<th>Total perception</th>
<th>Kolmogorov-Smirnov</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
<td>Sig.</td>
</tr>
<tr>
<td>Bachelor degree</td>
<td>.052</td>
<td>142</td>
<td>.200</td>
</tr>
<tr>
<td>Master degree</td>
<td>.077</td>
<td>60</td>
<td>.200</td>
</tr>
<tr>
<td>Others</td>
<td>.285</td>
<td>9</td>
<td>.034</td>
</tr>
</tbody>
</table>

a. Lilliefors Significance Correction
### Table 8
**Descriptive statistics for Total Score of Teachers’ Perception based on education level**

<table>
<thead>
<tr>
<th>Your level of education</th>
<th>Statistic</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td>2.3239</td>
<td>.02205</td>
</tr>
<tr>
<td>95% Confidence Interval for Mean</td>
<td>2.2803</td>
<td>2.3675</td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>2.3282</td>
<td>2.3289</td>
</tr>
<tr>
<td>Median</td>
<td>.069</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>.26281</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.63</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>1.63</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>2.97</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1.34</td>
<td></td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>.35</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-.214</td>
<td>.203</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-.098</td>
<td>.404</td>
</tr>
<tr>
<td>Mean</td>
<td>2.4338</td>
<td>.03304</td>
</tr>
</tbody>
</table>

| **Bachelor degree**     | Lower Bound 2.3677 | Upper Bound 2.4999 |
| 95% Confidence Interval for Mean | 2.4366 | 2.4474 |
| 5% Trimmed Mean         | .065       |            |
| Median                  | .25590     |            |
| Variance                | .63        |            |
| Std. Deviation          | 1.63       |            |
| Minimum                 | 3.13       |            |
| Maximum                 | 1.50       |            |
| Range                   | .31        |            |
| Interquartile Range     | -.251      | .309       |
| Skewness                | 1.104      | .608       |
| Kurtosis                | 1.9883     | .15918     |

| **Master degree**       | Lower Bound 1.6212 | Upper Bound 2.3554 |
| 95% Confidence Interval for Mean | 2.0089 | 2.1842 |
| 5% Trimmed Mean         | .228       |            |
| Median                  | .47753     |            |
| Variance                | .11        |            |
| Std. Deviation          | 2.50       |            |
| Minimum                 | 1.39       |            |
| Maximum                 | .76        |            |
| Range                   | -.157      | 1.400      |
| Interquartile Range     | -1.052     |            |
| Skewness                |            |            |
| Kurtosis                |            |            |
**Figure 5** Boxplot of the Outliers for Teachers’ Perception Scores by education level

**Figure 6** Histogram of the Total Score of Teachers’ Perception according to those who holding bachelor degree

**Figure 7** Histogram of the Total Score of Teachers’ Perception according to those who holding master’s degree
Figure 8 Histogram of the Total Score of Teachers’ Perception according to those who holding other's education degree

Answering Research Questions

The purpose of this study was to examine teachers’ perceptions toward school-based transition services for individuals who are D/hh in Saudi Arabia.

Research Question One

What are the overall perceptions toward school-based transition services for students who are D/hh in Saudi Arabia among teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

This question was answered through producing means, standard deviations, and maximum and minimum range for the variable overall perception. In order to simplify the interpretation of the overall perceptions of teachers toward school-based transition services for students who are D/hh in Saudi Arabia, the following criterion were used: very high perception, given weight 5, ranged from 4.20 to 5.00, high perception, given weight 4, ranged from 3.40 to <4.20, acceptable, given weight 3, ranged from 2.60 to <3.40, low perception, given weight 2, ranged from 1.80 to <2.60, and very low perception, given weight 1, ranged from 1 to < 1.80 (Alnahdi, 2012).
Table 9

*Overall perceptions of teachers toward school-based transition services for Students who are D/ hh in Saudi Arabia*

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>(\bar{x})</th>
<th>s</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall perception</td>
<td>211</td>
<td>2.34</td>
<td>.29</td>
<td>2.03</td>
<td>1.11</td>
<td>3.13</td>
</tr>
<tr>
<td><strong>Education area</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General public schools</td>
<td>155</td>
<td>2.36</td>
<td>.28</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Specialized institutes</td>
<td>56</td>
<td>2.30</td>
<td>.30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9 shows that the overall perceptions (which represent by the whole statements of the study tool "38" items) of teachers toward school-based transition services for students who are D/ hh in Saudi Arabia was low (\(\bar{x}=2.34, \ s=0.28\)) based on the criterion used in this study. Teachers who worked at specialized institutes as well as these, who worked in general public schools, had low perceptions, 2.36 and 2.30, respectively. It is worth mentioning that teachers who worked in general public schools have slightly higher perceptions than those who worked at specialized institutes, but the difference was not significant. The researcher considered that these results may refer to the fact that teachers in both general public schools and specialized institutes had direct or indirect communication with students who are D/ hh, which may have reduced the differences between them.

Figure 9 illustrates overall perceptions of teachers who worked in general public schools and those who worked at specialized institutes toward school-based transition services for students who are D/ hh in Saudi Arabia.
Figure 9 illustrates overall perceptions of teachers toward school-based transition services for Students who are D/hh in Saudi Arabia

Research Question two

What are teachers’ perceptions toward their preparation to plan and implement transition services for students who are D/hh in Saudi Arabia? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

This dual question was answered through both descriptive and inferential statistics. For descriptive data means, standard deviations, and maximum and minimum range for the variable teachers’ perceptions toward their preparation to plan and implement transition services for students who are D/hh in Saudi Arabia were reported in table 10.
Table 10

*Teachers’ perceptions toward their preparation to plan and implement transition services for Students who are D/hh in Saudi Arabia*

<table>
<thead>
<tr>
<th>Teachers’ preparedness to implement transition services</th>
<th>N</th>
<th>( \bar{x} )</th>
<th>s</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>211</td>
<td>2.17</td>
<td>.33</td>
<td>2.75</td>
<td>1.00</td>
<td>3.75</td>
</tr>
</tbody>
</table>

Table 10 shows that the teachers’ perceptions toward their preparation to plan and implement transition services for students who are D/hh in Saudi Arabia was low (\( \bar{x} = 2.17, \ S = .33 \)) based on the criterion used in this study.

**Checking Normality**

The same procedures that were done for the total perception to check its normality were applied for the subscale of teachers’ preparedness to implement transition services as follows:

The significant values of the Kolmogorov-Smirnov test and the Shapiro-Wilk for the subscale of teachers’ preparedness to implement transition services was less than .05 indicating non-normal distribution.

Table 11

*Tests of normality for the Score of Teachers’ preparedness to implement transition services*

<table>
<thead>
<tr>
<th>teachers’ preparedness to implement transition services</th>
<th>Kolmogorov-Smirnov(^a)</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td></td>
<td>.063</td>
<td>211</td>
</tr>
</tbody>
</table>

\(^a\) Lilliefors Significance Correction
Figure 10 Histogram of the Score of Teachers’ preparedness to implement transition services

Figure 11.Boxplot of the Outliers for the Score of Teachers’ preparedness to implement transition services

Figure 11 shows there were 3 outliers, cases 161, 201 and 47. When these three were removed, the significant value of the Kolmogorov-Smirnov test was less than .05, but for the Shapiro-Wilk test, the significant value was greater than .05, indicating normality and there were no outliers any more.
Table 12
Tests of normality for the Score of Teachers’ preparedness to implement transition services after removing the outliers

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov(^a)</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>teachers’ preparedness to implement transition services</td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td></td>
<td>.070</td>
<td>208</td>
</tr>
</tbody>
</table>

\(^a\) Lilliefors Significance Correction

Figure 12. Histogram of the Score of Teachers’ preparedness to implement transition services after removing the outliers
Figure 13. Boxplot of the Outliers for the Score of Teachers’ preparedness to implement transition services after removing the outliers

When the test was conducted by the grouping variable, education area, the significant values of Shapiro-Wilk for the two groups were less than .05 indicating non-normal distribution. Additionally, the same 3 outliers, cases 161, 201 and 47, emerged.

Table 13

Tests of normality for the Score of Teachers’ preparedness to implement transition services by school level they taught

<table>
<thead>
<tr>
<th>What school level do you currently teach?</th>
<th>Kolmogorov-Smirnov\textsuperscript{a}</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Kolmogorov-Smirnov\textsuperscript{a}</td>
<td>Shapiro-Wilk</td>
</tr>
<tr>
<td>General</td>
<td>.070</td>
<td>.970</td>
</tr>
<tr>
<td>Specialized</td>
<td>.134</td>
<td>.906</td>
</tr>
</tbody>
</table>

\textsuperscript{a}. Lilliefors Significance Correction
Figure 14 Histogram of the Score of Teachers’ preparedness to implement transition services by those who teach at general schools

Figure 15 Histogram of the Score of Teachers’ preparedness to implement transition services
Figure 16 Boxplot of the Outliers for the Score of Teachers’ preparedness to implement transition services by education area

After deletion of the above mentioned outliers and conducting the normality test by the grouping variable (education area), the significant values of the Shapiro-Wilk test for the two groups were greater than .05, indicating normal distribution, but we cannot accept the removing of the outliers because there was big difference in the mean of one group before and after deletion of the outliers (appendix 2)

Table 14
Tests of normality for the Score of Teachers’ preparedness to implement transition services by school level they taught after removing the outliers

<table>
<thead>
<tr>
<th>What school level do you currently teach?</th>
<th>Kolmogorov-Smirnov (^a) Statistic</th>
<th>df</th>
<th>Sig.</th>
<th>Shapiro-Wilk Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>teachers’ preparedness to implement transition services</td>
<td>General</td>
<td>.081</td>
<td>154</td>
<td>.015*</td>
<td>.990</td>
<td>154</td>
</tr>
<tr>
<td>Specialized</td>
<td>.125</td>
<td>54</td>
<td>.036*</td>
<td>.968</td>
<td>54</td>
<td>.161</td>
</tr>
</tbody>
</table>

\(^a\) Lilliefors Significance Correction
Figure 17 Histogram of the Score of Teachers’ preparedness to implement transition services by those who teach at general schools after removing the outliers

Figure 18 Histogram of the Score of Teachers' preparedness to implement transition services by those who teach at special schools after removing the outliers
Regarding the results of normality tests, the data of the subscale of teachers’ preparedness to implement transition services were valid for further analysis using non-parametric tests Mann-Whitney U and Kruskal-Wallis. Since the distribution of this variable was non-normal, Mann-Whitney U test for two groups was utilized to test the differences between teachers who worked at specialized institutes for students who are D/hh and teachers of students who are D/hh who worked in general public schools. The table below shows that teachers who worked in general public schools had higher perceptions (with the highest mean rank). From the results of the Mann-Whitney U test, it can be determined that perception of teachers who worked in general public schools was statistically not significantly higher relative to those worked at specialized institutes ($u = 4114.000, p = .563$).

Table 15

*Mann-Whitney U test*

<table>
<thead>
<tr>
<th>Grouping Variable:</th>
<th>n</th>
<th>MeanRank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dependent variable</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>What school level do you currently teach?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General public schools</td>
<td>155</td>
<td>107.46</td>
<td>16656.00</td>
</tr>
<tr>
<td>Specialized institutes</td>
<td>56</td>
<td>101.96</td>
<td>5710.00</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>211</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mann-Whitney U</td>
<td></td>
<td>4114.000</td>
<td></td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td></td>
<td>5710.000</td>
<td></td>
</tr>
<tr>
<td>$z$</td>
<td></td>
<td>-.578</td>
<td></td>
</tr>
<tr>
<td>$p$-value</td>
<td></td>
<td>.563</td>
<td></td>
</tr>
</tbody>
</table>

*p > 0.05*
Research Question Three

What are teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

This dual question was answered through descriptive statistics by producing means, standard deviations, maximum and minimum range for the variable teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia in addition to inferential statistics.

Table 16

<table>
<thead>
<tr>
<th>Teachers’ perceptions toward potential implementation challenges of school-based transition services for Students who are D/hh in Saudi Arabia</th>
<th>N</th>
<th>( \bar{X} )</th>
<th>s</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ perceptions towards potential implementation challenges of school-based transition</td>
<td>211</td>
<td>2.40</td>
<td>.47</td>
<td>2.50</td>
<td>1.00</td>
<td>3.50</td>
</tr>
</tbody>
</table>

Table 16 shows that the teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia were low (\( \bar{X} = 2.40, s = .47 \)).

Checking Normality

The same procedures that were done for the total perception to check its normality were applied for the subscale of teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia. The significant value of the Shapiro-Wilk test for the subscale was less than .05 indicating non-normal distribution.
Table 17

Tests of normality for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic</td>
<td>df</td>
</tr>
<tr>
<td>teachers’ perceptions regarding potential challenges of transition services</td>
<td>.115</td>
<td>211</td>
</tr>
</tbody>
</table>

a. Lilliefors Significance Correction

Figure 19 Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services
Figure 20 Boxplot of the Outliers for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services

Figure 20 shows that there are two outliers, cases 67 and 41. When these outliers were removed, the significant value of the Kolmogorov-Smirnov test was still less than .05 indicating non-normal distribution.

Table 18
Tests of normality for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services after removing the outliers

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic df Sig.</td>
<td>Statistic df Sig.</td>
</tr>
<tr>
<td>teachers’ perceptions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>regarding potential</td>
<td>.105 209 .000**</td>
<td>.981 209 .007**</td>
</tr>
<tr>
<td>challenges of transition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>services,</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Lilliefors Significance Correction
When the test was conducted by the grouping variable education area, the significant values of Shapiro-Wilk for the two groups were less than .05 indicating non-normal distribution. The same two outliers, cases 67 and 41, were apparent.

**Figure 21 Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services after removing the outliers**

**Figure 22 Boxplot of the Outliers for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services after removing the outliers**
Table 19

*Tests of normality for the score of teachers’ perceptions toward potential implementation challenges of school-based transition services by grade level taught*

<table>
<thead>
<tr>
<th>What school level do you currently teach?</th>
<th>Kolmogorov-Smirnov(^a)</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistics</td>
<td>df</td>
</tr>
<tr>
<td>teachers’ perceptions regarding potential challenges of transition services</td>
<td>General</td>
<td>.126</td>
</tr>
<tr>
<td></td>
<td>Specialized</td>
<td>.148</td>
</tr>
</tbody>
</table>

\(^a\) Lilliefors Significance Correction

![Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach in general schools](image)

*Figure 23 Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach in general schools*
Figure 24 Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach at special schools.

Figure 25 Boxplot of the Outliers for the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services by education area.

After deletion of the above-mentioned outliers and conducting the normality test by the grouping variable education area, the significant values of the Shapiro-Wilk test for the two groups was less than .05, indicating non-normal distribution.

Table 20

*Tests of normality for the score of teachers’ perceptions toward potential implementation challenges of school-based transition services by grade level taught after removing the outliers*

<table>
<thead>
<tr>
<th>What school level do you currently teach?</th>
<th>Kolmogorov-Smirnov a</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>.111</td>
<td>.980</td>
</tr>
<tr>
<td>Specialized</td>
<td>.148</td>
<td>.952</td>
</tr>
</tbody>
</table>

Table 20 continues:

<table>
<thead>
<tr>
<th></th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>Kolmogorov-Smirnov a</td>
<td>.111</td>
<td>153</td>
<td>.000**</td>
<td>.980</td>
<td>153</td>
</tr>
<tr>
<td>Specialized</td>
<td>Kolmogorov-Smirnov a</td>
<td>.148</td>
<td>56</td>
<td>.004**</td>
<td>.952</td>
<td>56</td>
</tr>
</tbody>
</table>

Figure 26 Histogram of the Score of Teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach at general schools after removing the outliers
Figure 27 Histogram of the score of teachers’ perceptions toward potential implementation challenges of school-based transition services for those who teach at special schools after removing the outliers

Regarding the results of the normality tests the data of the subscale of teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia were valid for further analysis using non-parametric tests Mann-Whitney U and Kruskal-Wallis.

Since the distribution of this variable was non-normal, the Mann-Whitney U test for two groups was utilized to test the differences between teachers who work at specialized institutes for students who are D/hh and teachers who worked in general public schools. The results, as shown in Table 21, revealed that teachers who worked in general public schools had the higher perception (with the highest mean rank), but the difference was not statistically significant ($u = 4293.500, p = .905$).
Table 21

*Mann-Whitney U test*

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Grouping Variable:</th>
<th>N</th>
<th>MeanRank</th>
<th>Sum of Ranks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ perceptions toward potential implementation</td>
<td>General public schools</td>
<td>155</td>
<td>106.30</td>
<td>16476.50</td>
</tr>
<tr>
<td></td>
<td>Specialized institutes</td>
<td>56</td>
<td>105.17</td>
<td>5889.50</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>211</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mann-Whitney U</td>
<td>4293.500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>5889.500</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z</td>
<td>-.119</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>P-value</td>
<td>.905</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p > .05

**Research Question Four**

What are teachers’ perceptions toward work experience prior to and after leaving school for students who are D/hh? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

This dual question was answered through descriptive statistics by producing means, standard deviations, and maximum and minimum range for the variable teachers’ perceptions toward work experience prior to and after leaving school for students who are D/hh in addition to inferential statistics.
Table 22

*Teachers' perceptions toward work experience prior to and after leaving school for Students who are D/hh*

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>N</th>
<th>( \bar{X} )</th>
<th>s</th>
<th>Range</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teachers’ perceptions toward work experience prior to and after leaving school for Students who are D/hh</td>
<td>211</td>
<td>2.42</td>
<td>.32</td>
<td>1.87</td>
<td>1.27</td>
<td>3.13</td>
</tr>
</tbody>
</table>

Table 22 shows that the teachers’ perceptions toward work experience prior to and after leaving school for students who are D/hh was low (\( \bar{X} = 2.42, S = .32 \)).

**Checking Normality**

The same procedures that were done for the total perception to check its normality were applied for the subscale of teachers’ perceptions toward work experience prior to and after leaving school for students who are D/hh in Saudi Arabia. The significant value of the Shapiro-Wilk test for the subscale was less than .05, indicating non-normal distribution.
Table 23

Tests of normality for the Score of Teachers’ perceptions toward work experience

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Statistic df Sig.</td>
<td>Statistic df Sig.</td>
</tr>
<tr>
<td>teachers’ perceptions toward work experiences</td>
<td>.066 211 .027*</td>
<td>.986 211 .030*</td>
</tr>
</tbody>
</table>

<sup>a</sup> Lilliefors Significance Correction

*Figure 28 Histogram of the Score of Teachers’ perceptions toward work experience*
Figure 29 Boxplot of the Outliers for the Score of Teachers’ perceptions toward work experience

Figure 29 shows that there are two outliers, 67 and 47. When these outliers were removed, the significant value of the Shapiro-Wilk test was greater than .05, indicating normal distribution. As the mean of the subscale was not affected by deletion of the two cases, 2.42 before the removal of the outliers, and 2.43 after deletion of it, there was no need to remove it.

Table 24
Descriptive statistics for the Score of Teachers’ perceptions toward work experience

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Statistic</th>
<th>Std. Error</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.4290</td>
<td>.02114</td>
</tr>
<tr>
<td>95% Confidence Interval</td>
<td>2.3874</td>
<td></td>
</tr>
<tr>
<td>for Mean</td>
<td>2.4707</td>
<td></td>
</tr>
<tr>
<td>5% Trimmed Mean</td>
<td>2.4296</td>
<td></td>
</tr>
<tr>
<td>Median</td>
<td>2.4000</td>
<td></td>
</tr>
<tr>
<td>Variance</td>
<td>.0935</td>
<td></td>
</tr>
<tr>
<td>Std. Deviation</td>
<td>.30555</td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>1.60</td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>3.13</td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>1.53</td>
<td></td>
</tr>
<tr>
<td>Interquartile Range</td>
<td>.40</td>
<td></td>
</tr>
<tr>
<td>Skewness</td>
<td>-.009</td>
<td>.168</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>-.057</td>
<td>.335</td>
</tr>
</tbody>
</table>
Table 25
Tests of normality for the Score of Teachers’ perceptions toward work experience after removing the outliers

<table>
<thead>
<tr>
<th>teachers’ perceptions toward work experiences,</th>
<th>Kolmogorov-Smirnov&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Shapiro-Wilk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statistic</td>
<td>df</td>
<td>Sig.</td>
</tr>
<tr>
<td>.074</td>
<td>209</td>
<td>.008**</td>
</tr>
</tbody>
</table>

<sup>a</sup> Lilliefors Significance Correction

Figure 30 Histogram of the Score of Teachers’ perceptions toward work experience after removing the outliers
The subscale of teachers’ perceptions toward work experience prior to and after leaving school for students who are D/hh in Saudi Arabia was considered to be normally distributed and was valid for further analysis using parametric tests such as independent samples t test.

Table 26

<table>
<thead>
<tr>
<th>Education area</th>
<th>N</th>
<th>$\bar{x}$</th>
<th>s</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>General public schools</td>
<td>155</td>
<td>2.42</td>
<td>.31</td>
<td>.220</td>
<td>.826</td>
</tr>
<tr>
<td>Specialized institutes</td>
<td>56</td>
<td>2.43</td>
<td>.34</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p > .05
Independent Samples t test was utilized to test if there were differences in teachers’ perceptions toward work experience prior to and after leaving school for Students who are D/hh according to the education area. As shown in table 26, teachers’ perception in the specialized education was slightly higher than those in general education, but this difference was not statistically significant \( t = .220 \) \( p \text{ value} .826 \) which was greater than .05, indicating that there were no statistically significant differences in teachers’ perceptions based on education area.

**Research Question Five**

What are the differences in teachers’ perceptions regarding school-based transition services and post-school employment for students who are D/hh in Saudi Arabia based on their educational background, level of education, years of teaching experience, family experiences with disability and grade levels taught? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

This question was answered by using parametric tests, Independent Samples t test for the differences based on educational background, grade levels taught, and family experiences with disability, and One Way ANOVA for the differences based on teaching experience and education level.

**Examination of Assumptions**

First, the assumption of a normal distribution for the dependent variable, perception within each group of independent variables was explored and previously discussed in the screening of the data section. Subsequently, Levene’s test was applied to test the assumption of homogeneity of variance, which assumes that the dependent variable, attitudes, has equal variance in each category of the independent variables, teaching experience.
Table 27

Independent Samples t test for differences in teacher's perception based on educational background

<table>
<thead>
<tr>
<th>Education background</th>
<th>n</th>
<th>$\bar{x}$</th>
<th>s</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Special education major</td>
<td>183</td>
<td>2.35</td>
<td>.29</td>
<td>1.344</td>
<td>.180</td>
</tr>
<tr>
<td>Other majors with special education certificate</td>
<td>28</td>
<td>2.27</td>
<td>.22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p > 0.05

Independent Samples t test was utilized to test if there were differences in teachers’ perceptions regarding school-based transition services and post-school employment for Students who are D/hh in Saudi Arabia based on their educational background. As shown in table 27, teachers with special education major have higher perception (2.35) than their colleagues who had other majors with a special education certificate (2.27), but the significant value of $t = 1.344$ was not significant $p = .180$ indicating that there were no statistically significant differences in teachers’ perceptions based on their educational background.

Examination of Assumptions

First, the assumption of a normal distribution for the dependent variable, perception within each group of independent variable (level of education), was explored and previously discussed in the screening of the data section. Levene’s test was applied to test the assumption of homogeneity of variance, which violated the assumption.
The p-value (5.627) of Levene's Statistic ($F$) for the assumption of homogeneity of variance in Table 28 was less than (.05); this was significant ($p < .01$), which means the null hypothesis can be rejected, and the assumption of homogeneity of variance not met. Hence, a Brown-Forsythe test was conducted as an alternative test to compare the means of teachers' perceptions toward transition services. The results (Table 29) indicated that there were statistically significant differences between the means of teachers’ perceptions toward transition services based on their education level ($F = 11.308, p \text{ value} = .000$). To determine the differences between groups, post-hoc for multiple comparison (Games-Howell) was conducted.

Results shown in Table 30 demonstrate the difference that occurred between teachers with a Master’s degree and those with a Bachelor’s degree was in favor of teachers with a Master’s degree ($\bar{x} = 2.43$) in contrast to (2.32) for teachers with a Bachelor’s degree, indicating that teachers with higher education have a higher perception.
Table 29

Brown-Forsythe test for differences in teacher's perception based on their education level

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>1.677</td>
<td>2</td>
<td>.839</td>
<td>11.308</td>
<td>.000**</td>
</tr>
<tr>
<td>Within Groups</td>
<td>15.426</td>
<td>208</td>
<td>.074</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17.104</td>
<td>210</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.01

Table 30

Descriptive statistic of education level and Post HOC (Games-Howell) results

<table>
<thead>
<tr>
<th>Teaching years of experience</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>s</th>
<th>Differences using Games-Howell</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Bachelor degree</td>
<td>142</td>
<td>2.32</td>
<td>.26</td>
<td></td>
</tr>
<tr>
<td>2-Master degree</td>
<td>60</td>
<td>2.43</td>
<td>.26</td>
<td>2 &amp; 1 (0.11)</td>
</tr>
<tr>
<td>3-Others</td>
<td>9</td>
<td>1.99</td>
<td>.48</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>211</td>
<td>2.34</td>
<td>.29</td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05

Table 31

Levene's Test for the Dependent Variable: perception

<table>
<thead>
<tr>
<th>Levene's Statistic</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>.343</td>
<td>2</td>
<td>208</td>
<td>.710</td>
</tr>
</tbody>
</table>
The p-value .710 of Levene's Statistic $F$ for the assumption of homogeneity of variance as shown in Table 31 was greater than .05 and this was not significant $p > .05$, which means the null hypothesis cannot be rejected, and the assumption of homogeneity of variance was met.

Table 32

*One Way ANOVA for differences in teacher's perception based on teaching experience*

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>.220</td>
<td>2</td>
<td>.110</td>
<td>1.356</td>
<td>.260</td>
</tr>
<tr>
<td>Within Groups</td>
<td>16.883</td>
<td>208</td>
<td>.081</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>17.104</td>
<td>210</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p > .05

ANOVA test was utilized to test if there were differences in teachers’ perceptions regarding school-based transition services and post-school employment for students who are D/hh in Saudi Arabia based on their years of teaching experience. As shown in Table 32, the results of ANOVA reveal that there were no significant differences in teachers’ perceptions ($F = 1.356$, $p$ value .260) with significant value of greater than .05. These results indicated that teaching experience had no impact on teachers’ perceptions regarding school-based transition services and post-school employment for students who are D/hh in Saudi Arabia.

The researcher considered that these results may refer to the high percentage of the study sample who worked in general schools (73.5%), the factor that makes them far from this area to gain an overall idea or perception regardless of their teaching years of experience. Furthermore, as is shown in the below table, the average mean of each group was very close to each other, and this decreases the differences between them.
Table 33

Descriptive statistic of teacher’s perception based on teaching experience

<table>
<thead>
<tr>
<th>Teaching years of experience</th>
<th>N</th>
<th>( \bar{x} )</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 years</td>
<td>71</td>
<td>2.30</td>
<td>.29</td>
</tr>
<tr>
<td>6-10 years</td>
<td>76</td>
<td>2.35</td>
<td>.28</td>
</tr>
<tr>
<td>11+ years</td>
<td>64</td>
<td>2.37</td>
<td>.29</td>
</tr>
<tr>
<td>Total</td>
<td>211</td>
<td>2.34</td>
<td>.29</td>
</tr>
</tbody>
</table>

![Figure 32 Descriptive statistic of teacher’s perception based on teaching experience](image)

*Figure 32 Descriptive statistic of teacher’s perception based on teaching experience*
Table 34

Independent Samples t test for differences in teacher's perception based on family history of disability

<table>
<thead>
<tr>
<th>Family history of disability</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>s</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>With family history of disability</td>
<td>67</td>
<td>2.32</td>
<td>.28</td>
<td>.856</td>
<td>.393</td>
</tr>
<tr>
<td>Without family history of disability</td>
<td>144</td>
<td>2.35</td>
<td>.29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p>0.05

Independent samples t test was utilized to test if there were differences in teachers’ perceptions regarding school-based transition services and post-school employment for students who are D/hh in Saudi Arabia based on their family history of disability. As shown in Table 34, teachers without family history of disability have a higher perception (2.35) than their colleagues with family history of disability (2.32), but the significant value of the t test confirmed that \( p > .05 \). Therefore, we can conclude that there were no statistically significant differences in teachers’ perceptions based on family history of disability.

Table 35

Independent Samples t test for differences in teacher's perception based on grade levels taught

<table>
<thead>
<tr>
<th>Grade levels taught</th>
<th>n</th>
<th>( \bar{x} )</th>
<th>s</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>General public schools</td>
<td>155</td>
<td>2.36</td>
<td>.28</td>
<td>1.301</td>
<td>.195</td>
</tr>
<tr>
<td>Specialized institutes</td>
<td>56</td>
<td>2.30</td>
<td>.30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p>0.05

The Independent samples t test was utilized to test the differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools. As shown in table 35, the results of t test showed that there
were no significant differences between them regarding overall perception ($t = 1.301$, $p$ value .195) with a significant value of greater than .05. Therefore, we can conclude that there are no differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools. Moreover, teachers who work at specialized institutes and who work in general public schools have low perception (2.36 and 2.30) respectively. It is worth mentioning that teachers who work in general public schools have a slightly higher perception than those who work in specialized institutes, but the difference was not significant.

The researcher concluded that these results may have referred to the fact that both groups of teachers in general public schools and specialized institutes had direct or indirect communication with students who are D/hh which could have reduced the differences between them.

**The Open Question Analysis**

What are some of the challenges and barriers (obstacles) that hinder the transition services for students who are D/hh in Saudi Arabia?

The participants of this study were asked at the end of the questionnaire to mention (if they had) some of the challenges and barriers (obstacles) that hinder the transition services for students who are D/hh in Saudi Arabia. The results revealed that 49 out of 211 of the participants responded to this open question, a representation of 23.2%. Of these responses, obstacles can be categorized into issues related to a lack of government support, a lack of involvement of companies, a lack of coordination between schools and families, and other. Following is a description of participant responses to the open question.
The lack of government support

Participant responses revealed that the lack of financial support from the government was one of the main causes of hindrance for students who are D/hh to engage in the workforce. An important point stated by the participants was that transition services were marginalized among other important services. Therefore, it was important to raise people’s awareness regarding this issue and in turn, this issue needed to be supported by a high-ranking legislative body. Additionally, it was stated that it is necessary for the Ministry of Education to coordinate with other ministries, and with private sector institutions, to provide students who are D/hh with transition services that best suit their abilities. Certainly, there should be coordination between the Ministry of Education and the Ministry of Labor in regards to transition services, and the Ministry of Education should guide, prepare, and train students who are D/hh for the workforce after their education. Furthermore, analysis of the open-ended question responses revealed that some of the participants implied that the government should assign some vocational jobs for individuals who are D/hh. This issue requires some urgent decisions from the special education administration. It was stated that the Ministry of Education needs to take a more active role in raising awareness. The Council of Ministers must also pass a resolution to bring all the stakeholders together.

The lack of involvement of companies

One respondent stated that some companies may use, or take advantage of, individuals who are D/hh. It was also mentioned that it was not the responsibility of the teacher or the school, but rather, it was the responsibility of human resources departments in companies to
initiate transition services. Comments also stated that companies did not want to employ individuals who are D/hh in operating machines, particularly the ones with a high noise level.

**Coordination between school, family and governmental departments**

Analysis of the open-ended question responses revealed that some of the participants thought that the responsibility for activating transition services was with the professionals in school, as this should be their first priority. Some of the participants in this study stated that they believed transition services were the core point and that such services should open the door to success for students who are D/hh. Participants stated that coordination between school, family, and governmental departments was very important in order to activate schools in developing transition services. Institutions and ministries should also play a significant social role in this matter. Some of the participants stated that it was possible to arrange an integrated project with the help of designated authorities such as the Ministry of Education sponsors, training centers, certified translators, and entrepreneurs to design such a successful project to help those individuals with disabilities.

Some respondents stated that family and school should play an important role in qualifying students academically. It was noted that school and family had very important roles in assisting individuals who are D/hh to choose the right careers that best fit their abilities. Additionally, the teachers should be dedicated to transition programs to assist students who are D/hh identify their hobbies and interests and implement them in the transition programs. Teachers should contribute to orienting students who are D/hh for their future careers and help them find suitable work opportunities.
Some of the participants stated that the educational curriculums for students who are D/hh were weak, thereby making it difficult for transition services to succeed, that transition services were not properly empowered enough, and that there was no organized structure for transition services. In regard to the systematic structure of the services, some participants stated that most services were random and relied on individual efforts. Some participants stated that the educational curriculums should be adapted to meet the needs of students who are D/hh during the transition periods by establishing a special curriculum (not the general curriculum) for students who are D/hh, and to provide them with good career opportunities. In regard to the systematic structure of the services, some participants stated that most services were random and relied on individual efforts.

Finally, some of the participants perceived that the future of special education was unclear, not in terms of teachers or students, or the services provided, but rather due to teachers’ lack of understanding from the administration, general instructors, and parents even over some minor issues. As a result it could negatively impact the evaluation process as well as diagnosis. A lack of understanding can lead to low morale. According to one comment, unfortunately, educators are concerned only about their paychecks and therefore, it is hard to get them engaged in extra services.

Other

One concern was related to the timing of transition services. It was mentioned that transition services should be activated after students who are D/hh graduate from high school. Some of the participants stated that even though the need for transition services for middle and high school students who are D/hh is high, there are actually only a few transition services in the D/hh community.
One respondent stated that there is a need for a large media support and a request from the individuals with disabilities to move this project to the implementation level. Certainly, these types of projects require significant effort, research and initiations.

Some of the participants stated that the obstacles that hinder transition services for students who are D/hh included that such students tended to sleep, were lazy, weakness of future career, employee’s lack of knowledge about job duties, low income based on the educational degree, lack of special transportation for female employees, and long working hours.

Other respondents stated that it is necessary for coordination of efforts to develop transition services need to include multispecialty teamwork to establish a mandatory transition services plan for high school students who are D/hh in order to prepare them for the work environment.

Finally, the participants expressed their feelings of gratitude for the researcher effort in this area. Some expressed the importance of the topic, describing it as a very good and valuable study that serves an important group of people in our society. One participant said that he “suffers a lot from this issue” when he sees students who are D/hh graduating from high school, “wondering where they will go”.

**Summary**

The purpose of this study was to examine overall teachers’ perceptions toward school-based transition services for students who are D/hh in Saudi Arabia. Additionally, this study was designed to compare the overall perceptions of teachers who taught in special schools versus teachers in general schools. As well, this study was designed to compare teachers’ perceptions toward their preparation to plan and implement transition services for students who are D/hh in
Saudi Arabia, teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia, and teachers’ perceptions toward work experience prior to and after leaving school for individuals who are D/hh regarding education area (both special schools and general schools). In addition, this study aimed to check if there were differences in teachers’ perceptions regarding school-based transition services and post-school employment for students who are D/hh in Saudi Arabia based on their years of teaching experience, educational background, grade levels taught, and family experiences with disability.

This study utilized the questionnaire that was developed by Alnahdi (2012) in English, translated it to Arabic, and modified it based on a comprehensive literature review pertaining to teachers’ perceptions towards transition services for students who are D/hh, teachers’ perceptions towards work experiences for students who are D/hh, and teachers’ perceptions regarding potential challenges related to transition services for students who are D/hh.

The questionnaire was developed to gather demographical information and educational background and experiences of participants and teachers’ perceptions regarding teachers’ perceptions toward transition services, teachers’ perceptions towards work experience, teachers’ perceptions regarding potential challenges in providing transition services, and teachers’ perceptions toward professional preparation to appropriately plan for and implement transition services.

A total of 211 special education teachers and general education teachers completed the questionnaire of the study. The majority of them (86.7%) had special education as their major in the university, and 73.5% were teaching in general schools.
In general, the results of this study indicated that the overall teachers’ perception toward school-based transition services for students who are D/hh in Saudi Arabia was low ($\bar{x} = 2.34, s = 0.28$). Moreover, teachers felt they were unprepared to plan and implement transition services ($\bar{x} = 2.17, s = 0.33$) and they had low perception towards potential implementation challenges of school-based transition services for students who are D/hh ($\bar{x} = 2.40, S = .47$). As well, the results of this study indicated that special education teachers and general education teachers were both unsatisfied with transition experiences ($\bar{x} = 2.42, S = .32$) and they did not perform sufficient transition services that could provide them with satisfactory transition experiences.

Furthermore, the results also indicated that there were no significant differences between the teacher groups (teachers who worked at specialized institutes and those who work in general public schools) and their mean scores across overall teachers’ perceptions toward school-based transition services for students who are D/hh in Saudi Arabia were (2.30 and 2.36) correspondingly. Likewise for the subscales, there were no statistically significant differences between teachers who worked at specialized institutes versus those who worked in general public schools regarding teachers’ perceptions toward their preparation to plan and implement transition services ($u = 4114.000, p = .563$), teachers’ perceptions toward potential implementation challenges of school-based transition services ($u = 4293.500, p = .905$), and teachers’ perceptions toward work experience prior to and after leaving school for students who are D/hh (2.43 and 2.42) respectively.

In addition, the results revealed that there were statistically significant differences between the means of teachers’ perceptions toward transition services based on their education level ($F=11.308, p value .000$). The difference raised was between teachers with a Master’s
degree and those with a Bachelor’s degree in favor of teachers with a Master’s degree ($\bar{x}=2.43$) against (2.32) teachers with a Bachelor's degree signifying that teachers with higher education had a higher perception. While there were no significant differences in teachers’ perceptions regarding school-based transition services and post-school employment for Students who are D/hh in Saudi Arabia based on their educational background, years of teaching experience, family experiences with disability and grade levels taught ($p>.05$).

In addition to the quantitative results, the participants of this study were asked to state (if they had) some of the challenges and obstacles that could deter the transition services for students who are D/hh in Saudi Arabia. Of the participants, 23.2% responded to this question. The comments stated that the obstacles included a lack of financial support from the government for supporting individuals with disabilities to get engaged in the workforce, obstacles relating to conditions stemming from the disability such as tending to sleep, and a lack of future career perspectives, employee’s level of knowledge related to the job duties, low income due to the educational degree, lack of special transportation for female employees, and long working hours.

It is very important that teacher education programs be evaluated regarding content and methods of training. These programs need to revise their course offerings in order to include training on school to work strategies, which could ultimately benefit students who are D/hh.
CHAPTER FIVE

Discussion

The objective of this chapter is to discuss the results of this study in terms of the research questions raised in the Introduction to this thesis and assess teachers’ perceptions towards school-based transition services for individuals who are D/hh in Saudi Arabia. This will be performed by interpreting the perceptions of teachers as gathered through the study, correlating these with prevailing knowledge, explaining the implications of the findings and offering recommendations and suggestions for policy makers and researchers.

The total population of this study was comprised of 211 male teachers working in programs or institutions for male students who are D/hh. Personal characteristics obtained from participants included educational background (major in university), level of education, teaching experience, family history regarding disability and school type currently teaching (i.e., general or specialized). The majority of the teachers possessed Bachelor’s degrees (68.3%), majored in special education in university (67.3%), and taught in general schools (73.5%). With regard to family history of disability, the study revealed that most of the teachers had no members in their family history with a disability (68.2%). The teaching experience of the study participants varied from one year to greater than 10 years.

The dependent variable identified in this study was the overall perceptions of teachers toward transition services. The independent variables were the demographic data (teaching experience, academic qualification, education major, school type, and family history of disability).

The research questions addressed by the study are restated for ease of reference.
1. What are the overall perceptions toward school-based transition services for students who are D/hh in Saudi Arabia among teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

2. What are teachers’ perceptions toward their preparation to plan and implement transition services for students who are D/hh in Saudi Arabia? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

3. What are teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

4. What are teachers’ perceptions toward work experience prior to and after leaving school for individuals who are D/hh? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?

5. What are the differences in teachers’ perceptions regarding school-based transition services and post-school employment for students who are D/hh in Saudi Arabia based on their educational background, level of education, years of teaching experience, family experiences with disability and grade levels taught? Are there differences between teachers who work at specialized institutes for students who are D/hh and teachers of students who are D/hh who work in general public schools?
Discussion of Findings

In general, the present study found that teachers have low perceptions towards school-based transition services for students who are D/hh. Several studies have explored teachers’ attitudes toward transition services and have confirmed that a favorable outlook toward the significance of the work determines the effectiveness of transition planning and services (e.g., Mowbray, Bybee, Harris, & McCrohan 1995; Winn & Hay, 2009). Furthermore, some studies have established that the preparedness of teachers for transition services and their opinions regarding the adequacy of that preparedness play a crucial part in the effectiveness of transition services (e.g., Benitez, 2005; Wolfe et al., 1998).

The following sections describe the findings from the present study with regard to the perceptions of teachers towards school-based transition services.

Teachers’ overall perceptions toward school-based transition services for students who are D/hh

The current study tested the differences in overall perception towards school-based transition services between teachers who work in specialized institutes for the D/hh and in general public schools which include students who are D/hh.

Earlier studies by Webb and Wehmeyer (2012) found that special education teachers and vocational specialists had different perceptions with regard to the competencies related to transition services. Similarly, Wandry et al. (2008) reported differences in the perceptions of teachers in special and general education settings. Alnahdi (2013), on the other hand, found that in Saudi Arabia, some factors, such as gender and educational background, did not affect differences in perception whereas other factors, such as years of teaching experience and family history of disability, did affect differences in perception.
However, the outcomes of the current study revealed that there were no significant differences between both sets of teachers with regard to overall perception toward school-based transition services. Therefore, it could be concluded that there are no differences in opinion between teachers who work with students who are D/hh in general public schools or specialized institutes in Saudi Arabia. In contrast, Wolfe et al (1998) found that perceptions of transition services varied between teachers in general and special education settings. In their study, they observed that special education teachers gave much higher significance and rankings to the various competencies associated with transition services than regular teachers.

The low perception by the teachers in the current study of special institutes could be explained by the fact that transition services are new in Saudi Arabia and are still in the process of gaining acceptance. Hence, it is not surprising that teachers are unaware of the concept of transition services, or their merits. The findings of the present study showed low perceptions toward transition service. Measures should be taken by the Ministry of Education to increase the awareness with regard to transition services and to aid the eventual practitioners, i.e., teachers.

A key finding of this study was that the overall perceptions towards school-based transitions services of teachers of students who are D/hh in Saudi Arabia were low, and did not differ significantly across educational settings.

**Teachers’ overall perceptions toward their preparation to plan and implement transition services for students who are D/hh**

Special education teachers recognize the need for provision of systematic transition services for students with disabilities; however, the implementation quality of these services is limited (Benitez, Morningstar, & Frey, 2009; Seo, 2008). In order to achieve success in transitions, the preparedness of teachers is necessary and the teachers must feel convinced about
their preparedness (Yuen, 2012). Benitez (2005) observed a positive correlation between the level of preparedness and the level of frequency in implementing transition services suggesting that those who were well prepared to implement these services did so more often. Paatsch and Toe (2014) found that teachers in the U.S. felt well prepared to conduct transitional services. Conversely, Alnahdi (2013) found that teachers in Saudi Arabia frequently felt ill-equipped to plan or offer transitional services.

Similar outcomes were determined by the current study as it was found that the teachers’ perceptions toward their preparation to plan and implement transition services for students who are D/hh in Saudi Arabia was low (2.40) with regard to the criterion used in this study, which was 4.20 to 5.00, high perception, given weight 4, ranged from 3.40 to <4.20, acceptable, given weight 3, ranged from 2.60 to <3.40, low perception, given weight 2, ranged from 1.80 to <2.60, and very low perception, given weight 1, ranged from 1 to < 1.80 (Alnahdi, 2012). Furthermore, the current study found the perception of teachers working in general public schools was not statistically significantly different than those who work at specialized institutes.

As the overall perception of teachers towards school-based transition services was low in this study, it is not surprising that their perception towards their own preparedness with regard to the planning and implementation of transition services was also low. Fullan (2007) observed that motivation is a key factor to encouraging individuals to take up new tasks or responsibilities. Hence, motivating teachers could be the first step to enhancing their preparedness to plan and implement transition services. However, motivation should not be limited to encouraging teachers; instead, they should be provided with sufficient time to participate in relevant trainings and workshops. Furthermore, treating the provision of transition services as a factor for promotion or career progression may provide an incentive for teachers to improve their
knowledge and capabilities with regard to the planning for and implementation of transition services. Also, with growing familiarity of transition services, their low perceptions will progressively increase (Alnahdi, 2012). Furthermore, a study by Althabet (2002) revealed that the special education preparation programs in Saudi Arabia contained no courses related to transition services. Corrective measures taken in this regard, such as revised curricula for teacher training programs in Saudi Arabia and awareness programs for transition services, can also increase the preparedness of teachers with regard to transition services.

The key finding of the current study in this context was that the perception of teachers in Saudi Arabia with regard to their preparation to plan and implement transition services was low. This perception remained the same irrespective of educational setting.

**Teachers’ perceptions toward potential implementation challenges of school-based transition services for students who are D/hh**

Special education teachers may face numerous challenges for the effective implementation of transition services. A general agreement among special education teachers on the importance of transition services has been reported by many researchers; however, the efficiency of the implementation of transition services differs based on teachers’ backgrounds and the regularity with which these teachers essentially implement the services was found to be low (Benitez, Morningstar, & Frey, 2009).

The present study found that the teachers’ perception towards the potential implementation challenges of school-based transition services for students who are D/hh in Saudi Arabia was low. In other words, teachers in Saudi Arabia believe there are many barriers that prevent them from implementing appropriate transition services in their schools. There was no statistical differences between teachers who worked in general public schools and those who
work in specialized institutes, again, the overall low perception of teachers towards transition services indicates that there were many obstacles and concerns need to be eliminated so teachers can feel confident and have higher perceptions toward transition services. Corrective measures that can be taken to address this shortfall may include revisions in the educational curricula for teachers, and more outreach programs related to spreading awareness about transition services in Saudi Arabia.

Zand and Pierce (2011) observed that numerous challenges may be encountered during the provision of transition services to students who are D/hh. Some challenges include society’s lack of appreciation for such students, which could take the form of discrimination or stigmatization, and viewing students who are D/hh as lower human beings with lower capabilities and efficiency.

Brownell et al. (2005) observed that the rate of employment of individuals who are D/hh is lower when compared to persons without any disability. This may be the result of the perception of a large number of employers that persons who are D/hh have lower effectiveness or productivity in the workplace. Other challenges encountered with the implementation of transition services include the complexity of the disability and a lack of support from different society stakeholders (e.g., Hunt & Marshall, 2012) and restricted accessibility to transition services due to limited provision of services. Furthermore, transition services are constrained by inadequate staffing and resources; limited government support with regard to setting up and equipping educational facilities, and training students who are D/hh (Johnson & Seaton, 2011). Another challenge encountered is the lack of parental support (Johnson & Seaton, 2011). In the context of Saudi Arabia, the overall perception of the society towards people with disabilities is also a challenge (Al-Gain & Al-Abdulwahab, 2002; Al-aoufi, 2011).
In effect, the key finding of the current study in this context was that the perception of teachers in Saudi Arabia with regard to potential implementation challenges was low as explained above. This could be attributed, in part, to their overall low perceptions of school-based transitions as a whole.

**Teachers’ perceptions toward work experience prior to and after leaving schools for individuals who are D/hh**

Hardman et al. (2016) observed that students with disabilities have had tremendous challenges in getting opportunities for competent professional attachments and employment positions, which subsequently give them the necessary work experience they require in their careers. Test et al. (2009) listed paid employment/work experience as one of sixteen evidence-based in-school predictors of post-school outcomes for students with disabilities. Landmark et al. (2010) identified paid and unpaid work experience as a substantiated best practice of transition services. Studies by Benz, Lindstrom, and Yovanoff (2000), Carter, Ditchman, Sun, Trainor, Swedeen, and Owens (2010), Fabian (2007), Harvey (2002), Izzo, Cartledge, Miller, Growick, and Rutkowski (2000), Rabren, Dunn, and Chambers (2002), Shandra and Hogan (2008), to name a few, emphasized the significance of work experience before leaving school for students with disabilities. It could therefore be assumed that teachers who are involved in transition services would have high perceptions about the work experience of their students who are D/hh. However, the current study found that the teachers had low perception toward work experience prior to and after leaving school for individuals who are D/hh. There was no statistical differences between teachers who worked in general public schools and those who work in specialized institutes. This finding again highlights the low awareness and implementation of transition services across Saudi Arabia. Consequently, it is vital that the transition services
associated with special education programs in middle and high schools in Saudi Arabia make the practice of employment during school a priority and thereby provide students with exposure to different kinds of work experience as much as possible. This will enable better post school work opportunities for students as they will have more work experiences when they leave school. However, it must be noted that this will be a challenge due to the lack of teachers who have the required experience to aid students with planning and training in work skills. Moreover, another challenge is that not all schools in Saudi Arabia are equipped to provide students with work experience, as some are not designed for inclusive education for students with special needs (Al-Mousa, 2010).

The key finding of the current study was that teachers in Saudi Arabia did not have a high perception of the work experience of the students who are D/hh. This again could be attributed to the overall low perceptions of school-based transitions as a whole in Saudi Arabia. Also, teachers in Saudi Arabia do not have enough experience with transition services to observe the effects of work experience on their students who are D/hh. As a derivative, it is obvious that the teachers could not therefore have an opinion on the efficacy of transition services in Saudi Arabia.

The following section will discuss the impact of teachers’ characteristics (such as years of teaching experience, educational qualification, etc.) on their perceptions regarding school-based transition services and post-school employment.

**Differences in teachers’ perceptions regarding school-based transition services and post-school employment**

Other studies which have investigated teachers’ perceptions associated with services for students with disabilities (e.g., Al-Abduljabber, 1994; Al-Ahmadi, 2009; Al-Wabli, 1982; Althabet, 2002; Elhoweris & Alsheikh, 2006; Hussain, 2010) studied the perceptions of both
male and female teachers. These studies found that gender sometimes did affect perceptions. For example, the study by Al-Abduljabber (1994) found that female teachers displayed more favorable viewpoints toward including students with disabilities in general schools than their male counterparts. On the other hand, Al-Ahmadi (2009) and Al-Wabli (1982) found that the attitudes of male instructors were more favorable than those of female instructors. Conversely, the studies by Elhoweris and Alsheikh (2006) and Hussain (2010) did not find significant variances in the attitudes or perceptions of teachers based on their gender. However, the current study was limited to the opinions of male teachers due to their higher accessibility to the researcher (who is also male). Nevertheless, the influence of the teachers’ educational background, level of education, years of teaching experience, family history of disability and grade levels taught were all considered.

**Differences Based on Educational Background**

Wandry et al. (2008) observed that teachers from special education majors, both undergraduate and graduate, perceived transition practices much higher than their general education peers. The participants of the study felt that educators’ knowledge of transition services had a significant impact on transition services to be successful. Further, educators’ interest in transition services was also higher than general education teachers.

The present study, however, found that teachers with a special education major had a higher perception than their colleagues with other majors or a special education certificate. The difference between these two groups is that teachers who enrolled in special education programs typically studied for four years with a minimum of 120 credits, whereas the other group focused on other academic subjects (e.g. mathematics or arts) for four years and after graduation they enrolled in a two year program with 30 credits of special education training. However, the results
indicated that there was no statistically significant difference in teachers’ perceptions based in their educational background.

In contrast to this view, Alnahdi (2013) found that in Saudi Arabia, some factors, such as gender and educational background, did not affect the perceptions of teachers. Also the educational background did not have any effect on the attitude of the teachers towards transition services. However, Alnahdi (2013) stated that these teachers may be unprepared for providing the services.

Alnahdi (2012) observed that the educational qualification of teachers in combination with their years of experience could influence their attitudes towards transition services. Vaz et al. (2015) indicated that a combination of formal training and experience could contribute to the way teachers view services for students with disabilities. The teachers in the current study were quite evenly distributed with regard to their teaching experience—33.65% had 1-5 years of experience, 36.02% had 5-10 years of experience, and 30.33 had >10 years of experience.

Furthermore, 86.7% of the teachers in the current study had majored in special education. The years of experience could again help teachers who have not specialized in special education gain enough knowledge to be on par with trained special education teachers.

However, this study could not identify any key differences based on the educational background of the participating teachers due to their overall low awareness and perceptions towards transition services for their students who are D/hh. Thus, from this study, it can be suggested that teacher education programs should be prepared for increasing the transition planning and services.
The key finding of the current study was that the educational background, i.e., special educators or general educators, of teachers in Saudi Arabia significantly did not affect their perceptions with regard to school-based transition services and post-school employment.

**Differences Based on Level of Education**

Al-Ahmadi (2009) investigated the difference of opinion among male and female teachers, and among special and general education teachers, who were working in public schools in Saudi Arabia. The results showed male teachers and those with master’s degrees to have positive attitudes towards integration.

The present study revealed that the means of teachers’ perceptions toward transition services based on their education level were not statistically significant. This study showed that although educational qualifications can provide a head start to a teacher who is commencing his career, the knowledge gained through experience can even the balance between a young teacher (e.g., with 1-2 years of experience) with a Master’s degree and a more experienced teacher (e.g., with 11-12 years of experience) with a Bachelor’s degree. Contrary to this finding, Al-Wabli (1982) reported no significant differences among teachers based on the type of degree or years of experience.

However, this study could not identify any key differences based on the educational level of the participating teachers due to their overall low awareness and perceptions towards transition services for their students who are D/hh. The key finding of the current study was that the educational qualifications of teachers in Saudi Arabia did not affect their perceptions with regard to school-based transition services and post-school employment.
Differences Based on Years of Teaching Experience

Alnahdi (2013) found that a teacher’s years of teaching experience affected his/her perceptions of transition services. For example, he found that teachers with one to four years of teaching experience displayed more positive attitudes than those with five to ten years of teaching experience or greater. Niemann (2007) on the other hand, found that teachers’ perceptions were not affected by their years of experience.

The current study found that there were no significant differences in teachers’ perceptions, which remained low, based on their years of teaching experience. This indicated that teaching experience has no impact on teachers’ perceptions regarding school-based transition services and post-school employment for students who are D/hh in Saudi Arabia. This could have been influenced by the high percentage of participants in the study sample who worked in general schools (73.5%). Furthermore, the average mean of each group was very close to each other which reduced the difference between them.

It could be expected that teachers who are fresh from their training would be more enthusiastic to embrace services for students who are D/hh, while the more experienced teachers may be skeptical to take up anything new. The lack of difference in the perceptions of these two groups of teachers towards transition services in Saudi Arabia provides an indication of the low awareness of teachers with regard to transition services and the shortcomings in the educational curriculum for teachers.

The key finding of the current study was that years of teaching experience did not affect the perception of teachers in Saudi Arabia with regard to school-based transition services and post-school employment.
Differences Based on Family History of Disability

Teachers having a relative with a disability could influence their attitudes towards transition services (Al-Ahmadi, 2009; Alquraini, 2012; Alsalhe, 2012; Al-Faiz, 2006; Dubis, 1988). The current study also found that there was no statistically significant difference in teachers’ perceptions based on family history of disability. Again, it must be noted that the overall lack of awareness of transition services in Saudi Arabia could have influenced this low perception.

In contrast, Alnahdi’s (2012) findings revealed that teachers who have a family history of disability expressed less favorable attitudes towards transition services than those who did not have a family history of disability. Alnahdi (2012) observed that this finding was particularly unexpected due to the assumption that people who have a family history of disability would demonstrate more favorable viewpoints than others. Alnahdi (2012) further explained this finding using two possible explanations. First, teachers who have a family history of disability may become more distrustful of any new services provided to students with disabilities, caused by the fact that existing programs for students with disabilities in Saudi Arabia did not meet the required outcomes with regard to the aspirations and ambitions of students' families, particularly with regard to equipping students for post-school existence (Almuaqel, 2008). Consequently, their earlier and unfavorable experiences with transition services for a family member with disability could make them view new special education services with skepticism. Second, the teachers’ perceptions may be affected by the degree of disability of their family members.

The key finding of the current study was that family history of disability of teachers in Saudi Arabia did not affect their low perceptions with regard to school-based transition services and post-school employment.
Differences Based on Grade Levels Taught

Alnahdi (2012) found that teachers’ attitudes towards transition services were not affected by the grades they taught. Hence, teachers teaching elementary grades did not have an opinion different from teachers who taught middle school or high school grades. Alnahdi (2012) observed that this could be due to the fact that special education teachers in Saudi Arabia are not trained to address specific audience levels. Instead, they are equipped to teach different school levels, and therefore teachers who teach elementary grades one year could move over to teaching middle school or high school in another year.

It can be therefore assumed that the grade levels taught by the teachers would not influence their perceptions towards transition services for students who are D/hh. The present study confirmed this assumption by the fact that teachers who taught different grade levels did not have differing perceptions. It must be noted that the mean perception values remained low. In effect, this study could not identify any key differences based on the grade levels taught by the participating teachers due to their overall low awareness and perceptions towards transition services for their students who are D/hh.

In contrary to this finding, Leyser (1994) studied teachers across six nations and observed that more positive attitudes toward inclusion were exhibited by secondary school and junior high teachers, than their elementary school counterparts. Another conflicting view was that elementary school teachers were more positive about inclusion than the secondary school teachers (Savage & Wienke, 1989; Stephens & Braun, 1980). Vaughn, Schumm, Jallad, Slusher, and Saumell (1996) observed that the difference is most likely to stem from elementary teachers attempting to make modification for students with learning disabilities by providing easily understandable materials, individual assignments, and assessments than were secondary teachers.
The key finding of the current study was that the grade levels taught by teachers in Saudi Arabia did not affect their perceptions with regard to school-based transition services and post-school employment.

**Challenges and barriers that hinder the transition services for student who are D/hh in Saudi Arabia**

Various challenges with regard to transition services were reported by several researchers including Zand and Pierce (2011), Brownell et al. (2005), Hunt and Marshall (2012), and Johnson and Seaton (2011). Some of these include lack of appreciation of students who are D/hh by the larger society; high levels of discrimination exhibited by the labor markets; assumption from the majority of employers that persons who are D/hh are less efficient and productive at workplaces; lack of adequate support from the relevant authorities; inadequate support from the government authorities, especially the education sectors, in investing appropriately in construction of learning institutions for students with special needs; equipping the institutions with the required facilities; and training of the professionals who teach such students. These studies found that lack of support from parents is also a challenge in providing transition services.

Challenges reported by the participants in the current study included lack of financial support from the government, the tendency of students who are D/hh to sleep and be lazy all the time, weakness of Saudization, future career, employee’s lack of knowledge about job duties, low income due to educational qualification, lack of special transportation for female employees, and long working hours. In addition, companies were found to want to employ individuals who are D/hh to operate machines, specifically the noisier ones. Furthermore, some of the participants thought that the educational curricula for the D/hh students are weak, which makes it hard to
establish transition services. Furthermore, they reported that there was no organized structure for transition services. Some of the participants observed that some companies manipulated and misused individuals who were D/hh.

The systems and services supporting students who are D/hh were mostly random and individual efforts. The teachers felt that coordination between school, family, and governmental departments was very important to activate the role of transition services and schools’ role in developing transition services. They also believed that transition services should be activated after graduation from high school of students who are D/hh.

Some teachers highlighted that transition services for the D/hh community were limited although the requirement was high. Moreover, they believed that adapting a special educational syllabus to meet the needs of students who are D/hh during the transition period would be beneficial. Furthermore, they believed that families, schools, institutions, and government ministries should play a significant role in qualifying students academically as this would help students obtain good career opportunities.

The teachers believed that the activation of transition services should be the responsibility of professionals in schools. Moreover, they highlighted the role to be played by the government, schools and families in identifying and assigning suitable vocations to individuals who are D/hh.

Another item highlighted by the teachers was the requirement for coordination between the Ministry of Education and the Ministry of Labor with regard to transition services. In their opinion, the Ministry of Education should be involved in the guidance, preparation, and training of individuals who are D/hh for suitable jobs. Consequently, this requires coordination with other ministries and with the private sector to offer transition services that suit their abilities. Moreover, the teachers also felt that multi-specialty teams could be established to create
mandatory transition services plans for high school students who are D/hh and that dedicated teachers should be assigned for transition programs to assist students who are D/hh with the identification of their hobbies and interests and to facilitate their implementation of transition programs. However, they also reported that some instructors were only concerned with their paychecks and hence it was difficult to engage them in additional services.

Contrarily, some of the participants believed that transition services were core and could aid in students who are D/hh achieving success and distinction. They also believed that transition services were not the responsibility of schools or teachers, but rather the responsibility of human resource departments.

Other salient points raised by the participants included that transition services are marginalized and that awareness regarding this issue needed to be increased. Furthermore, support was required from high-level legislation and governmental decisions, media, and the disabled individuals themselves.

Finally, in the opinion of the participants, the future of special education in Saudi Arabia was unclear. This they clarified was not in terms of the schools, teachers, students, or services, but rather that students who are D/hh did not get adequate support from the government, school administration, general education teachers, and parents. Furthermore, they observed weaknesses in the diagnosis and evaluation of individuals who are D/hh. The teachers observed that students who are D/hh encounter problems and negative attitudes. Therefore, they believed that the government should take a more active role in enabling students who are D/hh to have a more fulfilling role in society. This could be achieved by more stringent guidelines to employers in the private sector, among other things.
The key findings from the responses to the open question were that transition services are relatively new in Saudi Arabia and hence limited awareness and limited government support are evident. The lack of parental involvement and financial outlay considerably hinder the provision of these services to students who are D/hh.

**Practical Implications**

The present study examined teachers’ perceptions with regard to the transition services from school to the work force for students who are D/hh in Saudi Arabia. The study therefore gained an improved understanding of the perceptions of teachers regarding students who are D/hh in Saudi Arabia with the intent of recognizing the implications that may affect both special education institutes and general schools where these students learn and hence adequately prepare students who are D/hh for post school success. Furthermore, this study investigated how teachers of students who are D/hh perceive their readiness and preparation to plan and implement transition services, what challenges they may encounter while they plan and implement such services, and the work opportunities that students who are D/hh may have after receiving the transition services. The study also examined the impact of the teaching environment, years of teaching experience, educational background, grade levels taught, and family experiences with disability on the teachers’ perceptions to the issues under study. Also owing to the educational achievement issues and transitional challenges faced by students who are D/hh, this study expanded the existing knowledge surrounding this topic in Saudi Arabia. Consequently, the findings of this study contribute to the successful formulation of transition services by disability service professionals so that they can design effective programs and successfully support students who are D/hh. These measures will also lead to an increase in the employment rate or
transition to employment of students who are D/hh not only in Saudi Arabia, but also within the Middle East region.

Findings from the study have, therefore, led to the recognition of some practical implications that could be applied not only in Saudi Arabia, but also in other countries in the region. It is hoped that these suggestions will result in the evolution of best practices for the provision and use of transition services in schools in Saudi Arabia and other countries. The following sections describe the practical implications generated based on the findings of this study. These implications are intended for the Ministry of Education in Saudi Arabia and teachers of students who are D/hh. A few general implications are also provided.

**Ministry of Education**

It is imperative that the Ministry of Education in Saudi Arabia participate in the facilitation of the transition services to ensure that students who are D/hh receive the required support to progress toward productive and successful careers. A few suggestions follow.

The Ministry of Education should establish appropriate legislation for transition services. Alnahdi (2012) and Aldabas (2015) observed the lack of legislation with regard to transition services in Saudi Arabia. It is therefore a necessary step for the Ministry of Education to draft and establish appropriate legislation related to the development and implementation of transition services in Saudi Arabia. While inputs and assistance can be drawn from existing legislation from other countries, the legislation should take into consideration the specific religious and cultural context of Saudi Arabia (for example, segregation, views on disability, and so on) so as to ensure widespread acceptance and support for its implementation and consequent success.

The Ministry of Education should establish interdisciplinary teams for transition services. The Ministry can also set up specialized agencies to offer transition services. Such teams can be
established by involving, for example, other teachers from the same or other schools, parents, and experts referred by the Ministry of Education.

The Ministry of Education should establish clear guidelines with regard to transition plans. In countries such as the United States, transition plans are required to be an important constituent of the IEP of each individual student by the time they reach 16 years of age as per the IDEA 2004 guidelines (Johnson, 2005). Similarly, the Ministry of Education officials in Saudi Arabia can determine whether to follow the guidelines established by more developed countries with regard to the age at which a student must have a transition plan for post-school employment. Conversely, they can determine if a similar regulation can be developed in Saudi Arabia which would address the responsibilities of special education personnel in a clear and quantifiable manner.

The Ministry of Education should conduct awareness programs. The Ministry of Education can conduct periodic programs to increase the awareness of teachers and other stakeholders in the implementation of transition services for students who are D/hh. This will help increase the overall awareness across the country and ensure that the required personnel are aware of changes in programs and expectations.

The Ministry of Education should serve as a channel for interaction and collaboration. The Ministry of Education can function as a channel to facilitate the interaction between different government Ministries and also industries in the private sector. This will help to expedite the ease of transition of students who are D/hh into careers that are appropriate for them. For example, collaborating with the Saudi Arabian Ministries of Labor, Commerce and Industry, Social Affairs, and other suitable ministries can aid the Ministry of Education in identifying different areas of employment for students who are D/hh.
School budgets should be extended. As the primary and most influential stakeholder with regard to education in Saudi Arabia, the Ministry of Education can extend school budgets to ensure that adequate resources and staff are available to provide transition services for students who are D/hh.

Comprehensive curricula for students who are D/hh should be established. Students who are D/hh require that their academic and overall skills be honed during their school life. Hence, it is recommended that the Ministry of Education setup a governing body that can oversee the curricula development for students who are D/hh. The governing body should include psychologists, educational experts, teachers, and other suitable participants. The objective of the curricula should be to provide a well-rounded growth experience for the students, which will help prepare them for not only employment after leaving school, but also better integration into the society at large. Furthermore, special educational syllabi can be created to meet the needs of students who are D/hh during the transition period between school and placement into employment.

Standard training programs for teachers should be established. The Ministry of Education should establish standard training programs for teachers who are associated with transition services for students who are D/hh. Teachers from both general and special education settings must be included in this initiative. This will ensure that the requirements with regard to transition services are clearly communicated across the board.

The special education curriculum for teachers should be revised. The Ministry of Education must periodically revise the special education curriculum for teachers to include new services that are initiated. Teachers from both general and special educational settings should be included in this initiative.
The Ministry of Education should support the creation and implementation of IEPs. Although provision for IEPs exists under the RSEIP, as discussed in the literature review, the level of creation and implementation of these in Saudi Arabia is yet to gain complete acceptance. This is further affected by the lack of cultural customization in the guidelines. Hence, the Ministry of Education should revise the guidelines for IEP creation to be more in line with the cultural environment of Saudi Arabia and provide oversight and guidance in the creation of implementation of IEPs for students who are D/hh.

**Teachers**

After parents, teachers are the primary influencers and participants in the growth and development of children with special needs or otherwise. Therefore, a few practical suggestions are provided for their use. Teachers should recognize the individual needs of students who are D/hh when creating an IEP. Teachers must recognize that all students are individuals with individual requirements and hopes and aspirations. Therefore, taking the time to create a personalized IEP for a student is worth the effort as this will ensure that the student’s particular requirements (curricular or extra-curricular, social or individual) are taken into consideration and also ensure the effectiveness of the IEP.

Teachers should recognize the individual needs of a student who is D/hh when deciding on the transition services to be employed for him/her. As understood from the literature review, the U.S. views transition services as an outcome-oriented process that helps an individual progress from school to various post-school activities (e.g., post-secondary education, vocational training, employment, continuing and adult education, adult services, independent living, or community participation). Furthermore, transition services are founded on the requirements of individual students and take into consideration his/her personal inclinations and
interests. Moreover, transition services can encompass education and associated services, community experiences, the identification and elaboration of employment and other post-school objectives, and acquisition of daily living skills and functional vocational education, if appropriate. However, in Saudi Arabia, transition services are still a recent phenomenon that are yet to gain widespread acceptance and approval (Aldabas, 2015) and hence are still in a position to be defined and customized for individual students who are D/hh. Therefore, teachers of students who are D/hh must carefully design transition services tailored to each specific individual.

Teachers must ensure parental involvement in the use of transition services. Johnson and Seaton (2011) observed that parents have a significant part to play in encouraging their children with disabilities to gain self-acceptance, self-belief, self-esteem, and self-determination. However, support from parents with regard to school-based services is often lacking perhaps due to a lack of information. It is therefore suggested that teachers reach out to parents and work with them to determine the individual requirements and likes and dislikes of a student who is D/hh and hence the appropriate transition services for a student.

Teachers should design educational curricula customized to the needs of individual students. Due to their wide experience with students of different levels of disability and capability, teachers are among the best persons to participate in the design of educational syllabi for use in schools that include students who are D/hh (both general and special schools).

Teachers should aid students in identifying an appropriate career/vocational stream. For transition services to be effective, it is necessary that the appropriate career/vocational stream be identified for an individual student. Teachers, due to their close interactions with the students, are best suited to help students identify suitable career/vocational streams for themselves.
Teachers should aid students in identifying their areas of strength and areas of development with regard to a chosen career/vocational path. Once a career stream is chosen, teachers can guide students with the identification of the requisite skills and their own merits and/or shortcomings with regard to each. Teachers can furthermore aid the students in drawing up a plan to help them with developing or maintaining the identified skills.

**General Implications**

**Improve Facilities at Schools**

Schools, both general and special, must constantly upgrade their facilities to meet the changing needs of students who are D/hh. Furthermore, the Ministry of Education should institute routine inspections to ensure that schools comply with a minimum standard of facility provision. It must be noted that facilities could include tangible assets such as infrastructure (e.g., buildings, laboratories, libraries, etc.) and non-tangible assets such as faculty qualification, student satisfaction, and so on.

**Increase involvement of family**

Several studies have highlighted the significance of family involvement in transition services (Heal, Gonzalez, Rusch, Copher, & DeStefano 1990; Landmark et al., 2010). The involvement of the family of students who are D/hh in their education and career planning and subsequent utilization of transition services will ensure that they can track and assess the progress made by the students. Furthermore, this will help them work with the teachers to suitably modify programs in a timely manner, if required.

Encourage individuals who are D/hh to improve their independent performance. Though governments and societies make constant endeavors to ease the integration of individuals who
are D/hh into professional life, in particular and social existence in general, it is also required that students constantly improve their individual skills and capabilities and keep abreast of changing professional requirements. This will help them to take charge of their individual career progression (Wehmeyer & Palmer, 2000).

Establish extra-curricular activities to increase the overall skills and capabilities of students who are D/hh. It is desirable that students who are D/hh emerge from school having benefited from all the programs offered by the school and having gained an overall well-rounded education. Students will benefit from interaction with their peers (in general education settings) and the use of extra-curricular activities such as sports and other pastimes can facilitate this. Schools in Saudi Arabia must also provide adequate and timely extra-curricular activities to aid in the well-rounded development of children who are D/hh as this will help them in future dealings with disabled and non-disabled peers (Jang & Kim, 2004).

Study Limitations

The researcher has tried his best to interpret the findings in a holistic way, yet a few limitations have been observed with regard to the present study. The literature reviewed comes mostly from Western countries. The culture in Western countries differs widely from the culture in Saudi Arabia and hence findings from such studies cannot be deemed entirely appropriate for use in Saudi Arabia. The study was performed only with male respondents due to the cultural norm of gender segregation and the consequent segregated schools in Saudi Arabia.
The implications and assumptions derived from the study are founded on survey data (i.e., quantitative data). Hence, these may not provide a comprehensive image of the teachers’ perceptions. Furthermore, though a question was provided to permit the participants to provide their thoughts in an open manner, the responses were not categorized or thematically analyzed to provide deeper insights into the perceptions of teachers. However, the issues and challenges provided were utilized to derive some practical implications from the perspective of the study.

**Implications for Future Research**

This descriptive, non-experimental study was the second study of its kind in Saudi Arabia as it investigated the perceptions of male teachers in Saudi Arabia regarding transition services for students who are D/hh. However, more research is needed regarding transition services for students who are D/hh in Saudi Arabia. Future studies can scrutinize the opinions of families, employers, and stakeholders in the Ministry of Education in Saudi Arabia with regard to transition services. At the same time, investigating the perceptions’ of the eventual recipients and beneficiaries of transition services, namely students who are D/hh, would be beneficial in strengthening the provision of such services. The current study included teachers from only the capital city of Riyadh. Future studies can look at including other regions in Saudi Arabia. Due to the gender segregation practiced in Saudi Arabia, only men were invited to participate in this study. This was due to the fact that as the researcher is male, the logistics of the study (including permissions to gain access to the different schools, interacting with the principal, etc.) were easier to arrange with male teachers. Studying the perceptions of women teachers and also a mixed group of teachers would be beneficial.
Conclusion

This chapter answered the research questions raised in the Introduction to this thesis and assessed the effectiveness of school-based transition services for individuals who are D/hh in Saudi Arabia. This was performed by interpreting the perceptions of teachers as gathered through the study, correlating these with prevailing knowledge, explaining the implications of the findings and offering recommendations and suggestions for policy makers and researchers. This chapter also highlighted the limitations of the current study and offered areas for future research.

This study was the second performed in Saudi Arabia to explore the perceptions of teachers with regard to school-based transition services for students who are D/hh. Overall, the study found that teachers in Saudi Arabia have low perceptions with regard to transition services. This could be explained by the fact that transition services are new in Saudi Arabia and are still in the process of gaining acceptance. The same low perceptions were found with regard to the teachers’ opinions with regard to their own preparedness to plan and implement transition services for students who are D/hh. A similar low awareness and hence perception was found with regard to implementation challenges associated with transition services. In other words, it could be concluded that the teachers believed that they were insufficiently prepared to plan and/or implement transition services. Consequently, the teachers had low perceptions also with regard to the work experience of the students who are D/hh. Hence, they were not able to determine the efficacy of transition services in Saudi Arabia. Furthermore, the individual characteristics of teachers such as years of teaching experience, educational background, grade levels taught, and family experiences with disability, did not affect their low perceptions towards school-based transition services.
Challenges and barriers highlighted by the participants of the current study with regard to transition services in Saudi Arabia included primarily the lack of government support, the lack of interest displayed by individuals who are D/hh and by potential employers in hiring individuals who are D/hh which resulted in lower job opportunities. Other issues that were revealed included the weakness in the educational curricula and the lack of organized infrastructure for transition services.

This study also presented several practical implications with regard to the successful implementation of transition services for students who are D/hh in Saudi Arabia. These implications were from the perspective of the role that can be played by the Ministry of Education and teachers in increasing the effectiveness of transition services for students who are D/hh in Saudi Arabia.

It is hoped that the findings from this study will draw the attention of officials in the Saudi Arabian Ministry of Education with regard to the degree to which teachers of students who are D/hh have understood transition services and their readiness and preparedness to plan and implement transition services and take appropriate actions to improve the same. Moreover, the findings from the study will aid the stakeholders of special education departments in Saudi Arabian universities to assess the effectiveness of the curricula for special education teachers and also for the Ministry of Education to enhance the school curriculum for students with disabilities.
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Appendices
Appendix A

Map of the location of Saudi Arabia
Appendix B

The transition services survey. English version
Transition Services from School to Work for Students Who Are Deaf or Hard of Hearing in Saudi Arabia: Teachers’ perceptions.

Dear teacher:

This study is about Transition services to work in Saudi Arabia in anticipation of establishing it for individuals with disabilities. And as you know, teachers are the main element in schools, so your participation will add more to this study.

I appreciate your time that you are giving to fill this survey.

Transition services: are services that provided through a written plan to make students transfer from one level to another go smoothly. (For example, plan to prepare student for a certain kind of job and this plan start while the student in school).

Please note that this survey focus on students who are deaf or hard of hearing.

Thank you so much

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@balkahtani

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+14024199877
Demographic Data

1- Your education background (major in university)

   1. Special education major.
   2. Other majors with special education certificate

2- Your level of education

   1. Bachelor degree.
   2. Master degree.
   3. Other

3- Years of teaching experience.

   1. 1 – 5 Years
   2. 6 – 10 Years
   3. 11 + Years

4- Do you have a relative with any disability?

   1. Yes
   2. No

5- What school level do you currently teach?

   1. Elementary school
   2. Middle school
   3. High school
- Please, read each of all following statements and put a check mark indicating your agreement / disagreement with each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree (5)</th>
<th>Agree (4)</th>
<th>Neither Agree nor Disagree (3)</th>
<th>Disagree (2)</th>
<th>Strongly Disagree (1)</th>
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<tbody>
<tr>
<td>1. The role of the school is to only improve students academically.</td>
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<td>2. Students who are deaf or hard of hearing (D/HH) should stay home after high school and not work in the community.</td>
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<td>3. Transition to Work services should be provided for students who are deaf or hard of hearing (D/HH) within special education services.</td>
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<td>4. Transition to Work services will help students who are deaf or hard of hearing (D/HH) to move seamlessly to the next level in their life after leaving school.</td>
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<td>5. A transition plan should be included in the IEP of students who are deaf or hard of hearing (D/HH) in middle and high school.</td>
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<td>6. Including transition planning in the IEP of students who are deaf or hard of hearing (D/HH) will add more unnecessary burden on teachers.</td>
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<td>7. It is important to raise students' awareness about the possible work opportunities for them.</td>
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<td>8. Transition to Work services for students who are deaf or hard of hearing (D/HH) will cost more than they are worth.</td>
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</table>
9. Transition to Work services will complicate the lives of students who are deaf or hard of hearing (D/HH) rather than help them.

10. Transition to Work services should be implemented by professional staff rather than teachers.

11. Establishing workshops within schools to prepare students who are deaf or hard of hearing (D/HH) for work after school will be beneficial.

12. Schools should expose students to some work experiences or vocational training or both during high school.

13. Supporting students in real work environments will help students to improve their work skills.

14. Assigning life skills goals for students in middle and high schools is so important.

15. It is so important to improve decision-making skills for students who are deaf or hard of hearing (D/HH).

16. Improving students' social skills is a secondary goal.

17. Giving students who are deaf or hard of hearing (D/HH) opportunities to participate in activities with their typically developed peers will help them to be more success after leave schools.

18. It is necessary to give students opportunities to be independent in school.
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<tr>
<td>19. Getting Family’s participating in making a transition plan will help to make it more successful.</td>
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<tr>
<td>20. It is important to have transition plan for all students to prepare them for life after leave school.</td>
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<tr>
<td>21. It is important that teachers get trained of how to determine the necessary life skills for students after leave school.</td>
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<tr>
<td>22. I'm ready to be part of transition to work services as soon as they are implemented in my school.</td>
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<td>23. There is significant shortcomings in prepare teachers regarding transition services.</td>
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<tr>
<td>24. Transition services were the focus in one course or more courses that I studied in the university.</td>
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<td>25. Transition services were not mentioned in any of the courses in my bachelor degree.</td>
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<tr>
<td>26. The university courses are too sufficient to prepare special education teachers to be capable of making transition plans for students.</td>
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<tr>
<td>27. There is a shortage in the courses related to determining goals for students who are deaf or hard of hearing (D/HH) disabilities in middle and high school.</td>
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<td>28. I have enough knowledge about how to make a transition plan for students.</td>
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<td>29. This is the first time that I have been exposed to the notion of transition plan for students.</td>
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</tbody>
</table>
30. I have been trained in how to determine the necessary life skills for students after they leave school.

31. Transportation for students to and from work sites will be difficult.

32. Having family participation in planning transition is an easy task.

33. The coordination between schools and specialized agencies will be challenging in order to train and find jobs for youth who are deaf or hard of hearing (D/HH).

34. Employers are not ready to give work opportunities to youth with D/HH disabilities

35. People will welcome seeing persons with D/HH disabilities having jobs.

36. Workers without disabilities will welcome having a person with D/HH disabilities as a coworker.

37. Teachers have low expectations for their students regarding experiencing success in jobs after school.

38. Lack of the work opportunities for students with disabilities in the community will be challenging.

What are some of the challenges and barriers (obstacles) that hinder the transition services for student who are deaf or hard of hearing in Saudi Arabia?
Appendix C

The transition services survey. Arabic version
عزيزي المعلم:

السلام عليكم ورحمة الله وبركاته ،،،، تحية طيبة وبعد ،،،،

كما تعلم لما لرأيك من أهمية بخصوص تطبيق أي خدمة من الخدمات في ميدان التربية والتعليم فمن هذا المنطلق هذه الدراسة تهدف لمعرفة أراء المعلمين في معاهد وبرامج تربية وتعليم الصم وضعاف السمع في مدينة الرياض بخصوص ( الخدمات الإنتقالية للطلاب الصم وضعاف السمع ) من وجهة نظر المعلمين ، وبمشاركتك الخاصة سيتم إضافة المزيد إلى هذه الدراسة،هذه الدراسة ستقدم كجزء من رسالة دكتوراه بجامعة Ball State University وأننا أقدر وقتك المعطى لإنهاء هذه الاستبانة.

الخدمات الإنتقالية : هي الخدمات التي تقدم من خلال خطة مكتوبة تهدف إلى تسهيل مهمة إنتقال الطالب من مرحلة إلى أخرى (على سبيل المثال: خطة تدريبية لإعداد الطالب للانتقال من مرحلة ما بعد المدرسة إلى سوق العمل).

يرجى ملاحظة أن هذه الدراسة تركز على الطلاب الصم وضعاف السمع في معاهد وبرامج التربية الخاصة.

شكرًا لتعاون شḤخصكم الكريم ،،،،

أخوكم

بدر بن ناصر القحطاني

balkahtani@bsu.edu

966555250044+
14024199877+
1- خلفيتك التعليمية: (التخصص في الجامعة)

1- التربية الخاصة.
2- تربية عامة، مع دبلوم عالي في التربية الخاصة.

2- مستوى التعليم:

1- درجة البكالوريوس.
2- ماجستير.
3- أخرى.

3- عدد سنوات التدريس:

1- 1 - 5 سنوات.
2- 6 - 10 سنوات.
3- 11 + أو أكثر.

4- هل لدى أحد أقاربك إعاقة؟

1- نعم.
2- لا.

5- المرحلة التدريسية التي تدرسها حالياً:

1- المدرسة الابتدائية.
2- المدرسة الإعدادية.
3- المدرسة الثانوية.
يرجى قراءة كل من العبارات التالية ووضع علامة الاختيار في المكان الذي تراه مناسب، كما يرجى عدم ترك أي سؤال بدون اختيار.

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<tr>
<th>لا أوافق بشدة</th>
<th>لا أوافق</th>
<th>موافق بشدة</th>
<th>موافق</th>
<th>غير متأكد</th>
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<tbody>
<tr>
<td>1 – يحصر دور المدرسة في تنمية وتطوير المهارات الاكاديمية للطلاب فقط.</td>
<td>موافق بشدة</td>
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<td>2 – البقاء في المنزل وعدم العمل هو الخيار الطبيعي للطلاب الصم وعمي السمع بعد التخرج من المدرسة.</td>
<td>موافق بشدة</td>
<td>موافق</td>
<td>غير متأكد</td>
<td>لا أوافق بشدة</td>
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<tr>
<td>3 - يجب تقديم الخدمات الإنتقالية من المدرسة إلى العمل ضمن الخدمات المقدمة في التربة الخاصة.</td>
<td>موافق بشدة</td>
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<td>غير متأكد</td>
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<td>4 - وضع خطة انتقالية سيساعد بشكل كبير على تسهيل عملية انتقال الطلاب إلى مرحلة ما بعد المدرسة.</td>
<td>موافق بشدة</td>
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<tr>
<td>5 - يجب أن يتم وضع خطة انتقالية لجميع الطلاب ضمن الخطة التربوية الفردية في المرحلة المتوسطة والثانوية.</td>
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<td>غير متأكد</td>
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<tr>
<td>6 - تضمن خطة انتقالية ضمن الخطة التربوية الفردية سيكون عبء إضافي غير ضروري على المعلمين.</td>
<td>موافق بشدة</td>
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<td>7 - من المهم توعية الطلاب حول فرص العمل الممكنة لهم.</td>
<td>موافق بشدة</td>
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<td>غير متأكد</td>
<td>لا أوافق بشدة</td>
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<tr>
<td>8 - تكلفة تقديم الخدمات الانتقالية لبيئة العمل لا توفر الفائدة المرجوة من تقديمها.</td>
<td>موافق بشدة</td>
<td>موافق</td>
<td>غير متأكد</td>
<td>لا أوافق بشدة</td>
</tr>
<tr>
<td>9 - تقديم الخدمات الإنتقالية لبيئة العمل سيزيد من تعقيد حياة الطلاب بدلاً من مساعدة.</td>
<td>موافق بشدة</td>
<td>موافق</td>
<td>غير متأكد</td>
<td>لا أوافق بشدة</td>
</tr>
<tr>
<td>10 - وضع وتطبيق الخطة الإنتقالية لبيئة العمل يتطلب وجود متخصصون في هذا المجال وهذا ليس من دور المعلمين.</td>
<td>موافق بشدة</td>
<td>موافق</td>
<td>غير متأكد</td>
<td>لا أوافق بشدة</td>
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<tr>
<td>11 - إنشاء مراكز ورش عمل في المدارس لتدريب الطلاب على المهارات المهنية أمر في غاية الأهمية.</td>
<td>موافق بشدة</td>
<td>موافق</td>
<td>غير متأكد</td>
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<tr>
<td>12 - يجب أن توفر المدارس فرص تدريبية للطلاب على بعض المهن خلال المرحلة الثانوية.</td>
<td>موافق بشدة</td>
<td>موافق</td>
<td>غير متأكد</td>
<td>لا أوافق بشدة</td>
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<tr>
<td>13 - دعم الطلاب من خلال تدريبهم في بيئة عمل طبيعية سيساهم في تطوير مهاراتهم.</td>
<td>موافق بشدة</td>
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<td>غير متأكد</td>
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<td>14 - وضع الأهداف الحياتية (مثل: الاستقلالية وتقدير المصير) لطلاب المرحلة المتوسطة والثانوية أمر في غاية الأهمية.</td>
<td>موافق بشدة</td>
<td>موافق</td>
<td>غير متأكد</td>
<td>لا أوافق بشدة</td>
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<td>15 - تطوير مهارات إتخاذ القرار للطلاب أمر مهم جداً.</td>
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<td>موافق</td>
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<td>لا أوافق بشدة</td>
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<tr>
<td>16</td>
<td>تطوير المهارات الاجتماعية للطلاب أمر ثانوي وليس أساسي.</td>
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<tr>
<td>17</td>
<td>زيادة فرص إشراك الطلاب الصم وضعاف السمع مع أقرانهم العاديين في الأنشطة سيساعد عملية نجاحهم في مرحلة ما بعد المدرسة.</td>
<td></td>
<td></td>
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<td>18</td>
<td>من المهم إعطاء الطلاب الفرصة للتصرف بشكل مستقل في المدرسة.</td>
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<td>19</td>
<td>إشراك أسرة الطالب في وضع خطة إنتقالية سيساعده في نجاح هذه الخطة بشكل كبير.</td>
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<td>من المهم وضع خطة إنتقالية لجميع الطلاب لإعدادهم لمرحلة ما بعد المدرسة.</td>
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<td>من الضروري تدريب المعلمين على تحديد المهارات الحياتية اللازمة للطلاب بعد مرحلة المدرسة.</td>
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<tr>
<td>22</td>
<td>لدى كامل الاستعداد للمشاركة في تقديم الخدمات الإنتقالية.</td>
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<td>هناك قصور كبير في إعداد المعلمين فيما يتعلق بالخدمات الإنتقالية.</td>
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<td>24</td>
<td>كان هناك مقرر واحد على الأقل ركز على الخدمات الإنتقالية ضمن المواد التي درستها في الجامعة.</td>
<td></td>
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<tr>
<td>25</td>
<td>لتم التعرض للخدمات الإنتقالية إعادة كجزء من الخطة الدراسية في مرحلة البكالوريوس في الجامعة.</td>
<td></td>
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<td>26</td>
<td>المواد التي تدرس في الجامعة كافية جداً لإعداد معلمين تربية خاصة قادرين على وضع خطة إنتقالية.</td>
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<td>27</td>
<td>هناك نقاط في المواد التي تدرس في الجامعة فيما يتعلق بكيفية وضع أهداف إنتقالية لطلاب المرحلة المتوسطة والثانوية.</td>
<td></td>
<td></td>
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<tr>
<td>28</td>
<td>لتم تدريب المعلمين في طباعة الخطة الإنتقالية للطلاب الصم وضعاف السمع.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>29</td>
<td>هذه السنة الأولى التي تعرف فيها على فكرة الخطة الإنتقالية للطلاب الصم وضعاف السمع.</td>
<td></td>
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<td>30</td>
<td>لقد تلقت تدريب على كيفية تحديد المهارات الحياتية اللازمة للطلاب الصم وضعاف السمع بعد المرحلة المدرسة.</td>
<td></td>
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<tr>
<td>31</td>
<td>من الصعب توفير المواصلات للطلاب من وإلى أماكن العمل أو التدريب.</td>
<td></td>
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<td>32</td>
<td>من السهل إشراك الأسر في التخطيط للخدمات الإنتقالية.</td>
<td></td>
<td></td>
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<td>33</td>
<td>من الصعب التنسيق بين المدارس والوكالات المتخصصة بتوظيف وتدريب الطلاب.</td>
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<tr>
<td>34</td>
<td>أرباب العمل غير مستعدين لإعطاء الشباب الصم وضعاف السمع فرصة للعمل.</td>
<td></td>
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</table>
| 35 | رؤية الشباب الصم وضعاف السمع في
الوظائف سيلقي ترحيباً من الناس بشكل عام.

<p>| | | |</p>
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<thead>
<tr>
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<tbody>
<tr>
<td></td>
<td>36- حصول الصم وضعاف السمع على وظائف سيلقي ترحيباً من زملاء العمل من غير ذوي الإعاقة.</td>
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<tbody>
<tr>
<td></td>
<td>37- المعلمين لديهم توقعات منخفضة جدا لمستقبل الطلاب الصم وضعاف السمع لمرحلة ما بعد المدرسة.</td>
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</thead>
<tbody>
<tr>
<td></td>
<td>38- قلة فرص العمل سيكون أحد التحديات أمام نجاح الخدمات الإنتقالية في بيئة العمل.</td>
<td></td>
</tr>
</tbody>
</table>

إذا كان لديك أي تعليق بشأن الخدمات الإنتقالية في المملكة العربية السعودية، فالمساحة التالية حرة لكتابة ما تشاء.
Appendix D

Reliability analysis (Cronbach’s alpha analysis)
<table>
<thead>
<tr>
<th>Item</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
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<td>1.</td>
<td>31.13</td>
<td>27.558</td>
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<td>2.</td>
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<td>.551</td>
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<td>3.</td>
<td>32.93</td>
<td>31.178</td>
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<tr>
<td>4.</td>
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<td>31.178</td>
<td>.320</td>
<td>.651</td>
</tr>
<tr>
<td>5.</td>
<td>32.57</td>
<td>30.530</td>
<td>.338</td>
<td>.628</td>
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<tr>
<td>6.</td>
<td>30.90</td>
<td>28.714</td>
<td>.337</td>
<td>.638</td>
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<td>28.300</td>
<td>.441</td>
<td>.608</td>
</tr>
<tr>
<td>8.</td>
<td>31.73</td>
<td>28.861</td>
<td>.176</td>
<td>.652</td>
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<tr>
<td>9.</td>
<td>32.80</td>
<td>30.648</td>
<td>.280</td>
<td>.633</td>
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<td>10.</td>
<td>32.90</td>
<td>31.748</td>
<td>.238</td>
<td>.640</td>
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<tr>
<td>11.</td>
<td>30.07</td>
<td>24.823</td>
<td>.551</td>
<td>.576</td>
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<tr>
<td>12.</td>
<td>32.07</td>
<td>32.159</td>
<td>.126</td>
<td>.648</td>
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<td>13.</td>
<td>32.27</td>
<td>28.340</td>
<td>.300</td>
<td>.626</td>
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<td>32.77</td>
<td>31.033</td>
<td>.172</td>
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<td>15.</td>
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<td>31.903</td>
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<td>.643</td>
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<td>16.</td>
<td>31.70</td>
<td>28.355</td>
<td>.221</td>
<td>.643</td>
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<tr>
<td>17.</td>
<td>31.77</td>
<td>27.840</td>
<td>.359</td>
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<td>Statement</td>
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<td>Scale Variance If Item Deleted</td>
<td>Corrected Item-Total Correlation</td>
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<td>------</td>
<td>-----------</td>
<td>-----------------------------</td>
<td>-------------------------------</td>
<td>---------------------------------</td>
</tr>
<tr>
<td>2.</td>
<td>Students who are deaf or hard of hearing (DHH) should stay home after high school and not work in the community.</td>
<td>30.03</td>
<td>24.144</td>
<td>0.204</td>
</tr>
<tr>
<td>6.</td>
<td>Including transition planning in the IEP of students who are deaf or hard of hearing (DHH) will add more unnecessary burden on teachers.</td>
<td>31.23</td>
<td>25.220</td>
<td>0.365</td>
</tr>
<tr>
<td>7.</td>
<td>It is important to raise students' awareness about the possible work opportunities for them.</td>
<td>33.30</td>
<td>30.355</td>
<td>0.887</td>
</tr>
<tr>
<td>8.</td>
<td>Transition to Work services for students who are deaf or hard of hearing (DHH) will cost more than they are worth.</td>
<td>30.07</td>
<td>25.757</td>
<td>0.375</td>
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<tr>
<td>9.</td>
<td>Transition to Work services will complicate the lives of students who are deaf or hard of hearing (DHH) rather than help them.</td>
<td>30.23</td>
<td>24.944</td>
<td>0.808</td>
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<tr>
<td>11.</td>
<td>Establishing workshops within schools to prepare students who are deaf or hard of hearing (DHH) for work after school will be beneficial.</td>
<td>33.30</td>
<td>30.355</td>
<td>0.887</td>
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<tr>
<td>12.</td>
<td>Schools should expose students to some work experiences or vocational training streets during high school.</td>
<td>33.13</td>
<td>29.326</td>
<td>0.296</td>
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<tr>
<td>13.</td>
<td>Supporting students in real work environments will help students to improve their work skills.</td>
<td>33.03</td>
<td>29.981</td>
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<tr>
<td>14.</td>
<td>Assigning life skills goals for students in middle and high school is so important.</td>
<td>33.00</td>
<td>29.981</td>
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<tr>
<td>31.</td>
<td>Transportation for students to and from work sites will be difficult.</td>
<td>31.50</td>
<td>27.017</td>
<td>0.103</td>
</tr>
<tr>
<td>34.</td>
<td>Employers are not ready to give work opportunities to youth with DHH disabilities.</td>
<td>32.07</td>
<td>26.692</td>
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<tr>
<td>35.</td>
<td>People will welcome seeing persons with DHH disabilities having jobs.</td>
<td>32.30</td>
<td>29.390</td>
<td>0.862</td>
</tr>
<tr>
<td>36.</td>
<td>Workers without disabilities will welcome having a person with DHH disabilities as a coworker.</td>
<td>32.30</td>
<td>29.390</td>
<td>0.862</td>
</tr>
<tr>
<td>37.</td>
<td>Teachers have low expectations for their students regarding experiencing success in jobs after school.</td>
<td>32.10</td>
<td>25.197</td>
<td>0.421</td>
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<tr>
<td>38.</td>
<td>Lack of the work opportunities for students with disabilities in the community will be challenging.</td>
<td>32.73</td>
<td>27.926</td>
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### Reliability Statistics

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### Item-Total Statistics

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<th>Item Description</th>
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<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
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<tbody>
<tr>
<td>31. Transportation for students to and from work sites will be difficult.</td>
<td>15.50</td>
<td>12.052</td>
<td>0.469</td>
<td>0.370</td>
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<tr>
<td>32. Having family participation in planning transition is an easy task.</td>
<td>16.63</td>
<td>16.033</td>
<td>0.414</td>
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<tr>
<td>33. The coordination between schools and specialized agencies will be challenging in order to train and find jobs for youth who are deaf or hard of hearing (Di-H).</td>
<td>15.37</td>
<td>12.861</td>
<td>0.403</td>
<td>0.407</td>
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<tr>
<td>34. Employers are not ready to give work opportunities to youth with Di-H disabilities.</td>
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<td>15.995</td>
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<td>35. People will welcome seeing persons with Di-H disabilities having jobs.</td>
<td>16.30</td>
<td>17.469</td>
<td>0.408</td>
<td>0.523</td>
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<tr>
<td>36. Workers without disabilities will welcome having a person with Di-H disabilities as a coworker.</td>
<td>16.33</td>
<td>17.057</td>
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<td>37. Teachers have low expectations for their students regarding experiencing success in jobs after school.</td>
<td>16.10</td>
<td>16.369</td>
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<td>38. Lack of the work opportunities for students with disabilities in the community will be challenging.</td>
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<td>17.099</td>
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### Reliability Statistics

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#### Item-Total Statistics

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<th>Corrected Item-Total Correlation</th>
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</thead>
<tbody>
<tr>
<td>21.</td>
<td>It is important that teachers get trained to how to determine the necessary life skills for students after leave school.</td>
<td>25.10</td>
<td>21.266</td>
<td>0.232</td>
<td>0.628</td>
</tr>
<tr>
<td>22.</td>
<td>I'm ready to be part of transition to work services as soon as they are implemented in my school.</td>
<td>25.00</td>
<td>17.862</td>
<td>0.499</td>
<td>0.670</td>
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<tr>
<td>23.</td>
<td>There is significant shortcomings in prepare teachers regarding transition services.</td>
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<td>22.686</td>
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<td>0.694</td>
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<tr>
<td>24.</td>
<td>Transition services were the focus in one course or more courses that I studied in the university.</td>
<td>23.60</td>
<td>17.421</td>
<td>0.380</td>
<td>0.595</td>
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<tr>
<td>25.</td>
<td>Transition services were not mentioned in any of the courses in my bachelor degree.</td>
<td>24.40</td>
<td>19.145</td>
<td>0.290</td>
<td>0.617</td>
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<td>26.</td>
<td>The university courses are too sufficient to prepare special education teachers to be capable of making transition plans for students.</td>
<td>22.73</td>
<td>18.616</td>
<td>0.307</td>
<td>0.614</td>
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<td>27.</td>
<td>There is a shortage in the courses related to determining goals for students who are deaf or hard of hearing (D/HH) disabilities in middle and high school.</td>
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<td>23.059</td>
<td>0.035</td>
<td>0.670</td>
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<tr>
<td>28.</td>
<td>I have enough knowledge about how to make a transition plan for students.</td>
<td>23.47</td>
<td>17.706</td>
<td>0.393</td>
<td>0.592</td>
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<tr>
<td>29.</td>
<td>This is the first time that I have been exposed to the notion of transition plan for students.</td>
<td>23.17</td>
<td>18.764</td>
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<td>0.583</td>
</tr>
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<td>30.</td>
<td>I have been trained in how to determine the necessary life skills for students after they leave school.</td>
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<td>0.614</td>
<td>0.543</td>
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Appendix E

Permission from ministry of education Arabic version
الملكة العربية السعودية
وزارة التربية والتعليم
2021
إدارة العامة للتربيه والتعليم بمنطقة الرياض
إدارة التخطيط والتطوير

الإفادة

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<thead>
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<th>رقم الجواز</th>
<th>اسم الدارس</th>
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<tr>
<td>K629388</td>
<td>يدر بن ناصر محمد القحطاني</td>
</tr>
</tbody>
</table>

السلام عليكم ورحمة الله وبركاته وبعد:

تلبية لطلب الدارس الموضحة بياناته أعلاه فإنه لا يمنع لدى إدارة التخطيط والتطوير بالإدارة العامة للتربيه والتعليم بمنطقة الرياض من تطبيق دراسته في مدينة الرياض والتي هي بعنوان:

( تصورات المعلمين حول الخدمات الانتقالية من المدرسة إلى العمل للطلاب الصم)

( Teachers perceptions toward transition services from school to work for students who are deaf or hard of hearing in schools in Saudi Arabia)

والله ولي التوفيق

إدارة التخطيط والتطوير
Appendix F

Permission from ministry of education English version
Kingdome of Saudi Arabia
The Ministry of education
Education Development Center in Riyadh

TO WHOM IT MAY CONCERN

<table>
<thead>
<tr>
<th>Passport Number</th>
<th>Name of researcher</th>
</tr>
</thead>
<tbody>
<tr>
<td>K629388</td>
<td>Bader Alkahtani</td>
</tr>
</tbody>
</table>

Education Development Center in Riyadh gives Bader Alkahtani approval to conduct his research entitled: (TRANSITION SERVICES FROM SCHOOL TO WORK FOR STUDENTS WHO ARE DEAF OR HARD OF HEARING IN SAUDI ARABIA: TEACHERS’ PERCEPTIONS)

Best Regards,

Education Development Center
Appendix G

Survey permission English version
Survey permission, From: Bader Alkahtani Ed.D student at BSU.

Ghaleb Alnahdi, ga278409@hotmail.com

Dear Alkahtani,

Please, feel free to use the survey, and do not hesitate to contact me in case you need anything else regarding your study.

All the Best

Ghaleb H Alnahdi

Ghaleb Alnahdi, Ph.D
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