Teachers’ Perspectives of Inclusion of the Students with Severe Disabilities in Elementary Schools in Saudi Arabia

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Abstract

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Teachers’ Perspectives of Inclusion of Students with Severe Disabilities in Elementary Schools in Saudi Arabia.

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In Saudi Arabia, the majority of students with severe disabilities are still educated in special schools that do not meet their unique needs for interaction with their typically developing peers in public schools settings where they could improve social, communication, and academic skills. One of the most significant obstacles to inclusion of students with severe disabilities is teachers’ perspectives regarding inclusive education for this category of students. As a result, this study examined teachers’ perspectives regarding the inclusion of students with severe disabilities using a quantitative approach. This study also examined the relationship between teachers’ perspectives regarding the inclusion of students with severe disabilities and current teaching position, training, teacher's levels of education, previous teaching experience with any kind of disabilities in inclusive settings, grade level taught, teachers’ gender, and whether they have a family member with a disability. Three hundred and three teachers responded to the Opinions Relative to Integration of Students with Disabilities (ORI: Arabic version) survey, including 161 males and 139 females, and three non-specified gender. A two-way ANCOVA, a one-way ANOVA, and an independent t-test were used to answer the research questions. The findings of the study indicate that teachers have slightly negative perspectives toward inclusive education of students with severe disabilities. Significant
factors regarding teachers’ perspectives toward the inclusion of students with severe disabilities included current teaching position, previous teaching experience with any kind of disabilities in inclusive settings, and teachers’ gender. Finally, this study includes implications for practice regarding educating students with severe disabilities in Saudi Arabia in terms of special education services, components of successful inclusive education, Saudi legislation improvement and implementation, and future research.

Approved:  

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Chapter 1: Introduction

Prior to the 1950s, most individuals with severe disabilities in the United States of America (USA) obtained their education services in institutions or from private groups (Westling & Fox, 2009). According to the Office of Special Education and Rehabilitative Services (2007), in the early 1960s, one in five children with disabilities received their education services in public schools even though these services were not meeting their unique needs. In the middle of the 1960s, the concept of normalization was established, based on the idea that people with severe disabilities should be integrated with other individuals in society in their living and learning activities to the maximum extent possible (Osgood, 2005). The concept of deinstitutionalization was also introduced in the middle of the 1960s. This concept advocated that individuals with severe disabilities should be removed from life in institutions to be integrated with their families and local communities (Osgood, 2005). On November 19, 1975, the Education for All Handicapped Children Act (EHA) (Public Law 94-142) was passed by Congress, which was the first Act designed to ensure special education and related services for children with disabilities throughout the country. According to this Act, students with disabilities from ages 5-21 were required to be educated with typically developing peers to the maximum extent possible, regardless of the nature and severity of their disabilities (Osgood, 2005). Therefore, the term mainstreaming emerged as a term to describe the practice of educating students with disabilities with their typically developing peers in the least restrictive environment (LRE) at that time.

The EHA legislation was amended in 1990 and renamed the Individuals with Disabilities Education Act (IDEA), which supported educating students with disabilities
alongside their peers in their neighborhood public schools. It was at this time that the term and concept of mainstreaming was replaced by the practice of inclusion (Heward, 2006). The similarities between mainstreaming and inclusion can be described as both supporting the rights of students with disabilities to receive their education in the least restrictive environment, as mandated by law. However, the philosophy of inclusion seeks to include a variety of students with disabilities, including students with severe disabilities in the general education setting with an opportunity to participate in curricular and non-curricular activities.

The Individuals with Disabilities Education Improvement Act of 2004 (IDEIA) mandated that students with disabilities be educated with typically developing students in general education classes to the greatest extent possible. Additionally, IDEIA reemphasized that students with disabilities should only be placed in separate classes or schools when the nature or severity of their disabilities is such that they cannot receive an appropriate level of education in a general education classroom with supplementary aides and services (IDEIA U.S.C. 300&120). This law guaranteed the right of all students with disabilities to receive their education in the LRE. Thus, the philosophy that has guided special education in the last three decades has changed and is continually being adapted to meet the ever-changing needs of students with disabilities, particularly in the United States. A large part of this transformation is based upon the idea that students with disabilities should receive a free and appropriate public education (FAPE) in the LRE.

The implementation of each amendment led to an increase in the number of students with disabilities receiving their education in the general education setting. According to the U.S. Department of Education (1998), almost a decade after the
implementation of IDEA, students with mild mental retardation disabilities spent more than 79% of a typical school day in the regular education classroom. Furthermore, the percentage of students with moderate to severe developmental delays who were placed in general education settings rose from 20.7% to 42.4% in 1998 (U.S. Department of Education, 1998, p. 47).

Additionally, in the 2000-2001 school year, approximately 96% of students with disabilities received their education in regular school buildings, and almost half were in regular classrooms for most the day (U.S. Department of Education, 2005). In 2010, the U.S. Department of Education indicated that 95% of 6-21 years of students with disabilities were educated in public schools while only three percent were served in special schools for the students with disabilities and 1% were served in regular private schools by their parents while less than 1% were served in one of the following environment: in a separate residential facility, homebound or in a hospital, or in a correctional facility. For example, the 49% of students with mild mental retardation spent more than 60% of the school day in regular education classrooms, while only 6% of these students attended a separate school for students with disabilities. They also reported that 45% of students with multiple disabilities spent their school day in regular schools while 20.6% of these students were educated in separate schools for students with disabilities. Finally, 16.2% of students with developmental delays spent more than 60 percent of their school day in regular classrooms and only 0.7% were placed in separate school for students with disabilities (p. 85).

The implementation of IDEIA not only increased the percentage of students with disabilities attending their neighborhood public schools, but further advanced the
academic performance of students with disabilities. For instance, research indicates that reading skills for students with severe disabilities in elementary schools in inclusive settings improved by 31.7% and mathematics skills improved by 23.9%. Moreover, the reading skills of middle school students increased by 13.8% and mathematics skills improved by 12.5% (Teigland, 2009). Thus, the implementation of IDEA has increased the quality of education programs delivered to students with disabilities in inclusive settings.

In comparison to the special education services in the USA, in the Kingdom of Saudi Arabia (KSA), special education services are still in a developing stage that can be compared to the beginnings of special education initiated in the 1960s, and developing in stages parallel to those in the United States (Marza, 2002). Prior to 1958, most individuals with disabilities in Saudi Arabia did not receive any sort of education. Most families who had children with disabilities attempted to informally educate their children in different ways. For instance, some families sent their children to other Arabic countries that had special education services (e.g., Egypt, Jordan) to stay in special educational institutes for most of the school year (Al-Mousa, 1999). Other families taught their children some basic skills (e.g., reading, writing) at home.

In 1958, the Saudi government began to consider providing education to some students with disabilities, particularly students with blindness and deafness. At that time, some students were educated in schools that utilized the Islamic curriculum, known as scientific institutes (Salloom, 1995). Following this initiative, the Department of Special Learning was established in 1962, with its main goal being to provide an appropriate education for three categories of disabilities: students with blindness, deafness, and
mental retardation (Afeafe, 2000). Subsequently, in 1964 this department established three special schools for these students in three cities: Macca, Aneaza, and Alhofouf (Ministry of Education of Saudi Arabia, 2008).

In this context, the first informal attempt to include students with mild disabilities with typically developing peers for part of the day was carried out in one school in the Eastern part of Saudi Arabia, in the city of Alhofouf, in 1984 (Al-Mousa, Al-Sartawi, Al-Abuljabar, Al-Batal, & Al-Husain, 2006). Even though this effort fell short of implementing the critical components of successful inclusion for students with disabilities, it was the beginning of the practice of giving students the legitimate right to attend schools with their typically developing peers in a general education classroom.

Generally, a lack of appropriate special education services for students with disabilities led the Saudi government to consider ways to improve these services. Therefore, to further develop the policy of special education for students with disabilities in Saudi Arabia, a Ministry of Education representative from the Directorate General of Special Education in Saudi Arabia and some professionals from the Department of Special Education of King Saud University, who hold their master’s and doctoral degrees from the United States in special education, reviewed the United States’ special education policies, including EHA and IDEA. Modeling their policies after U.S. initiatives, the Regulations of Special Education Programs and Institutes of Saudi Arabia (RSEPI) in 2001 introduced the first education regulations for students with disabilities in Saudi Arabia. This policy stressed the importance of inclusion for students with disabilities. The RSEPI also states that students with disabilities should receive their education in the least restrictive environment (Ministry of Education of Saudi Arabia, 2002). These regulations
also require schools to allow students with moderate and severe disabilities to receive their education with typically developing peers in regular classrooms to the maximum extent of their abilities. However, even though these regulations have underlined all students’ rights to receive their education in general classrooms, it has not been implemented for students with severe disabilities in Saudi Arabia (the Saudi definition of severe disabilities is discussed later in this chapter). In other words, students with severe disabilities still receive their education separately in special schools or private institutions. According to the Ministry of Education (2008), 28,602 (88%) of students with mild disabilities (e.g., learning disabilities) during the 2007-2008 academic year received their education in public schools either in special classrooms or in general classrooms; however, 2,016 (96%) of students with autism, moderate to profound cognitive disabilities, and multiple disabilities) received their education in private institutes.

**Background of the Study**

Students with severe disabilities in Saudi Arabia are often still educated in segregated special education institutions that do not allow them to interact with their typically developing peers in inclusive settings, where they could improve social, communication, and academic skills. These institutes provide shelter, food, financial aid, and assistance to students with moderate, severe, or profound intellectual disabilities, multiple disabilities, and autism. An additional essential issue is that students with disabilities in these institutes receive individual education programs (IEPs) that are based on a special education curriculum designed by the Ministry of Education specifically for these students instead of individualized and adapted or modified from the general
education curriculum. Lastly, special education institutes lack related services, such as occupational therapists, physical therapists, and speech and language pathologists that could provide supports and services for students with disabilities, enabling them to acquire more benefit from their IEPs and develop their communication, physical, and other life skills, as are provided in some public schools for students with mild disabilities (Al-Otaibi & Al-Sartawi, 2009; Al-Quraini, 2007; Al-Wabli, 1996). Overall, the way that many students with severe disabilities still receive their education in segregated settings does not recognize their rights and unique needs to be included like other students with milder disabilities.

Indeed, there are numerous obstacles that play a significant role in why these students continue to be placed in separate schools in Saudi Arabia and receive their education in this manner. One of the most significant obstacles to inclusion of students with severe disabilities is teachers’ perspectives regarding inclusive education for this category of students (Antonak & Livneh, 1988). As a result, it is important to understand teachers’ perspectives in order to predict their future behaviors and get a clear understanding of their current behavior toward students with severe disabilities (Antonak & Livneh, 1988). Positive teacher perspectives and attitudes toward students with severe disabilities are an essential key leading to successful inclusive education for these students (Jobe, Rust, & Brissie, 1996). In contrast, negative teacher perspectives may contribute to —low achievement expectations and limit acceptance” of students with disabilities (Smith, 2000, p. 2). Accordingly, it is essential to understand teachers’ perspectives in order to create successful, inclusive general education settings, as well as
guidelines for training teachers in educating students with severe disabilities in the general education setting.

**Statement of the Research Problem**

Based on their integral role on IEP teams, teachers in the US are influential in determining the level of inclusion for students with disabilities in the general education classroom. Numerous studies emphasize the role teachers play in promoting successful inclusion for students with disabilities (Auramidis & Norwich, 2002; Kozub & Lienert, 2003). When educators are supportive of inclusive decisions, they are more likely to demonstrate their support of these practices (Cook, 2001; 2004). Furthermore, Cross, Traub, Hutter-Pishgahi, and Shelton (2004) pointed out that one important condition needed for the successful inclusion of students with severe disabilities is a positive perspective of school staff members who work with these children.

On the other hand, a negative perspective of inclusion held by these professionals could be the main factor that impedes the inclusion of students with disabilities in regular education programs (Antonak & Livneh, 1988). There are many factors, including the level of students‘ disabilities that relate to teachers‘ perspectives of inclusion. Kozub and Lienert (2003) mentioned that physical education teachers prefer to work with students with moderate disabilities rather than students with severe disabilities. Additionally, Cook (2001) investigated teachers‘ attitudes toward including students with mild and severe disabilities in general education classrooms. The research indicated that teachers hold different attitudes (e.g., indifference or rejection) toward their students with disabilities based on the levels of disability (e.g., obvious and hidden disabilities),
indicating that students with severe disabilities are more likely to be rejected by teachers than students with mild and moderate disabilities.

Although these studies stress the importance of investigating educators’ perspectives and teachers’ perspectives towards inclusion by level of students’ disabilities, few studies have explored educators’ perspectives towards inclusion in Saudi Arabia. Therefore, it is difficult to determine if these perspectives will be the same in a country where few studies have been done and where there are significant religious and cultural differences from Western contexts. It is important to consider the unique values of a society and how they affect public perspectives of students with disabilities.

There are religious and cultural differences between Saudi Arabia and Western contexts. Indeed, Saudi societal values are affected by the Islamic religion based on the Qur'an and the Sunnah of the Prophet Muhammad. These values, in most cases, view disability as punishment for a person because the individual or his/her family has done something wrong, like commit a sin toward Allah (God).

Another view of disability according to Saudi values is that it is a test from Allah for either the person or his or her family to see if they will be patient in order to enter Paradise, a place prepared by Allah for those who follow the Qur'an and the Sunnah rules (Al-Mousa, 1999). These views of disability in Saudi Arabia lead most Saudi citizens to believe that individuals with disabilities are dependent on other people, have a poor quality of life, and are helpless (Al-Gain & Al-Abdulwahab, 2002). Accordingly, this view might cause Saudi people to consider people with disabilities as objects of ridicule or pity, leading to exclusion these individuals from social activities. As a result, these views and values lead the general public to hold a negative attitude toward people with
disabilities, which sometimes prevents them from participating in many activities with their typically developing community members.

Regarding opinions toward inclusive education for students with disabilities, a few studies indicate that teachers in Saudi Arabia might have different perspectives from their Western counterparts. Al-Ahmadi (2009) examined the perspectives of male and female teachers, special education teachers, and general education teachers working in public schools in Saudi Arabia regarding the integration of students with learning disabilities with their typically developing counterparts. The researcher analyzed teachers’ perspectives based on the respondents’ demographic and other variables (e.g., gender, age, degree held, years of teaching experience, having a family member with disability, and previous training in special education or inclusive education). This study found that male teachers had more positive attitudes toward inclusive education of students with learning disabilities than female teachers. This study also indicated that the type of degree teachers held related to their attitudes regarding the integration of students with learning disabilities. Those holding master’s degrees were more likely to have positive attitudes toward inclusive practices.

Another study conducted by Al-Abduljabber (1994) investigated attitudes toward mainstreaming of students with disabilities of 221 teachers and administrators working in public schools in Saudi Arabia. The investigator examined teacher’s and administrator’s attitudes based on gender, age, type of degree, years of experience, job position, and school level. This study concluded that female teachers and administrators held more positive attitudes than male teachers and administrators regarding mainstreaming. This
study also mentioned that administrators who had more experience had more positive attitudes regarding mainstreaming.

Finally, Dubis (1987) surveyed 373 special education teachers’ and administrators’ attitudes toward mainstreaming of students with deafness, blindness, and mental retardation in Saudi Arabia. The researcher examined their attitudes in relation to age, gender, grade level, and contact with children with disabilities. The study indicated that special education teachers and administrators had positive attitudes regarding mainstreaming for these students. However, previous studies have not researched Saudi teachers’ perspectives of inclusion for students with severe disabilities.

**The Purpose of the Study**

The purpose of this study was to examine teachers’ perspectives toward the inclusion of students with severe disabilities in elementary schools in Saudi Arabia. This study also investigated what factors or independent variables were related to their perspectives, including current teaching position (whether they are special education or general education teachers), teachers’ level of education, training (less versus more training regarding the inclusion of students with disabilities), level of student taught, previous inclusive teaching experience, gender of the teachers, and having a family member with a disability. The study examined the relationships between each of these variables and teachers’ perspectives concerning the inclusion of students with severe disabilities as the dependent variable.

**Significance of the Study**

Services for students with severe disabilities in Saudi Arabia fall short of expectations. Many of these students still receive their education in segregated schools.
Researchers also lack a clear understanding of how teachers in general and special education deal with the concept of inclusion. Yet, investigating this problem is crucial and understanding the perspectives of teachers plays a vital role in addressing the challenges associated with the implementation of inclusion of students with severe disabilities in Saudi Arabia. This study, therefore, is important for several reasons. First of all, there are no published studies that examine teachers’ perspectives toward inclusion of students with severe disabilities in Saudi Arabia. Secondly, this research provides insights regarding the perspectives of teachers regarding the inclusion of these students in Saudi Arabia for decision-makers in special education to consider. Thirdly, this study offers relevant information universities might consider regarding the training and educating of teachers in Saudi Arabia on the issue of inclusion. Finally, this research may prompt other researchers to investigate further barriers that restrict the inclusion of students with severe disabilities in general education classrooms in non-Western contexts.

**Research Questions**

This research explored teachers’ perspectives toward the inclusion of students with severe disabilities in elementary schools in Saudi Arabia, and specifically considered whether certain factors influenced their perspectives. The research questions addressed by this study included:

1) Are there significant differences in teachers’ perspectives based on their current teaching position (whether they are special or general education teachers), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?
2) Are there significant differences in teachers' perspectives regarding the inclusion of students *with* severe disabilities based on the teacher's training (less training or more training on inclusive education for students with disabilities), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

3) Is there a significant interaction effect between the current teaching position and teacher's training, after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

4) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on their level of education?

5) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on previous teaching experience with any kind of disabilities in inclusive settings (a public school setting)?

6) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on grade level taught (first grade, second grade, third grade, fourth grade, fifth grade, or sixth grade)?

7) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on teachers' gender?

8) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on whether they have a family member with a disability?

9) What are overall teachers' perspectives in Saudi Arabia regarding the inclusion of students with severe disabilities in general education classrooms?
Research Hypotheses

Based on the research questions, the following hypotheses were tested:

Null Hypothesis 1: There are no significant differences in teachers’ perspectives based on their current teaching position (whether they are special education or general education teachers), after controlling for class size (the number of students), regarding the inclusion of students with severe disabilities.

Null Hypothesis 2: There are no significant differences in teachers’ perspectives based on the teacher’s training (less training or more training on inclusive education for students with disabilities), after controlling for class size (the number of students), regarding the inclusion of students with severe disabilities.

Null hypothesis 3: There is no significant interaction effect between the current teaching position and teacher’s training after controlling for class size (the number of students) regarding the inclusion of students with severe disabilities in Saudi Arabia.

Null Hypothesis 4: There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on their level of education.

Null Hypothesis 5: There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on previous teaching experience with any kind of disabilities in inclusive settings (a public school setting).

Null Hypothesis 6: There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on the level taught (first grade, second grade, third grade, fourth grade, fifth grade, or sixth grade).
Null Hypothesis 7: There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on teachers’ gender.

Null Hypothesis 8: There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on whether they have a family member with a disability.

**Definition of Terms**

To clarify and understand the significant concepts addressed in this research, the author provides conceptual and operational definitions of each term.

**General education teacher:** A person authorized by the Ministry of Education in Saudi Arabia to teach different subjects, such as math, reading, among other subjects in general education classrooms (Ministry of Education, 2002). In this study, the term general education teacher specifically refers to an individual that teaches math, reading, social skills, physical education, art, and Islamic religion in public elementary schools in the study region, Riyadh, Saudi Arabia during the 2010-2011 academic year.

**Least Restrictive Environment (LRE):** refers to educating students with disabilities in a general education setting, with typically developing peers, and participating in a general curriculum and extracurricular activities to the maximum extent appropriate (Downing, 2010). Additionally, IDEIA (2004) reemphasized that students with disabilities should be placed in separate classes or schools only when the nature or severity of their disabilities is such that they could not receive an appropriate level of education in a general education classroom with supplementary aides and services, taking into consideration a continuum of alternative placements including general classroom, special education classroom, special schools, home instruction, or instruction in hospitals
and institutions (IDEIA U.S.C. 300&120). In this research, the IDEIA definition of LRE is used.

**Inclusion:** The concept of inclusion for students with severe disabilities is incorporated in the literature and refers to the following elements:

(a) placement in natural typical settings; (b) all students together for instruction and learning; (c) supports and modifications within general education to meet appropriate learner outcomes; (d) belongingness, equal membership, acceptance, and being valued; (e) collaborative integrated services by education teams; (f) systemic philosophy or belief system; and (g) meshing general and special education into one unified system. (Ryndak, Jackson, & Billingsley, 2000, p. 101)

The RSEPI defines inclusion for students with mild disabilities in Saudi Arabia as educating students with disabilities in general education classrooms while providing special education services (Ministry of Education, 2002). In this study, the concept of inclusion for students with severe disabilities refers to educating students with severe disabilities in public schools alongside their typically developing peers as much as possible (whether in the same classroom or a separate classroom inside the public school) with support from the school's staff.

**Mainstreaming:** refers to educating students with disabilities in the general education settings during a specific time of the school day (Heward, 2006). In this research, mainstreaming refers to the requirement of a student with disabilities to be educated during limited parts of the school day with their typically developing peers in curricular and extra-curricular activities.
Public elementary schools: refers to public elementary schools under the supervision of the Ministry of Education in Saudi Arabia that provide basic learning (e.g., reading, math, and writing) art, physical, and social skills from age 6-12 (Ministry of Education, 2002). In this study, public elementary schools refers to schools under the supervision of the Ministry of Education in Saudi Arabia, Riyadh in five school regions (East, West, North, South, and the center of the city Riyadh) that have special education programs for students with disabilities.

Quran: The Merriam Webster Dictionary defines the Quran as “th book composed of sacred writings accepted by Muslims as revelations made to Muhammad by Allah through the angel Gabriel” (para. 3, 2010). In this study, the Quran refers to the values and beliefs of the Quran that impact the perspectives of teachers regarding disability and inclusive education.

Regulations of Special Education Programs and Institutes (RSEPI): the educational legislation passed by the Saudi government in (2001) to improve the quality of special education services for students with disabilities (Ministry of Education, 2002). The 11 articles of the RSEPI support the rights of children with disabilities to obtain a free and appropriate education by requiring certain services should be provided by the schools. This legislation requires schools to educate students with disabilities in a general education setting to the maximum extent. It also requires that special education services (e.g., IEPs, related services, and transition services) should be carried out with students with disabilities in Saudi schools and special education institutes.

Scientific institutes: refers to schools established early in 1958 by the Saudi government, under the supervision of Al- Imam Muhammad Ibn Saud Islamic University,
which focused on Islamic and Arabic subjects (Afeaf, 2000). In this research, scientific institutes refer to the historic educational placement of students with disabilities where they received their education services in the early years of the special education movement in Saudi Arabia.

**Severe intellectual disabilities:** The American Association on Intellectual and Developmental Disabilities (AAIDD) (2010) defines children with severe disabilities who have “significant limitations both in intellectual functioning (IQ 40 and below) and in adaptive behavior, which covers many everyday social and practical skills. This disability originates before the age of 18” (para. 1). Westling and Fox (2009) describe students with severe disabilities as “all individuals who are often challenged by significant weakness in general learning abilities, personal and social skills, and or sensory and physical development” (p. 3). There is not currently a specific definition of severe intellectual disabilities in either Saudi literature or legislation; however, the Special Intellectual Education Institutes have identified certain conditions and criteria for the classification of students with severe disabilities to be eligible for special education services in these institutes as follows:

(a) The students with severe cognitive disability should have an IQ score of 50 and below; (b) the students should have a deficit in two or more adaptive behavior skills; (c) the students should be between ages six to fifteen to be eligible for the services in the special education institutes; (d) and the students with severe cognitive disabilities should not have severe behavior disorders that impede him or her from experiencing the benefits of the institute’s special education services. (Eastern Intellectual Education Institute in Riyadh, 2007, para. 5)
In this study, students with severe disabilities, refers to students’ ages 6-12 years with severe intellectual disabilities (the elementary school age group in Saudi Arabia) who have an IQ score of 50 and below, with a deficit in two or more adaptive behavior skills in terms of daily living skills, communication, and social skills.

**Special education teacher:** an individual who works with students with various disabilities to teach them life, social, and literacy skills, while modifying the general education curriculum. This individual performs other tasks that are supportive for these students (United States Department of Labor, 2010). In this study, this term specifically refers to a person who is trained in special education and who works with students with disabilities in public elementary schools in the research region of Riyadh, Saudi Arabia, during the 2010-2011 academic year.

**Sunnah of the Prophet Muhammad:** According to the Oxford Dictionary of Islam (2010) the Sunnah is

…established custom, normative precedent, conduct, and cumulative tradition, typically based on Muhammad's example. The actions and sayings of Muhammad are believed to complement the divinely revealed message of the Quran, constituting a source for establishing norms for Muslim conduct and making it a primary source of Islamic law. In the legal field, Sunnah complements and stands alongside the Quran, giving precision to its precepts. (para. 1)

In this study, the Sunnah refers to traditional and customs that affect Saudi teachers’ perspectives regarding disability and inclusive education.
Research Delimitations

The study was delimited by several factors. First, selected participants were limited to male and female Saudi special education teachers and general education teachers who work in public elementary schools that have special education programs under the supervision of the Ministry of Education in Saudi Arabia. Second, perspectives of Saudi special education teachers and general education teachers toward the inclusion of students with severe disabilities were examined by gender of participants. Finally, this study examined male and female Saudi special education teachers and general teachers‘ perspectives regarding the inclusion of students with severe disabilities during the spring of 2011 only. Fourth, participants were limited to teachers who work in public elementary schools that have special education programs located in the city of Riyadh in Saudi Arabia.

Research Limitations

There were some limitations in this study that should be considered:

(1) Since the methodology that was used in this study to collect the data is a survey, the participants‘ honesty in their response could not be controlled.

(2) The participants in this study were from school districts in the City of Riyadh in Saudi Arabia; therefore, the findings of the study cannot be generalized to other school districts in Saudi Arabia in different geographic locations.

(3) Most of the literature presented in this study examining the perspectives of teachers regarding inclusive education for students with disabilities comes from Western literature due to the lack of studies that discuss this concept in Saudi Arabia.
Summary of the Chapter

In this chapter, the researcher presented an overview of the purpose of the study in terms of the research problem, the significance of the study, the research questions, and the research hypothesis. This chapter also defined terms related to the study and research delimitations and limitations.

Organization of the Study

This study is organized into six chapters. In chapter one, the introduction, research problem, background of the study, statement of the problem, research questions and hypotheses, definitions of terms, and research delimitations and limitations were presented. In chapter two, the researcher provides a brief background regarding the setting of the study, Saudi Arabia, including a description of the education system in Saudi Arabia, particularly special education and the current special education services for students with mild to moderate and severe disabilities and the impact of the religious context. In chapter three, the author reviews literature relevant to individuals with severe disabilities, inclusive education for students with severe disabilities, perspectives of teachers regarding the inclusive education, and factors related to these perspectives. In chapter four, the research method of the study is discussed. In chapter five, the researcher presents the findings of the study. Finally, in chapter six, a discussion of the findings of this research, implications and recommendations for future research are discussed and conclusions are drawn.
Chapter 2: Setting

In this chapter, the researcher presents a brief background of the setting of the study in terms of an overview of the Kingdom of Saudi Arabia, its education system, and an overview of special education services. Secondly, this chapter describes the regulations regarding the education of people with disabilities, as well as current special education services for students with severe disabilities in Saudi Arabia.

Overview of the Kingdom of Saudi Arabia

The Kingdom of Saudi Arabia (KSA) was established in the 1932, when Ibn Saud conquered the majority of the Arabian Peninsula after a war that lasted three decades (World Factbook, 2010). It is located in the southwest of the Arabian Peninsula and is bordered on the north by Jordan, Iraq, and Kuwait, and on the east by Bahrain, United Arab Emirates, Quatar, and the Arabian Gulf Sea. On the south are Oman and Yemen, and on the west is the Red Sea. KSA dominates the Arabian Peninsula in terms of land area, covering over two million square kilometers of land. More than 27 million people live in Saudi Arabia, according to a census conducted in 2010. The geography of Saudi Arabia includes mountains, plains, and desert land. The temperature varies from over one hundred degrees Fahrenheit in the daytime to well below 30 degrees on a cold desert night. Saudi Arabia’s capital is Riyadh (Royal Embassy of Saudi Arabia, 2010).

The KSA economy is driven by oil. The country has more oil than any other nation; some experts estimate that KSA has one fourth of the world’s total reserves. Most of its economy is based on the collection and refining of oil products like kerosene or gasoline. Despite its oil wealth, Saudi Arabia is beginning to look to other natural resources to boost its income, such as natural gas, minerals, and precious metals (Royal
Embassy of Saudi Arabia, 2010). The Kingdom of Saudi Arabia is a theocratic monarchy. It is ruled by a royal family, which rules according to the Quran’s teachings of Sharia based on Islamic religious law. By far, the dominant religion in KSA is Islam. Under Sharia law, certain rights are applied to all people, such as life, dignity, and education (World Factbook, 2010).

The Saudi Education System

According to the Royal Embassy of Saudi Arabia (2010), the education system of Saudi Arabia has evolved dramatically since its founding 78 years ago. In the beginning, education was the privilege only of children of elite, wealthy families. Currently there is an increase in education facility construction in Saudi Arabia, with over twenty-five thousand schools built and more constructed as time passes. Now education is provided to all tiers of society, and all students have their schooling paid for by the government. The curricula are a mix of traditional Islamic religious education and lessons in many other fields, usually based on the curricula of schools in the United States of America or the United Kingdom. The schedule of these schools is usually modeled on the American system, with nine to 10 months of schooling with summer breaks and occasional time off for religious holidays (World Factbook, 2010).

The Ministry of Education in Saudi Arabia is responsible for providing a free and appropriate education for all students, including those with disabilities. It is also responsible for establishing new schools and maintaining old schools, providing and developing curricula, establishing training programs for in-service teachers, and offering adult education literacy (Ministry of Education, 2008). The Ministry is also responsible to oversee special education services for students with disabilities. The Ministry is where
eligibility for these services is established and special education services are provided in order to help students with disabilities be able to live independently and safely (Al-Mousa et al., 2006).

**Impact of the Islamic Religious Context on the Education System in Saudi Arabia**

As discussed in the first chapter, in Saudi Arabia there are religious and cultural differences from Western contexts. Saudi Arabia is the “birthplace of Islam and home to the two holy mosques,” Makkah and Midean (Mamoun, 2007, p. 78). This fact has led Saudi Arabia to be a religious country, which means most of the activities and behaviors are dictated by the Quran and Sunnah rules. According to these rules, people should be educated with high quality and with more focus on Islamic subjects including Tawhid - doctrine of oneness of the God or Allah, Hadith - words and deeds of the Prophet Muhammad that happened in his life, the Quran, and an explanation of the Quran. Therefore, the education system has never been fully separate from its Islamic roots. For example, in the elementary schools, there are nine periods each week and in the middle schools there are eight periods in the week that have religious subjects as the main focus (Metz, 1992). In the high schools, the periods dedicated to religious subjects are reduced to less than six periods every week. However, there are other subjects that are taught in the upper grades, such as mathematics, science, history, physics, geography, art, and physical education.

Additionally, religion in Saudi Arabia impacts education in terms of gender. For example, the girls in all levels of education in Saudi Arabia receive their education in schools segregated from boys (Metz, 1992). The girls’ schools provide some curriculum activities that consider what is needed to be a successful housewife in terms of cooking,
home economics, and tailoring skills; however, other non-curriculum activities are not allowed to be practiced, particularly, physical education activities. Finally, under the values of Saudi Arabia, most girls should be educated to be only teachers, nurses, and physicians; they cannot be engineers and soldiers.

Due to the fact that Saudi culture views disabilities as a condition that —comprises helplessness, continuing dependence, being home-bound, low quality of life and lack of productivity”, this leads to low expectations for people with disabilities in the education system in Saudi Arabia (Al-Gain & Al-Abdulwahab, 2002, p. 2). In practice, this means that some students with disabilities, particularly students with severe disabilities have been educated in segregated schools. Additionally, this view of disabilities might also lead some agencies to provide a low quality of educational services due to their beliefs that these individuals are not able to live independently (Mamoun, 2007). These values also further limit the opportunities for education of students with moderate to severe disabilities (Mamoun, 2007). Thus, the conservative religious views and social conventions have a direct impact on the education system in Saudi Arabia.

**Overview of Special Education in Saudi Arabia**

People with disabilities in Saudi Arabia were not provided any special education services prior to 1958. The parents of students with disabilities were responsible for providing any assistance to their children (Al-Ajmi, 2006). Special education services for students with disabilities in Saudi Arabia began to emerge in 1958 when some students with blindness received their education in schools known as “scientific institutes” (Salloom, 1995). The Ministry of Education established the Special Learning Department to improve learning and rehabilitation services for these students in 1962
(Afeafe, 2000). Additionally, several institutes for students with blindness were set up in large cities in 1972 (Al-Mousa, 1999). This early movement to improve special education services led to increases in these services by establishing regulations that guarantee rights for people with disabilities, increasing the quality of special education services, and educating professionals who are qualified to provide these services.

**Saudi Legislations for Individuals with Disabilities**

**Disability code.** This code was passed by the Saudi government in 2000 to guarantee that people with disabilities have access to free and appropriate medical, psychological, social, educational, and rehabilitation services through public agencies. This legislation further requires these agencies to assist eligible people in welfare, habilitation, health, education, training and rehabilitation, employment, complementary services, and other areas (Prince Salman Center for Disability Research, 2004).

**Regulations of special education programs and institutes (RSEPI).** To further develop the policy of special education for students with disabilities in Saudi Arabia, a Ministry of Education representative from the Directorate General of Special Education in Saudi Arabia and some professionals from the Department of Special Education at King Saud University—who hold master’s and doctoral degrees from the United States in special education—reviewed the United States' special education policies, including the Education for all Handicapped Children Act (EHA) in 1975 and Individual with Disabilities Education Act (IDEA) in 1990. Modeled after these US initiatives, the Regulations of Special Education Programs and Institutes of Saudi Arabia (RSEPI) introduced in 2001 were the first regulations for students with disabilities in Saudi Arabia. The RESPI outlines rights and regulations for students having disabilities in
Saudi Arabia and requiring special education services. The RSEPI defines the main categories of students with disabilities—mental retardation, learning disability, deafness, blindness, and multiple disabilities—as well as tasks for professionals who work with these students. It also describes an individual education program (IEP), elements of an IEP, and individuals who should participate in planning and providing an IEP.

The RSEPI includes procedures of assessment and evaluation for students to determine if they are eligible for special education services. Under the RSEPI, all children with disabilities are entitled to a free and appropriate education, individual education programs, early intervention programs, related services, and transition services. The RESPI also specifies how schools must provide these services to students with disabilities. Thus, RSEPI outlines and supports the quality of the special education services in Saudi Arabia.

In summary, these policies support the equal rights of individuals with disabilities in obtaining a free and appropriate education. However, even though these laws were passed almost a decade ago, there are some regulations in the legislation that have not been practiced in actuality with students with disabilities. In fact, the lack of the effective implementation has created a gap between the framework of these laws and the provision of services, resulting in a lack of special education services for students with disabilities, including students with severe disabilities. The following section discusses these services.

**Current Special Education Services for Students with Mild to Moderate Disabilities**

**Education settings.** Students with mild learning disabilities receive their education in typical classrooms with some support from special education services such as resource rooms. These students also fully participate in the general education
curriculum with some modifications and accommodations (Al-Ahmadi, 2009; Al-Mousa, et al., 2006). Students with mild and moderate cognitive disabilities still receive their education in separate classrooms within public schools. They do share some time with their typically developing peers in non-curricular activities such as breakfast or recess; a practice similar to early mainstreaming policies in the United States. The schools provide special education curriculum to these students, which is different than the general curriculum provided to their typically developing peers (Al-Mousa et al., 2006). Students with mild to moderate disabilities attend elementary school from ages 6 years to 13 or 14 years, followed by middle school until age 18. Unfortunately, after they complete their education in elementary and middle school, many of these students have no opportunity to attend any further education except at some vocational training centers (Al-Ajmi, 2006). The main purpose of these centers is to provide students with vocational training and employment skills that support independent living (Ministry of Health Care, 2010). Thus, the challenge has been to educate students with disabilities in general education settings.

**Procedures to determine eligibility.** Unfortunately, in Saudi Arabia the diagnosis and assessment processes to determine the eligibility of students for special education and related services are still not free of shortcomings. The assessment process for children does not begin early enough to successfully determine disabilities. This process usually starts when the child goes to school, so schools and other agencies do not provide early intervention for children with disabilities and their families. Additionally, most of the special education institutes as well as public schools lack a multidisciplinary team, IQ tests, adaptive behavior scales, and academic scales appropriate for the cultural
standards of Saudi Arabia (Al-Nahdi, 2007). Therefore, in most cases, the school psychologists define students' eligibility for special education service based on their IQ scores and teacher observations. Assessment procedures for children with mild to moderate disabilities in Saudi Arabia are not team-based. Overall, the assessment and diagnostic procedures need to be reassessed and revised to achieve reflect practice.

**Related Services for Students with Disabilities**

There are many related services for students with disabilities in the schools in Saudi Arabia, since most of these students have communication, fine motor skills, or gross motor skills problems. According to the RSEPI, all students with disabilities either in special education institutes or public schools should obtain related services in order to acquire more benefits from their IEPs (Ministry of Education of Saudi Arabia, 2002). Saudi studies have examined the availability of related services and their importance for students with disabilities in special education institutes or public schools. Al-Wabli (1996) examined the availability of related services and their importance in special institutes for students with cognitive disabilities in Saudi Arabia. This study found that speech-language pathologists, school counselors, psychologists, and social workers were available in these institutes. However, occupational therapy and physical therapy services were less available.

Following this line of investigation, Al-Quraini (2007) examined the availability and effectiveness of related services for students with mild mental retardation in public schools. According to this study, the most readily available related services were transportation, speech and language therapy, psychological services, school counseling, and school health services. On the other hand, social work service, occupational therapy,
and physical therapy were less available for these students in public schools. Another study conducted by Hanafi (2008) examined the availability of related services for students with hearing disabilities in public schools. This study indicated that health and medical services were more available for these students; however, social workers and rehabilitation service were not available. Finally, Al-Otaibi and Al-Sartawi (2009) investigated the availability of related services for students with multiple disabilities. The researchers concluded that special education centers and institutes for students with multiple disabilities in Saudi Arabia lack health, medical, and physical therapy services.

Overall, it is clear from these studies that some schools provide related services for students with disabilities such as transportation, psychological services, and counseling. At the same time, they lack related services in terms of speech and language pathology, physical therapy, and occupational therapy services.

**Providing Individual Education Programs**

The RSEPI requires schools to provide an individual educational program (IEP) for each student with a disability. Therefore, an IEP has become one of the most important educational services provided for each child. However, little research has examined IEPs for students with disabilities in Saudi Arabia. Research by Al-Herz (2008) examined achievement of goals of the IEP and related difficulties in programs and special education institutes in Riyadh, Saudi Arabia. This study found that special education teachers successfully determine the important elements of IEPs in terms of the student's weaknesses and strengths, annual goals and short-term objectives, and needs requiring specially designed instruction (Al-Herz, 2008). However, the study also concluded that some obstacles impede the provision of effective and appropriate IEPs,
such as the lack of use of efficient multidisciplinary teams (including the special education teacher, the child’s previous teachers, the parents of the child, and other members as needed), and IEPs that are determined by the child’s situation (Al-Herz, 2008). This study also pointed out that families do not participate effectively with other school staff in determining the needs of the students and in the preparation and implementation of IEPs (Al-Herz, 2008).

Although there are only a few studies that examine IEPs for students with disabilities in Saudi Arabia, this study pointed out significant issues regarding the provision of individual education programs. In fact, identification of the weakness and strengths of children with disabilities and the setting of annual goals in the IEP usually are done by special education teachers without participation of parents and other service providers (Al-Herz, 2008). The special education teacher is solely responsible for IEPs for up to 15 students with disabilities in the class, making individual attention to students‘ needs difficult. To summarize, although students with disabilities have received appropriate education, more effort is needed to improve these services.

Current Special Education Services for Students with Severe Disabilities

In the last decade, the practice of providing special education services for students with severe disabilities in Saudi Arabia has improved. In spite of this effort to improve services, more improvement is needed. This section briefly describes the current reality of special education services provided to students with severe disabilities in Saudi Arabia. This section addresses issues such as assessment and identification of those with severe disabilities, educational settings, individualized approaches, curriculum content, and instructional strategies.
Assessment and identification of severe disabilities. In Saudi Arabia, the assessment process for students with severe disabilities is still in the development stage, even though the RSEPI clearly defines the procedures for assessment of students with disabilities, including students with severe disabilities, which are modeled after those outlined in IDEA. Saudi legislation requires specific assessment procedures and evaluation for students with disabilities to determine if they are eligible for special education services. For example, the RSEPI indicates the definition, goals and procedures of assessment, and the roles of multidisciplinary teams (e.g., special education teachers, general education teachers, parents, and others). This legislation also defines the assessment steps that should be considered by the schools to determine eligibility for special education services: (a) obtaining consent from the parents before diagnosis of the child; (b) gathering preliminary information on the status of the child who might need special education services; (c) referring the child for further assessment procedures if the student needs it; (d) and assessing the child’s needs in different areas, done by the multidisciplinary team (Ministry of Education of Saudi Arabia, 2002). Additionally, the RSEPI defines significant aspects that should be considered by the multidisciplinary team. For example, it describes appropriate assessment tools for each type of disability (e.g., for mental retardation, the multidisciplinary team should consider assessments to identify strengths and needs in the area of IQ tests, adaptive behaviors scales, and academic scales).

In reality, the assessment procedures for students with severe disabilities discussed above have not been carried out with these students. The screening procedures to determine whether or not a student has a disability do not start prior to beginning
school (at the age of six years) (Al-Nahdi, 2007). These procedures lack a multidisciplinary team approach, which may consist of a physical therapist, occupational therapist, speech-language therapist, medical doctor, and counselors. Furthermore, assessment tools such as IQ tests, adaptive behavior scales, and academic scales are not adapted to the cultural standards of Saudi Arabia. Furthermore, students are not assessed by a multidisciplinary team to define their unique special education service needs (Al-Nahdi). Essentially, the assessment and identification of students is usually only performed by school psychologists and special education teachers. Thus, the process of determining the eligibility of students with severe disabilities for special education services in Saudi Arabia is lacking a multidisciplinary team-based approach and appropriate assessment scales normed for the Saudi Arabian population.

**Education setting.** The RSEPI requires that schools educate students with disabilities in Saudi Arabia in the general education setting (public schools) without providing a general guide that might be considered by the schools to assist in implementation. In reality, students are educated in a variety of settings based on the nature and severity of their disabilities (Al-Ahmadi, 2009). For example, students with mild and moderate cognitive disabilities, blindness, and deafness are educated in special classrooms in public schools. These students only participate with their typically developing peers in non-curricular activities (e.g., art, physical education), much in line with the early practice of mainstreaming in the United States.

Students with severe disabilities in Saudi Arabia are still receiving their education in special schools that do not meet their unique needs to be integrated with typically developing peers in the general education setting (a public school). Further, there is no
opportunity for these children to attend additional education after middle school with the exception of some vocational training centers that are also limited in availability. By contrast, as previously mentioned, students with learning disabilities receive their education in the general education setting (a public school) with some support from a resource room teacher who provides individual instruction for the student.

The RSEPI emphasizes that students with disabilities should be educated in a general education setting (public schools) to the maximum extent possible, taking into consideration a continuum of alternative placements; however, most students with severe disabilities are still being educated in special separate schools.

**Individualized approach and curriculum content.** Even though learners with severe disabilities in institutes receive individual education programs (IEPs), the curriculum content that is provided in their IEPs is modified from a special education curriculum designed by the Ministry of Education. Instead, these IEPs should be based upon an adaptation or modification of the general education curriculum of their typically developing peers, which is different from the current approach to delivering education for these students (Al-Herz, 2008). This special curriculum is designed to meet the needs of the students in the main areas, such as functional reading, writing, math, social, and self-independent skills.

**Instructional strategies.** There are some effective strategies being utilized by special education teachers in the scientific institutes for students with severe disabilities. For instance, systematic instruction and response prompts are currently being used (Al-Qhatine, 2009). However, there are many other teaching strategies that are not being used
with these students, specifically cooperative learning strategies, discovery learning, and problem solving (Al-Qhatine, 2009).

This lack of implementation of a wide range of strategies is likely due to teachers’ lack of sufficient training in these strategies, the nature of the special curriculum provided to the students, and a lack of paraprofessionals to support instruction in these institutes (Al-Qhatine, 2009). A total lack of paraprofessionals in Saudi schools may be due to the fact that the RSEPI does not require school districts to hire these individuals to assist teachers in teaching and facilitation of other activities. Another reason might be the lack of understating of the importance of the role these individuals might serve in the classrooms.

**Behavior management.** Unfortunately, Saudi schools are lacking ways to deal with inappropriate behavior that learners with severe disabilities often exhibit. According to Al-Ajmi (2006) in the Saudi schools there is little or no attention focused on behavior management for students with disabilities. This lack of the attention is due to a shortage of effective tools that might be used to deal with challenging behaviors (Al-Ajmi, 2006). Teachers often use traditional techniques to deal with problem behaviors in terms of verbal punishment instead of effective behavior techniques, such as positive behavior supports.

A study conducted by Al-Ajmi (2006) pointed out that most special education teachers in Saudi Arabia were unfamiliar with effective tools of behavior management in terms of positive behavior supports. The study concluded that teachers and other service providers were lacking in knowledge regarding effective assessment strategies used to identify problem behaviors, such as functional behavior assessments (FBA) (Al-Ajmi,
A FBA could be used by teachers to identify the relationship between problem behaviors and their function (Westling & Fox, 2009). Teachers then can teach students more appropriate behaviors to serve the function.

**Related services.** In Saudi Arabia, the RSEPI states that in order for students with special education needs to receive maximum benefit from their special educational programs, related services such as physical therapy, occupational therapy, speech-language pathologists, school psychologists, and school counseling services must be provided only if needed (Ministry of Education of Saudi Arabia, 2002). There are only some related services offered by the schools for these students in terms of transportation, school psychological services, and school counseling (Al-Otaibi & Al-Sartawi, 2009; Al-Quraini, 2007; Al-Wabli, 1996).

Although some related services are available and required, there are some related services still unavailable for students with severe disabilities that they may need; for instance, speech and language therapy, physical therapy, occupational therapy, health and medical services, and social work services (Al-Otaibi & Al-Sartawi, 2009; Al-Quraini, 2007). This is likely because of a lack of professionals who specialize in these fields, or because professionals with these foci are often employed in hospitals paying higher salaries (Al-Quraini, 2007). That being said, there are some private agencies such as Sultan Bin Abdulaziz Humanitarian City that provide these services. Unfortunately, parents must pay for these services since the RSEPI does not require schools or schools districts to pay for private agencies to provide these services. In conclusion, some related services still need to be made available for students with severe disabilities who need them in Saudi schools.
Transition services. The RSEPI requires that transition services be provided for students with disabilities, including students with severe disabilities. According to the RSEPI, transition services are intended to prepare the student with special education needs in moving from one environment or stage to another (Ministry of Education of Saudi Arabia, 2002). Additionally, this legislation emphasizes that transition services should be provided for the student when he or she needs them as part of his/her IEP.

The RSEPI defines the types of transition services that may be provided in order to assist students to move to different levels of education (e.g., pre-school to elementary, high school to higher education, or employment settings) (Ministry of Education of Saudi Arabia, 2002). Finally, the RSEPI indicates that transition services should be provided for students with disabilities at an early stage without defining that age; for instance, when the student is 16 or younger the student should receive transition services when necessary. Despite this fact, transition services have not been completely carried out for students with disabilities (Almuaqel, 2006). Additionally, even though transition services are mandated by RSEPI, to the best of this researcher’s knowledge, there is no published research addressing transition services for students with disabilities in Saudi Arabia.

Currently, the way students with severe disabilities in Saudi Arabia are receiving their education in a segregated settings does not recognize their rights as outlined by RSEPI, and they should be educated in inclusive settings (public school) the same as other students with milder disabilities. Additionally, the nature of the special education curriculum that is provided to them has become an obstacle that does not allow them to gain the skills that would assist them to be integrated into society. Additionally, a failure to provide effective teaching strategies that assist students with severe disabilities to
obtain social, communication, life, and academic skills and a lack of effective assessment tools for identification, diagnosis, and progress monitoring, in addition to those that might be used to identify problem behavior or effective strategies to reduce problem behaviors are main issues that do not guarantee a high quality of special education services for individuals with severe disabilities in Saudi Arabia.

**Summary of the Chapter**

This chapter presented the significant issues regarding the setting of the study in terms of the general background of Saudi Arabia and its general education system. Additionally, the researcher briefly discussed the Saudi legislations related to individuals with disabilities, as well as described and contrasted the current state of special education services for students with mild to moderate and students with severe disabilities in terms of assessment procedures, education setting (public schools), related services, and transition services.
Chapter 3: Review of the Literature

The author begins the chapter with definitions of severe disability, and the difference between severe disabilities versus multiple disabilities. Next, the chapter describes in detail, areas to be considered when providing an appropriate education for individuals with severe disabilities. Furthermore, a short definition of related and transition services for students with severe disabilities are presented.

Next, the chapter provides an overview of inclusive education for students with severe disabilities in terms of a historical overview of inclusion, taking into consideration differences between inclusion and mainstreaming, and provides evidence for the positive outcomes of inclusion. Finally, research reporting the perspectives of teachers regarding inclusive education, factors related to these perspectives, and the assessment tools to measure teachers’ perspectives regarding inclusion of individuals with disabilities is reviewed.

Definitions of Severe Disabilities

In the US, the definition of severe disability has been extensively discussed in the literature. For instance, Westling and Fox (2009) use this term to describe children with severe deficiencies that affect their abilities in different areas, such as learning, social, personal, and physical skills. Additionally, Collins (2007) described persons with severe disabilities as individuals —who have cognitive disabilities consistent with intelligence quotient (IQ) below 50-55 or a severe developmental disability that limits their functional ability to this range” (p. 19). Brimer (1990) also indicated the term severe disability as describing a condition that severely affects the developmental abilities of the person. Lastly, Sailor and Haring (1977) added that people with severe disabilities need extensive
services to achieve self-independence. Thus, these definitions emphasize that individuals with severe disabilities have low cognitive abilities that affect their daily life activities.

The Association for Persons with Severe Handicaps (TASH) (2000) proposes the definition for persons with severe disabilities as follows:

These persons include individuals with disabilities of all ages, races, creeds, national origins, genders and sexual orientation who require ongoing support in one or more major life activities in order to participate in an integrated community and enjoy a quality of life similar to that available to all citizens. Support may be required for life activities, such as mobility, communication, self-care, and learning as necessary for community living, employment, and self-sufficiency. (para. 1)

Similarly, the American Association on Mental Retardation (AAMR) (2002), known now as the American Association on Intellectual and Developmental Disabilities (AAIDD), identified three dimensions that determine the status of an individual's disability as a severe intellectual disability. First, the definition uses IQ scores as part of the determination of intellectual disability, with a cutoff score of approximately 40 and below. Second, adaptive behavior is a term used to describe the skills used to function in daily life. As indicated by the definition, an individual with an intellectual disability also lacks proficiency in a wide variety of adaptive skills including the following:

(a) conceptual skills, including language, money, time, and number concepts, and self-direction; (b) social skills in terms of interpersonal skills, social responsibility, self-esteem, gullibility, social problem-solving, and the ability to follow rules/laws and to avoid being victimized; (c) practical skills, such as
activities of daily living (personal care), occupational skills, healthcare, travel/transportation, schedules/routines, safety, use of money, use of the telephone. Finally, the individual must demonstrate these characteristics between the time of birth and 18 years of age. (AAMR, 2002, p. 190)

The American Psychiatric Association (APA) (2000) also classifies people with severe intellectual disabilities as having an IQ score range of 40 and below. Finally, the National Dissemination Center for Children with Disabilities (NICHY) (2004) describes people with severe disabilities as individuals who have severe to profound cognitive impairments or mental retardation. In summary, severe disability is a term used to refer to individuals with severe intellectual disabilities who have an IQ score of 40 and below and have significant limitations in social, learning, personal, and language skills.

**Severe versus multiple disabilities.** There is some confusion among researchers, stakeholders, policy makers, and others, regarding the difference between the terms severe disabilities and multiple disabilities since they have been used synonymously in the literature. Therefore, it is important to address this difference through a synthesis of the definitions of either severe or multiple disabilities.

As can be inferred from the above definitions of severe disability, individuals with severe disabilities have one type of disability that falls under the category of a cognitive or intellectual disability (Brimer, 1990; Collins, 2007; NICHY, 2004). This severe disability causes limitations in intellectual functioning, physical, communication, health, movement, vision, and hearing abilities (Westling & Fox, 2009). Additionally, the term severe disability requires, by definition, that the person have a severe level of cognitive disability. However, it does not require another type of disability be combined
with the cognitive disability (Snell, 2003). Finally, individuals with severe disabilities can receive their special education services through programs designed for persons with cognitive disabilities (Brimer, 1990; Collins, 2007; Westling & Fox, 2009).

On the other hand, the term multiple disabilities in the US refers to a combination of two or more disabilities, such as a cognitive disability and deafness, or a cognitive disability combined with blindness (Individual with Disabilities Education Improvement Act, 2004). This category of disability requires that the person have more than one type of disability, which may or may not include a cognitive disability as one of the impairments (Snell, 2003). Additionally, the definition of multiple disabilities requires extensive support that cannot be provided through special education services designed for any one type of disability (IDEIA, 2004). Thus, there is a distinct difference between multiple disabilities and a severe disability in terms of the number of disabilities that an individual has and the extent of special education services.

There is not currently a specific definition of severe intellectual disabilities in either Saudi literature or legislation; however, the Special Intellectual Education Institutes have identified certain conditions and criteria for the classification of students with severe disabilities to be eligible for special education services in these institutes as follows:

(a) The students with severe cognitive disability should have an IQ score of 50 and below; (b) the students should have a deficit in two or more adaptive behaviors skills; (c) the students should be between ages six to fifteen to be eligible for the services in the special education institutes; (d) and students with severe cognitive disabilities should not have severe behavior disorders (e.g.,
aggressive, disruptive) that impede him or her from receiving the institute's special education services. (Eastern Intellectual Education Institute in Riyadh, 2007, para. 5)

In this study, students with severe disabilities are defined as those students, ages 6-12 years, with severe intellectual disabilities (the elementary school age group in Saudi Arabia) who have an IQ score of 50 and below, with a deficit in two or more adaptive behaviors skills in terms of daily living skills, communication, and social skills.

Now that the group of individuals being addressed in this research has been defined, literature regarding appropriate educational considerations for education in an inclusive setting is reviewed.

**Providing Appropriate Education for Individuals with Severe Disabilities**

More recent research has shown that students with severe disabilities who are able to access the general curriculum in the general education setting develop communication, motor, and social skills, and build friendships when they receive adequate and appropriate modifications that meet their unique needs (Copeland et al., 2004; Ryndak & Billingsley, 2004). However, there is a large body of research showing that alternative curriculum should be added beyond the general curriculum, since most students with severe disabilities do not obtain skills in the same sequence as other students without disabilities and they still need to be linked to the general education curriculum.

An alternative curriculum provides an individualized curriculum that focuses on the characteristics and needs of students with severe disabilities in terms of social, behavioral, emotional, cognitive, and vocational skills (Heward, 2006). In addition, curriculum for learners with severe disabilities should not follow conventional
developmental standards applied to children without disabilities. For instance, a learner with a severe disability at age 13 should not be taught motor skills in the same way that students without disabilities at age three or four years are taught (Heward, 2006). Therefore, an effective curriculum for students with severe disabilities should combine both the skills of the general education curriculum, as well as aspects of an alternative curriculum, and consider the age of the individual. The following section describes some issues that should be considered in determining curriculum content for students with severe disabilities.

**Functional skills.** Functional skills are “those skills or tasks that contribute to the successful, independent functioning of an individual in adulthood” (Cronin, 1996, p. 54). Functional skills are useful and should be considered part of the curriculum to support students with severe disabilities to enable them to participate independently and effectively in an integrated setting. Functional skills include several activities; for instance learning dressing skills, eating skills, using transportation, and using money (e.g., using real bills and coins to make purchases from the stores or the vending machine) (Heward, 2006). Functional skills are important skills that teachers and other stakeholders should consider when preparing IEPs for students with severe disabilities.

According to Hamre-Nietupski, Nietupski, and Strathe, (1992) parents of students with severe disabilities in Iowa ranked functional skills before other skills, such as academic skills and social skills due to that fact they believe these skills will assist students in acquiring the skills to function independently. As a result, it is important for teachers and other school staff to determine students’ functional skill levels in planning an appropriate curriculum that addressed these skills (Collins, 2007). These skills should
be determined by using different sources that include previous records of the student, an ecological inventory, survey checklists, adaptive behavior scales, and other informal sources of information. Once the school team determines the functional skills that should be taught, an IEP should be written to include the main goals that are needed for the individual student. These skills should be appropriate for the child’s chronological age, match the current needs of the student, link to the general education curriculum, and taught as much as possible in the setting where the skills are to be used.

To summarize, a student’s functional skills should be determined using different assessment tools to determine the needs of the student and the IEP team should describe the goals that fit the child’s chronological age and current performance.

**Age-appropriate.** Another concern when teachers and other service providers develop and plan curriculum content for students with severe disabilities is selecting appropriate skills that fit with the age of the learners (Heward, 2006). Students with severe disabilities might not use the same material that other students without disabilities use; thereby, teachers need to assist the student in engaging with his or her peers in some activities (Heward, 2006). For instance, the teacher might instruct students with severe disabilities in various recreation and leisure skills (CD player operation) or in holiday projects (e.g., preparing cards of greeting) that are appropriate for their age (Heward, 2006).

It is an important issue for the IEP team to create a student’s IEP taking into consideration age-appropriate and functional skills. This is important because the non-school setting demands such skills and the student’s typically developing peers exhibit
them in general education settings (Heward, 2006). Thus, the inclusive education setting promotes age-appropriate and functional skills in the students’ repertoires.

**Decision-making/self-determination skills.** Teachers and other stakeholders must consider students’ abilities to make choices when designing curriculum for children with severe disabilities. Decision making skills and self-determination allows students to express their preferences, as well as make decisions regarding the matters that affect them (Heward, 2006). Self-determination refers to “volitional actions that enable one to act as the primary causal agent in one’s life and to maintain or improve one’s quality of the life” (Whemeyer, 2005, p. 117).

These skills assist students in making decisions regarding their daily life activities (e.g., in restaurants and during leisure activities). However, since some learners with severe disabilities have communication deficits that affect their ability to verbally express their preferences, teachers may use pictures or assistive technology devices to help students express their preferences (Heward, 2006). The most common assistive technology devices that assist students in expressing their preferences are Augmentative and Alternative Communication (AAC) devices. Self-determination and self-advocacy skills should be developed in students to allow them the opportunity to be self-determined.

**Individualized approach.** Students with severe disabilities face difficulties with functional behavior and acquiring skills which make them eligible for individual education programs (IEPs) in order to meet their unique needs using an individualized approach. Therefore, the IEP team, usually including a special and regular education teacher, related service personnel, and families of students with severe disabilities should
meet to develop and write an appropriate IEP considering several components: (a) unique needs of the child; (b) current level of performance; (c) measurable annual goals and short-term objectives; and (d) other special education services such as related services (Snell & Brown, 2006). Accordingly, the IEP has become an individualized approach to deliver instruction designed to develop various skills of learners with severe disabilities.

**Positive behavioral support.** As mentioned earlier, learners with severe disabilities usually exhibit some challenging behaviors, including self-injurious, aggressive, socially inappropriate, and stereotypic behaviors (Collins, 2007; Westling & Fox, 2009). Therefore, there are many approaches designed to assist educators in addressing these inappropriate behaviors. For example, when focusing on eliminating an undesirable behavior, the circumstances that affect this behavior need to be considered. Then, steps need to be taken to replace this behavior with a new appropriate behavior (Copper, Heron, & Heward, 2007). However, in recent years, a new approach has been introduced that takes into account the elements of behavior that were ignored in past approaches (Copper et al., 2007; Westling & Fox, 2009).

One current approach for dealing with challenging behaviors exhibited by students with severe disabilities is positive behavior supports. This approach attempts to understand the inappropriate behavior the learner with severe disabilities exhibits and appropriate ways to change it (Copper et al., 2007). Positive behavior supports also assist in defining the reasons that impact problem behaviors, by teaching the student effective ways to reduce this behavior, in modifying the environment in ways that make inappropriate behavior irrelevant, and in replacing inappropriate behavior (Bambara &
Kern, 2005; Crone & Horner, 2003). Thus, positive behavior supports have become a unique approach to deal with challenging behavior of students with severe disabilities.

The IEP team goes through several steps in order to provide individualized positive behavior support for learners with severe disabilities. These steps include: (a) conducting a functional behavioral assessment; (b) developing a behavior support plan; and (c) implementing and evaluating the plan (Bambara & Kern, 2005; Crone & Horner, 2003; Snell & Brown, 2006; Westling & Fox, 2009).

**Functional behavior assessments (FBA).** FBA is used to determine the purpose of the inappropriate behavior in order to find suitable replacement behavior. FBA is the first step for the IEP team to deal with problem behaviors of a child with a severe disability, so it is necessary to conduct a FBA to understand the target behavior while considering different behavior assessment tools (Westling & Fox, 2009). However, before the team uses any assessment tools, it is important to understand the life style of the child with a severe disability. Therefore, the team might try to understand how the child behaves during different activities, such as leisure activities and social relationship building (Westling & Fox). After the team has sufficient knowledge regarding the life style of the child, other behavior assessment tools might be utilized in terms of indirect assessment methods, direct observation assessment methods, and experimental analysis (Snell & Brown, 2006; Westling & Fox, 2009).

**Behavior support plans.** After an IEP team, (usually including a special and regular teacher, related service personnel, the family of the student with a severe disability, and others who are needed) determines the problem behaviors using a variety of methods, the team takes the next step to develop a positive behavior support plan to
deal with the behavior. In this plan, many issues regarding the problem behavior are clearly described; for instance, the description of the behavior, antecedents and the consequences of the behavior, the reasons for the behavior, the long term support, and effective strategies that might replace the behavior (e.g., reinforcement strategies) (Copper et al., 2007; Snell & Brown, 2006; Westling & Fox, 2009).

**Support plan evaluation.** The final step associated with the behavior support plan considered by the IEP team is to evaluate whether the goals of the plan have been met. There are several assessments that should be conducted to gather data regarding the effectiveness of the behavioral support plan (e.g., direct observation, the rate of the behavior) (Copper et al., 2007; Snell & Brown, 2006; Westling & Fox, 2009). The evaluation process measures the progress of the child with severe disabilities regarding the target behavior, the acquisition of the replacement skills, and the achievement of the lifestyle outcomes that were identified as important by the behavior support team” (Westling & Fox, 2009, p. 332). The support plan evaluation should include a clear description of the behavior (the purpose of the behavior, when the behavior happens, prevention strategies, and replacement skills).

As previously described, IDIEA requires that individuals with severe disabilities in the US receive high quality special education services, and the system utilizes specific approaches that guarantee this quality in terms of educating them in the general education setting to the maximum extent possible (Cole, Waldron, & Majd, 2004; Downing, Spencer, & Cavallaro, 2004). Therefore, students with severe disabilities have an opportunity in the general education setting to access the general curriculum, as well as obtain the functional skills that support them in living independently through an
individualized approach. Teachers also use instructional strategies that encourage students with severe disabilities to acquire functional skills, such as daily life skills. Finally, the IEP team provides a behavior support plan that assists in replacing challenging behaviors of students with severe disabilities with more appropriate ones.

**Related services.** In general, related services have become part of the appropriate education services that are available for learners with severe disabilities in the US. These services, specifically speech and language therapy, physical, and occupational therapy are provided to these learners in the general education setting and other places to support access to an appropriate education, enhance their educational outcomes, and facilitate their successful placement in the least restrictive environment (Giangreco, York, & Rainforth, 1989).

Related services providers can play an important role in assisting students with severe disabilities to access appropriate education to support students’ learning outcomes in the least restrictive environments through the applications of their disciplines and collaborate effectively with other school staff (Giangreco, Prelock, Reid, Dennis, & Edelman, 2000). Additionally, the related service personnel in the general education setting would —function as collaborative team members instead of in isolation as experts, use approaches that are not overly technical or specialized, so that the student may avoid being unnecessarily stigmatized, and provide assistance at times and in ways that consider the operation of the classrooms in order to avoid disruption” (Giangreco, et al., 2000, p. 369). One key factor that promotes related services personnel to provide high quality services for students with severe disabilities is collaboration among stakeholders. For instance, when the IEP team considers collaboration in their educational practice
between related service providers and other school staff, a team is able to meet the needs of the students in home, school, and the community environment (Giangreco et al., 1989). Thus, providing related services for the students with severe disabilities can be supportive to assist them in gaining maximum benefit from the special educational programs provided to them, supporting them in accessing an appropriate education, enhancing their educational outcomes, and facilitating successful placement in the least restrictive environment.

**Transition services.** These services are essential to provide for students with severe disabilities to support their move from secondary schools to different settings (e.g., postsecondary education and employment setting). The IEP team should be responsible for assessing the needs, developing the plan, collaborating with other local agencies (e.g., school districts, colleges, and employment agencies), and providing appropriate transition plans that addresses students’ needs to efficiently transition to various situations. However, currently in the KSA, although these services are mandated by the RSEPI, they have not been completely carried out for students with disabilities.

**Inclusion of Students with Severe Disabilities**

**History of the Inclusion Movement**

Historically, in the US, students with severe disabilities did not have the opportunity to be educated in general education settings due to the fact that educators and administrators were assuming these students were unable to learn (Donder & York, 1984). The Education for All Handicapped Children Act (EHA) (PL 94-142) passed in 1975, assisted students who were previously being educated in segregated settings, such as in special schools, to be educated in the least restrictive environment (Biklen, 1985;
Donder & York, 1984). The movement of normalization and deinstitutionalization were also introduced in the middle of the 1960s, which advocated removing these students from life in institutions to be integrated with their families and local communities (Osgood, 2005). There are several court cases that argued for the delivery of special education services in public schools for these students. These advances helped reduce the number of the special schools for students with severe disabilities and gradually transferred some of these students into special classrooms within public schools while they spent time interacting socially with their typically developing peers (Downing, 2008).

In 1992, some national organizations (i.e., TASH, National Association of State Boards of Education, and the Association for Retarded Citizens of the United States) that advocated for inclusion. They clearly pointed out that inclusion is one option on the continuum of the least restrictive environment, and students with severe disabilities have the right to be educated in general classrooms as much as possible with necessary support and services (Downing, 2008).

The implementation in the past several decades of legislation in the US (IDEA) favoring the inclusion of students with disabilities in general education settings has increased the percentage of students with disabilities being educated in inclusive settings. For example, in the 1998-1999 school year, students with disabilities spent more than 79% of a typical school day in the regular education classroom and the proportion of the students with mild to severe disabilities increased from 21% to 42% (U.S. Department of Education, 1998). Students with cognitive disabilities educated in the general education setting either for some or much of the day increased from 27.3% to 44.7% while their
placement in special schools decreased from 72.7% to 55.3% in the period from 1989 to 2000 (Willimasion, McLeskey, Hoppey, & Rentz, 2006).

The U.S. Department of Education (2003) indicated that the majority of students with severe disabilities spend a reasonable amount of their school day attending general education classes; for example, 58% of students with mental retardation, and 60% of students with autism spend the majority (i.e., 60% of more) of their school day in the general education classroom. Thus, the philosophies guiding special education have changed in the last three decades and continue to change, particularly in the United States. A large part of this transformation is based upon the idea that students with disabilities should receive their education in the least restrictive environment (LRE).

**Mainstreaming versus Inclusion**

Existing literature summarizes the similarities and differences between mainstreaming and inclusion. According to Yell (2006), both inclusion and mainstreaming are philosophically grounded in the struggle for the extension of civil rights. Additionally, both are directed at the placement of students with disabilities in general education settings with their typically developing peers.

In spite of the similarities, there are some differences between mainstreaming and inclusion that should be clarified. While mainstreaming involves placing students with disabilities, particularly students with mild disabilities, in regular classrooms for part of the day, inclusion involves allowing all students with disabilities to participate in the general education curriculum as well as in regular classes with their typically developing peers to the maximum extent possible (Osgood, 2005; Westling & Fox, 2009). Thus, the similarities between mainstreaming and inclusion can be described as both supporting the
rights of students with disabilities to receive their education in the least restrictive environment, as mandated by law. However, the philosophy of inclusion seeks to include a variety of students with disabilities, including students with severe disabilities, in the general education setting with an opportunity to participate in curricular and non-curricular activities. The philosophy of inclusion also considers several principles in terms of educating students with disabilities within age-appropriate settings, in neighborhood schools, with same grade and age peers, with support in the general education classrooms.

**Inclusion Defined**

Adding to the confusion regarding mainstreaming and inclusion, scholars define the philosophy of inclusion in many different ways. Villa and Thousand (2003) describe it as ―the principles and practice of considering general education as the placement of first choice for all learners‖ (p. 20). Taylor (2006) indicates that inclusion means serving students with a full range of abilities and disabilities in the general education classroom with appropriate in-class support. With a more comprehensive view of the inclusion concept, Mitchell (2004) defines inclusion as students with disabilities having full participation in age-appropriate classes in their neighborhood schools with appropriate supplemental aids and support services. Finally, Smith (2006) describes the concept of inclusion by stating that students with disabilities should attend their home school with their same age and grade peers all day in the regular education classroom. Overall, all of these definitions of inclusion emphasize that students with disabilities, including students with severe disabilities, should be educated in the general education settings with their typically developing peers.
Throughout the 1990s, many documents, including books, articles, newsletters, and other sources, have examined the concept of inclusion for students with disabilities as well as the significance of inclusion, and discussed the essential elements of practicing inclusion in schools (Osgood, 2005). Generally, most of these documents emphasize the importance of inclusion as an alternative to mainstreaming because the segregated setting is not an appropriate or effective way to educate all students with disabilities. Inclusion challenges the stigma and isolation of these individuals and provides full rights for students with disabilities, regardless of the severity of their disability to be educated in the general education setting. In summary, these movements mainstreaming and inclusion have improved and promoted the quality of education programs for all students with disabilities, particularly the inclusion movement that focuses on the education all of students in the general education setting.

**Positive Outcomes of Including Students with Severe Disabilities**

In this section, the researcher reviews only US studies that discuss the positive outcomes of inclusive education for the students with severe disabilities due to a lack of Saudi studies addressing this concept. These studies provide evidence that educating students with severe disabilities in the general education setting can support their unique needs in terms of academic, social, and communication skills, as well as providing benefits for students without disabilities. It is also important to state that these studies are relevant to the current research in that they emphasize the importance of educating students with severe disabilities in Saudi Arabia in the general education setting (a public school setting) instead of special schools which can support the development of these students in different ways as the following studies explain.
Consideration of an appropriate education setting in the US for students with severe disabilities begins with the general education setting. Much of the literature emphasizes that students with severe disabilities obtain their education in their neighborhood schools with their typically developing peers for many reasons (Collins, 2007; Heward, 2006). First, studies point out that students with severe disabilities who obtain their education in general education settings are able to gain their IEP goals more frequently than students educated in separate classrooms (Cole et al., 2004; Downing et al., 2004). Second, inclusion makes it easier for families of students with severe disabilities to participate with their children in different activities in their neighborhood schools (Cole et al., 2004; Downing et al., 2004). Third, the general education setting provides an opportunity for children to establish social relationships with their typically developing peers. Finally, the general education setting assists students to gain the skills necessary to function responsibly as good citizens (Heward, 2006). To summarize, the appropriate education setting for most students with severe disabilities in the US is in their neighborhood schools with their typically developing peers.

Adding to the general advantages of inclusion that have been discussed, many studies report specific positive outcomes from inclusion for both students with and without severe disabilities. Much discussion has taken place in the literature noting that the general education setting plays an essential role in developing and meeting the needs of students with severe disabilities in many areas including academic, social, and communication skills. In general, students with disabilities being educated in inclusive settings receive higher grades, and achieve high scores on standardized tests than students with disabilities placed in separate classrooms (Rea, Mclaughlin, & Walther-Thomas,
Findings from research indicating the specific benefits of inclusion are now discussed in more detail.

**Academic benefits of inclusion.** Research reveals that the academic accomplishments of students with severe disabilities increase through interaction with typically developing peers in the general education setting (Westling & Fox, 2009). For example, students generalize their skills in follow up activities and interaction with peers motivated them to acquire basic academic skills.

Another study conducted by Cole et al. (2004) examined the effect of the education setting on the achievement outcomes in math and reading for students with severe disabilities in 16 programs in general education settings and special schools in the state of California. This study indicated that achievement outcomes in math and reading for students with severe disabilities increased when compared with students with severe disabilities placed in special schools.

Downing, Morrison, and Berecin-Rascon (1996) assessed the academic progress of three students with severe disabilities in the general education setting. They reported that all three students were able to learn academic skills, letter identification, reading skills, and emergent writing skills. Additionally, Hunt, Staub, Alwell, and Goetz (1994) examined the academic performance of students with severe and multiple disabilities in the context of cooperative learning groups in an inclusive environment. This study pointed out that these students were able to achieve basic academic, communication, and social skills through their interaction with their typically developing peers in this setting.

Hilton and Liberty (1992) examined the relationship between class placement and educational outcomes of the 200 students with severe disabilities. This study reported that
an inclusive education setting has positive effects on the educational outcomes of these students. They also concluded that students with severe disabilities in inclusive classroom settings make progress in their academic skills leading to greater independent adult functioning, even though they had not received sufficient support from their teachers.

Finally, Brinker and Thorpe, (1984) investigated students’ rate of achievement of their IEP goals in the general education setting. They observed the achievement of 245 students with multiple and severe disabilities. They discovered these students were more likely to meet their IEP goals than those who were educated in self-contained classrooms. They increased their academic performance in academic skills, such as reading and mathematics, in the context of cooperative learning groups in an inclusive environment. Clearly, the findings of these studies emphasize the positive effect of being educated in an inclusive setting on the academic achievement of students with severe disabilities.

**Social benefits of inclusion.** Similarly, studies report that inclusion provides an opportunity for students with severe disabilities to build social skills in terms of establishing relationships with their typically developing peers (Hunt, Soto, Maier, & Doering, 2003). Kennedy, Shukla, and Fryxell (1997) compared the different experiences in social interaction for students with severe disabilities educated in an inclusive setting to those educated in separate classrooms. Findings indicated a significant impact of the inclusive educational setting in improving the social interaction and social support of students with severe disabilities.

Another study conducted by Fryxell and Kennedy (1995) examined the impact of educating students with severe disabilities in a general education setting on the level of social contact students had with their typically developing peers. This study found that
students with severe disabilities had a higher level of social contact and developed friendships with their peers. Similarly, Cole and Meyer (1991) compared the social competence of students with severe developmental issues in segregated settings to those in general education settings in various elementary schools. They reported that children with severe developmental disabilities in general education settings over a 2-year period progressed on a measure of social competence, whereas matched counterparts in segregated settings regressed.

Lastly, Brinker and Thorpe (1984) examined the rate of social interaction for 245 students with severe disabilities that were educated in the general education setting. These students experienced more frequent social interaction and had a more durable friendship network. Thus, the general education setting enhanced the opportunity for students with severe disabilities to gain appropriate social skills and build friendships through their interaction with typically developing peers.

**Communication benefits of inclusion.** In terms of communication skills, studies reveal that students with severe disabilities improve their communication skills in inclusive settings when compared with students with the same disabilities in self-contained classrooms (Foreman, Arthur-Kelly, Pascoe, & Smyth King, 2004). For instance, Snell and Eichner (1989) examined the impact of the inclusive education setting on the development of communication skills for students with severe disabilities. This study revealed that students with disabilities placed in general education classrooms have a greater opportunity to develop their communication skills through interactions with typically developing peers.
Moreover, Foreman et al. (2004) compared acquisition of communication skills of students with severe disabilities who were placed in a general education classroom versus a special education classroom. This study indicated that students with significant disabilities increased expressive and receptive language skills through interaction with their peers in inclusive settings to greater levels than students with significant disabilities in special education classrooms.

Finally, Hunt, Farron-Davis, Beckstead, Curtis, and Goetz, (1994) investigated the improvement of 13 children with severe disabilities educated in the general education setting who engaged in most activities with their typically developing peers. This study pointed out that these students gained important communication skills by being involved with typically developing peers in communication activities either in the classroom or during extra-curricular activities. Overall, research findings indicate that the inclusive environment provides an opportunity for students with severe disabilities to increase and develop a variety of skills in terms of academic achievement, social interaction, and communication skills.

**Benefits for students without disabilities.** In the past decade, studies of inclusion have demonstrated benefits for students with severe disabilities, but also for students without disabilities (Hall & Wolfe, 2003). Fisher, Sax, and Grove, (2000) conducted a 6-year follow-up study tracking the attitudes of high school students who participated in elementary public school programs designed to assist students without disabilities in interacting with peers with all disabilities. They found that the typically developing peers who were involved in these programs had a more positive attitude toward students with severe disabilities than those who were excluded from these
programs. This study pointed that students without disabilities learned to tolerate and interact with students with disabilities in ways that improved their ability to lead and foster a positive perspective towards students with disabilities.

Cole et al. (2004) assessed the academic outcomes for the students without disabilities who had the opportunity to be included with students with mild disabilities (mild learning disability and mild mental retardation) compared to those who were not enrolled in classrooms with students with severe disabilities. Interestingly, the typically developing peers who were engaged with peers with severe disabilities demonstrated greater academic skills than those who were not enrolled with students with severe disabilities. In this study, students without disabilities in inclusive classrooms reported improvements in their sensitivity, empathy, and acceptance of human differences as well as increased access to children without disabilities to cooperative learning opportunities and assistive technology.

Copeland et al. (2004) reviewed literature related to the impact of inclusive education for students with severe disabilities in the last decade. They concluded that research presents evidence that inclusive education for students with disabilities, including students with severe disabilities, improves the achievement of students without disabilities in elementary school. It increases awareness regarding the issue of disabilities for students without disabilities, as well as their parents‘ awareness. To summarize, positive outcomes for both students with and without severe disabilities support the need for students with disabilities to be included in the general education setting.

As demonstrated in the literature, including students with disabilities in the general education setting is a successful approach for ensuring that students with severe
disabilities develop skills in many different areas, as well as obtain the same educational rights as their peers. These areas include academic achievement, life, communication, and socialization in their neighborhood schools (Cole et al., 2004; Foreman et al., 2004; Hunt et al., 2003; Westling & Fox, 2009). That being said, there are many views of how inclusion can be implemented for students with severe disabilities. Some researchers argue that full inclusion is the only way students with disabilities can be educated with their typically developing peers in the general education setting, regardless of the degree of disability or intensity of needs. On the other hand, others argue for partial or responsible inclusion, which is more in line with the principles of least restrictive environment (LRE), where placement decisions are made on a case-by-case basis and depend on the individual needs of the student. The following section presents a brief discussion regarding the various models of inclusion.

Models of Inclusion

The literature describes several different models of inclusion for students with disabilities, ranging from full inclusion to a consideration of the full continuum of placement options. The group advocating for full inclusion for students with disabilities subscribes to a view of inclusion as all schools educating all students with disabilities in the general education classrooms all day, regardless of their level of severity of disability (Howard, 2004). This model assumes that the general education classroom is the only appropriate placement for students with various disabilities and it should meet the needs of all students with disabilities (Stout, 2001).

On the other hand, another group views full inclusion as a desirable model; unfortunately, the price of changing the structure of the school, which includes the cost of
hiring appropriate teachers and support staff, is sometimes difficult to provide (Howard, 2004). This group advocates educating students with disabilities in an inclusive setting to the maximum extent possible by providing all the necessary supports and services, either for the entire school day or a portion of it (Osgood, 2005).

Between the two extremes is another group that supports a full continuum of placement options for students, and believes that schools should make placement decisions on a case-by-case basis (Stout, 2001). This group states that IDEA requires the IEP team to consider a continuum of alternative placements. IEP teams should make decisions regarding the placement of students with disabilities and consider options that include the general classroom, the special education classroom, special schools, home instruction, or instruction in hospitals and institutions (Fuchs & Fuchs, 1998).

In this study, inclusion for students with severe disabilities refers to educating students with severe disabilities in public schools alongside their typically developing peers as much as possible (whether in the same classroom or a separate classroom inside the public school) with support from the school’s staff.

**Continuum of placements.** Finally, in the US, some students with disabilities may not be educated in the general education setting due to the nature or severity of their disability. According to the Office of Special Education and Rehabilitative Services (OSERS) of the U.S. (1991), some students with disabilities may require placements in settings other than the general education classrooms in order to be provided with an education designed to address their unique needs. Therefore, it is an important responsibility to ensure that these students receive their education in the LRE that meets their unique needs. The IDEA requires that each school district consider the continuum of
alternative placements to meet the unique needs of those who cannot be educated in the regular education setting (Yell, 2006). This legislation stated clearly that:

(a) Each school district shall ensure that a continuum of alternative placement is available to meet the needs of children with disabilities for special education and related services

(b) The continuum required…must:

(1) Include the alternative placement … (instruction in regular classes, special classes, special schools, home instruction, and instruction in hospital and institutions.

(2) Make provision for supplementary services (such as recourse room or itinerant instruction ) to be provided in conjunction with regular class placement (IDEA, 34 C.F.R. § 300.551)

The primary goal of the continuum of alternative placements is to provide the school district with the ability to identify appropriate educational placements that meet a student’s needs when a general education setting cannot be provided. Thus, when students with severe disabilities cannot be educated in the regular education setting, the continuum of placements should be considered, such as the general classroom, the special education classroom, special schools, home instruction, or instruction in hospitals and institutions.

To conclude, it is difficult to describe any of the models outlined above as the correct policy for providing students with severe disabilities appropriate education in the LRE; however, these models are considered to explain how educators perceive inclusion for students with disabilities. Nonetheless, it is an essential issue for educators, parents,
professionals, and policy makers to improve the quality of education programs for students with disabilities by considering critical elements in terms of what might improve education for students with severe disabilities in the continuum of alternative placement, including collaboration among professionals (e.g., special education teachers, general education teachers, service providers and others), adaptations, accommodations, and modifications of schoolwork (Downing & Peckham-Hardin, 2007; Hunt et al., 2003). Other elements considered essential components for the inclusion of students with severe disabilities are effective instructional practices to improve access to core general curriculum, peer support for students with severe disabilities, assistive technology, administrative support, and professional development training for educators, and effective involvement and support of parents or families in inclusive settings.

**Teachers' Perspectives of Inclusion**

Even though inclusive settings have demonstrated benefits for both students with and without disabilities in the US, there is a strong body of research showing different perspectives from various stakeholders regarding educating students with severe disabilities in the general education setting (Cook, 2001). Addressing the issue of educating students with severe disabilities in the general education setting should consider the perspectives of school staff toward inclusion. These perspectives will either positively or negatively contribute to the interaction between teachers and students with severe disabilities as well as their learning in the classroom (Cook, Cameron, & Tankersley, 2007).

It is important to consider that the severity of the disability may be a significant variable that positively or negatively relates to school staff members' perspectives
regarding the inclusion of students with disabilities in general education settings (Cook, Tankersley, Cook, & Landrum, 2000; Kozub & Lienert, 2003). Cook (2001) also emphasized that when teachers were asked about their perspectives regarding inclusive education for all students with disabilities, they reported positive perspectives regarding this concept. In contrast, when the teachers were asked about their views regarding the inclusive education for a specific type of disability (mild and severe), they tended to be more accepting of serving students with mild disabilities in their general classroom than students with severe disabilities.

Many researchers have examined the perspectives of school staff including teachers, administrators, and psychologists, regarding the inclusion of students with severe disabilities. Findings indicate that administrators and psychologists in Scotland have more positive perspectives regarding general education placement for students with severe disabilities than general and special education teachers (Tisdall, 2007). However, other studies indicated that the administrators' attitudes are less than positive toward inclusive education for students with disabilities due to their lack of adequate knowledge and experiences regarding the delivery of services to them, which might affect the process of inclusion of these students in the schools (Clayton, 1996; Daane, Beirne-Smith, & Latham, 2000).

Another study conducted in the United States by Vaughn, Schumm, Jallad, Slusher, and Saumell (1996) explored the perspectives of special education teachers regarding the inclusion of students with severe disabilities. Interestingly, their results indicate that special education teachers who teach in general education settings express
more positive perspectives towards inclusion of students with severe disabilities than special education teachers who teach in self-contained special education classrooms.

As research investigating the perspectives of teachers regarding the inclusion of students with severe disabilities continues, increasingly different perspectives are found. Contrary to the previously reported studies, many studies conclude that the inclusion of students with severe intellectual disabilities in general education classrooms is less accepted by general education teachers and administrators than the inclusion of students with learning disabilities and emotional disabilities (Cook, 2001; Cook et al., 2000). General education teachers report less effective interactions with their students with severe disabilities as opposed to students with mild and moderate disabilities (Cook, 2001; Kozub, & Lienert, 2003). For instance, Southern (2010) investigated general education secondary school teachers' perspectives toward the inclusion of students with severe disabilities in the US. This study pointed out that the teachers had negative perspectives regarding the inclusive education for the students with severe disabilities. This study suggested that educational administrators and facilitators of teacher education programs should provide general education teachers with information to create informed and positive perspectives regarding inclusive education for these students.

Cross-Cultural Perspectives of Inclusion

Not only have studies examined the perspectives of teachers in the US, but also cross-culturally. In one example, Leyser, Kapperman, and Keller (1994) investigated teachers' perspectives of inclusion for students with disabilities in the USA, Germany, Israel, Ghana, Taiwan, and the Philippines. They found that teachers in the USA and
Germany had more positive perspectives than teachers in the other countries toward the inclusion of students with disabilities.

Another study conducted by Gaad (2004), examined the perspectives of teachers regarding the inclusion of students with intellectual disabilities in the United Arab Emirates (UAE), Egypt, and the United Kingdom (UK). In this study, the researcher concluded that teachers in the UK as well as in the UAE have more positive perspectives toward inclusion of students with intellectual disabilities than those in Egypt. Errol, Clara, and Elisa (2005) also reported that high school teachers in Haiti and the United States have similar positive perspectives toward inclusion of students with disabilities. Lastly, Mobergy (2003) examined the perspectives of 1636 teachers in Zambia and Finland toward inclusive education for students with disabilities. This study pointed out that teachers in these countries have positive perspectives regarding inclusive education for students with disabilities, particularly special education teachers.

Other studies consider different approaches to examining teachers’ perspectives regarding the inclusion of students with severe disabilities. These studies take into consideration factors related to teachers’ perspectives in terms of the teacher’s current teaching position, years of teaching experience, level of education, teacher’s training, class size, grade level taught, gender differences, previous inclusive teaching experiences and whether or not they have a family member with a disability.

Factors Affecting Teachers’ Perspectives toward Inclusion

**Current teaching position.** Teachers’ positions, either exclusively as general education teachers or special education teachers, can be associated with their perspectives regarding inclusive education in the US and Scotland for students with severe disabilities.
For instance, there is some indication that special education teachers have more positive perspectives toward full inclusion than general education teachers (Elhoweris & Alsheikh, 2006; Tisdall, 2007).

Richard and Roger (2001) also report that special education teachers have more positive perspectives toward the inclusion of students with severe disabilities than do general education teachers. Alhamad (2006) mentions that special education teachers possess more positive perspectives regarding inclusive education for students with emotional and behavioral disabilities than general education teachers in the US.

Another study conducted by Scruggs and Mastropieri (1996) synthesized literature from 1958 to 1995 related to teachers' perspectives regarding inclusive education. This study found that in general, some special education teachers have more positive perspectives toward inclusion education for students with disabilities than general education teachers; however, this research indicated that 66.6% of special education teachers had a negative view of inclusive education.

Al-Ahmadi (2009) conducted research to examine the perspectives of special education teachers and general education teachers regarding the integration of students with learning disabilities in Saudi Arabia. This investigation concluded that there was no difference between the perspectives of general education teachers and special education teachers in this group of teachers from Saudi Arabia toward the integration of students with learning disabilities. Thus, the current positions of teachers might correlate with their perspectives regarding inclusive education for students with disabilities; however, a few studies pointed out this factor was not associated with their perspectives regarding inclusive education. Finally, Davis (2010) examined the relationship between the
perspectives of 113 special education and general education teachers regarding the inclusive education of students with severe disabilities in the US. Their study indicated no difference in the perspectives between teachers regarding the inclusion of students with severe disabilities.

**Years of teaching experience.** Years of teaching experience is another factor related to teachers’ perspectives regarding the inclusion of students with severe disabilities in the general education setting. For instance, teachers with 14 years or less of teaching experience expressed more positive perspectives towards inclusion than those with more than 14 years’ experience (Leyser et al., 1994). Other studies point out that teachers with less than five years teaching experience have more positive perspectives toward the inclusion of students with severe disabilities than those with 5-10, 11-15, or 16-20 years of experience (Avramidis, Bayliss, & Burden, 2000; Elhoweris & Alsheikh, 2006; Parasurma, 2006). Additionally, some studies indicate that teachers with more teaching experience with students with disabilities have more positive perspectives regarding inclusive education (Bender, Vail, & Scott, 1995; LeRoy & Simpson, 1996; Leyser et al., 1994).

Errol et al. (2005) examined the correlation between teachers’ perspectives and their teaching experience through an investigation of 364 teachers’ perspectives regarding inclusive education. This research pointed out that teachers who had more years of teaching experience possess more positive perspectives regarding inclusive education. However, other studies reveal that teachers with fewer years of teaching experience have more positive perspectives than teachers with more years of teaching experience (Clough & Lindsay, 1991; Forlin, 1995)
Even though the above studies point out that years of experience correlate with teachers’ perspectives regarding inclusive education, some studies concluded that years of teaching experiences had no relationship with teachers’ perspectives regarding inclusive education (Avramidis et al., 2000; Hasting & Oakford, 2003). Overall, these studies reported correlations between teachers’ perspectives regarding inclusive education for students with disabilities and the number of years of teaching experience. These correlations could be because those with more years of teaching experience are not experts in the new philosophy of educating students with disabilities in the inclusive setting. In contrast, those with less experience might be more understanding of students’ needs since they may be experts or more knowledgeable about the new philosophy of inclusive education due to having obtained some type of training (e.g., courses on inclusive education in their pre-service program).

**Level of education.** With regard to teachers’ perspectives of inclusion of students with severe disabilities based on their level of education, Parasurma (2006) pointed out that teachers in India who hold Master’s degrees have more positive perspectives toward inclusion of students with disabilities than those with bachelor’s degrees. Other research indicated that the higher the level of education, the more positive the perspective of teachers toward inclusion of students with disabilities (Anotank, Mulick, Kobe, & Fiedler, 1995). Furthermore, Errol et al. (2005) examined the perspectives of 364 teachers regarding inclusive education. The authors pointed out that teachers’ level of education affected their perspectives regarding inclusive education. More specifically, teachers who had graduate degrees (master or doctoral) had more positive perspectives regarding inclusive education than those with bachelor’s degrees.
In spite of some research indicating that teachers with a higher level of education tend to have more positive perspectives toward inclusive education of students with disabilities, some studies report that some teachers have negative perspectives toward inclusion for students with disabilities even though they have higher levels of education (Taylor, Richards, Goldstein & Schilit, 1997). It can be said that teachers' level of education may be related to their perspectives of inclusive education for students with disabilities.

**Training.** Teachers' training on inclusive education is another factor that relates to teachers' perspectives regarding inclusive education for students with disabilities. For instance, Smith (2000) examined the relationship between training and teachers' perspectives of inclusion for students with significant disabilities in Shelby County, Tennessee. He indicated that teachers who received more training had more positive perspectives toward inclusion of students with severe disabilities than teachers who did not receive adequate training. Other studies indicate that teachers who have had training have more positive perspectives regarding inclusive education for students with disabilities (Avramidis et al. 2000; Avramidis & Norwich, 2002; Forlin, 1995; Harvey, 1985; Johnson, 2001; Vanreusen, Shoho, & Baker, 2001). Clearly, the amount of training regarding inclusive education that teachers obtain can be a factor related to their perspectives toward inclusive education for students with severe disabilities. However, other studies found out that training does not have a relationship with the teachers' perspectives regarding inclusive education for students with disabilities (Brady & Woolfson, 2008; Jane, 2005). Thus, the training factor might or might not be related to teachers' perspectives on inclusive education for students with disabilities.
**Class size.** According to Al-Musudi (2008) the average class size in Saudi Arabia is between 25 to 45 students while the average class size in the US is 15 students, France is 14 students, while both Japan and Germany are 16 students. Many studies indicate that the number of students in a classroom is related to teachers’ perspectives regarding inclusive education. For instance, general education teachers reported that a decrease in the number of students in the classroom to 20 students facilitates the inclusion effort (Scruggs & Mastropiere, 1996). Other studies conclude that when general education classrooms have a large number of students, teachers may possess more negative perspectives regarding the inclusion of students with disabilities (Buysse, Wesley, & Keyes, 1998; Wesley, Buysse, & Tyndall, 1997). Bender et al. (1995) also found that teachers with a large number of students in the classroom had a negative perspective toward the inclusion of students with disabilities. To summarize, the number of students either with or without disabilities in a classroom, may be related to teachers’ perspectives toward inclusive education for students with severe disabilities.

**Grade level.** Researchers report that the grade level taught correlates with teachers’ perspectives of inclusion. For example, Elhoweris and Alsheikh (2006) noted that high school teachers have more positive perspectives than elementary school teachers toward the inclusion of students with severe disabilities. By contrast, Avramidis and Norwich (2002) revealed teachers in elementary and middle school have more positive perspectives regarding inclusive education than teachers in high schools. Bender et al. (1995) also found a correlation between 127 teachers’ perspectives toward mainstreaming of students with disabilities and grade level taught (from kindergarten to eighth grade). This investigation found that most teachers who taught higher grade levels
had more negative perspectives of inclusive education than those who taught lower grade levels. Additionally, Hanrahan and Rapagna (1987) examined the perspectives of 75 Canadian teachers regarding the mainstreaming of students with mental retardation by grade level (kindergarten to eleventh grade). This investigation found that Canadian teachers‘ perspectives are negative toward mainstreaming students regardless of their grade level.

Despite the literature showing that grade level has a differential relationship with teachers‘ perspectives toward inclusive education, some studies demonstrated there is no correlation between teachers‘ perspectives regarding inclusive education and grade level. For instance, Giacchi (2003) found no significant correlation between teachers‘ perspectives regarding inclusive education and grade level. Thus, findings are inconclusive as to how grade level taught relates to teachers‘ perspectives regarding inclusive education for students with severe disabilities.

**Previous inclusive teaching experience.** Avramidis et al. (2000) examined the perspectives of 81 teachers in elementary and secondary schools in England regarding inclusive education for students with disabilities based on teaching experience in an inclusive setting. This study concluded that teachers with teaching experience in inclusive settings possessed more positive perspectives regarding inclusive education.

Thousand, Meyers, and Nevin (1998) also investigated the perspectives of 578 special and general education teachers who taught students with disabilities in inclusive settings. These teachers reported that having students with disabilities in their classroom positively changed their perspectives regarding inclusion. Buysse, Skinner, and Grant (2001), investigated the perspectives of 92 teachers using a qualitative approach
(interview method) and concluded that teachers with previous teaching experience in inclusive settings reported positive perspectives toward placement in an inclusive setting for students with disabilities in early childhood programs.

Vaughn et al. (1996) examined teachers’ perspectives of inclusive education based on their previous teaching experiences in inclusive education settings using a qualitative approach (focus group interview). This study found that teachers with more years experience working in inclusive education had more positive perspectives regarding inclusion than those with less experience or those with none.

**Gender differences.** Gender may be another factor related to teachers’ perspectives toward inclusive education for students with severe disabilities. For instance, Alghazo and Gaad (2004) examined the perspectives of 160 male and female general education teachers in the United Arabia Emirates regarding the inclusion of students with disabilities. This study showed that female teachers had more positive perspectives toward inclusion of students with disabilities. Similary, other studies report that a majority of female teachers express positive perspectives toward the inclusion of students with disabilities than male teachers (Aksamit, Morris, & Leunberger, 1987; Harvey, 1985). On the other hand, some research reported that gender does not relate to teachers’ perspectives toward the inclusion of students with disabilities (Elhoweris & Alsheikh, 2006; Scruggs & Mastropiere, 1996). Accordingly, gender may or may not be related to teachers’ perspectives regarding inclusive education.

**Family member with a disability.** There are several studies that examined whether or not having a family member with a disability might relate to teachers’ perspectives toward the inclusion of students with severe disabilities. For example, Al-
Ahmadi (2009) investigated Saudi teachers’ perspectives regarding the integration of students with learning disabilities. This study concluded that there is no difference between the perspectives of teachers in Saudi Arabia toward the integration of students with learning disabilities for those who had a family member with a disability or not. Similarly, Parasuram (2006) examined 340 Indian teachers’ perspectives regarding inclusive education of students with disabilities. This study indicated no difference between teachers’ perspectives regarding inclusive education, whether they had a family member with a disability or not. Accordingly, these studies concluded that there was no relationship between having a family member with a disability and teachers’ perspectives regarding the inclusion of students with disabilities.

In summary, a great deal of research has shown the factors related to teachers’ perspectives regarding inclusive education for students with disabilities include: years of teaching experience, teachers' current teaching position, teachers' level of education, class size, grade level, previous inclusive teaching experience, gender differences, and having a family member with a disability. Taking into consideration these variables in the current research as factors that may relate to teachers’ perspective regarding the inclusion of students with severe disabilities is valuable to the field.

**Measuring Teachers’ Perspectives of Inclusion**

Social and behavioral researchers have developed many scales to understand teachers’ perspectives towards inclusion. For instance, Semmel, Abernathy, Butera, and Leaser (1991) developed the "Regular Education Initiative Teacher Survey" (REITS), designed to determine attitudes concerning the inclusion of students with mild disabilities, such as learning disabilities and behavioral disorders in general education.
classrooms. This scale includes items divided into 14 factors including: the special education teacher’s role, feelings about students with mild disabilities, adapting instruction to the needs of students with mild disabilities, teacher preparedness, and shared responsibility, among others. However, the REITS does have some limitations. For example, it includes 66 items, so answering all the questions can take a considerable amount of time. It is also designed only to measure attitudes towards students with mild disabilities. For these reasons, this scale would not be appropriate to use in measuring the perspectives of teachers in Saudi Arabia regarding the inclusion of students with severe disabilities.

Another scale that measures teachers’ attitudes toward inclusion is the “Scale of Teacher’s Attitudes toward Inclusive Classrooms” (STATIC), developed by Cochran in 1997. STATIC includes 20 items designed to measure positive and negative attitudes toward inclusion. A possible limitation of this scale is that it assumes a high level of content understanding specific to inclusive practices on the part of respondents. The participants in the current study were not likely to recognize some of the concepts presented, such as the idea of curriculum modifications and adaptations, as these concepts are not part of their current vocabulary or practice in Saudi Arabia.

Opinion Relative to the Integration of Students with Disabilities (ORI) is another scale designed to measure the attitudes of teachers toward the inclusion of students with disabilities. The ORI is a modified version of the Opinions Relative to Mainstreaming (ORM) developed by Larrivee and Cook (1979) to investigate teachers‘ attitudes toward mainstreaming students with disabilities in general classrooms (Antonak & Larrivee, 1995). The ORI scale includes 25 items divided into four factors: (a) benefits of
integration, which includes eight items, (b) integrated classroom management, which includes ten items, (c) perceived ability to teach students with disabilities, which includes three items, and (d) special versus integrated general education teachers that includes four items.

For the purpose of the current study, a scale that measures teachers’ perspectives toward inclusion of students with severe disabilities in general education settings in Saudi Arabia was needed. The researcher decided to use ORI to measure the perspectives of teachers regarding the inclusion of students with severe disabilities in this study for several reasons. First, the ORI has comprehensive factors that can be used to gather adequate information regarding teachers’ perspectives toward inclusion of students with disabilities. Second, the content of the items are appropriate for obtaining information regarding the background of special education and general education teachers in Saudi Arabia. For example, these items do not include advanced concepts of inclusion, such as modifications and adaptations of general curriculum or use of assistive technology, as these issues are likely to be unfamiliar for these teachers. Additionally, permission was granted by the authors of the ORI and encouraged the researcher to use it. There were previous studies that used the ORI scale in different languages. For example, a study conducted by Errol et al. (2005) compared the attitudes of 152 high school teachers regarding the integration of the students with disabilities in Haïti and the United States using the ORI-English and French versions. This research found that teachers in these two countries had similar attitudes toward the integration of students with disabilities. They also concluded that years of experience, and the level of education were
significantly correlated with teachers’ attitudes. Lastly, in this study a Cronbach alpha of 0.83, a good level of reliability, was reported.

The ORI has been used to successfully identify Saudi teachers’ perceptions of the inclusion of students with disabilities. For example, Al-Ahmadi (2009) examined the perspectives and attitudes of 255 teachers towards the integration of students with learning disabilities in regular Saudi public schools using the ORI Arabic version. The researcher analyzed teachers’ perspectives based on the respondents’ demographic and independent variables (e.g., gender, age, degree held, years of teaching experience, having a family member with disability, and previous training in special education or inclusive education). This study found that male teachers had more positive attitudes toward the integration education of students with learning disabilities than female teachers. This study also found that the type of degree teachers held affected teachers’ attitudes regarding the integration of students with learning disabilities. Those holding master’s degrees were more likely to have positive attitudes toward inclusive practices. The coefficient alpha of ORI of the Arabic version was 0.73. This study reported that teachers’ attitudes were neutral regarding the inclusion of students with disabilities. The study also concluded that previous teaching experience and inclusive in-service training significantly correlated positively with the teachers’ attitudes regarding the inclusive education of students with disabilities. Finally, Jobe et al. (1996) examined the attitudes of 162 teachers regarding inclusive education for students with disabilities using the ORI-English version and the correlation between their attitudes and gender, teaching experience, and inclusive in-service training. The coefficient alpha of the ORI total score was very high (.90). Overall, taking into consideration the limitations of the scales
discussed above, the ORI is an appropriate scale for answering the research questions and for the population of the present study in addition to it having a high reliability in previous studies. The specific reliability and validity of the ORI will be further discussed in the method section.

Summary of the Chapter

This chapter presented a general background of individuals with severe disabilities in terms of definitions of severe disability, and the difference between severe disabilities and multiple disabilities terms. The chapter also described components of an appropriate education for students with severe disabilities. A brief historical overview of inclusion, the difference between inclusion and mainstreaming, and positive outcomes of inclusion for students with severe disabilities were presented. The final section of the chapter presented research related to teachers’ perspectives of inclusive education, factors that might relate to their perspectives, and scales used to measure teachers’ perspectives of inclusion.
Chapter 4: Methodology

The purpose of this study was to explore the perspectives of teachers regarding the inclusion of students with severe disabilities in general education settings in Saudi Arabia using quantitative research methods. This study examined the perspectives of teachers based on: (1) current teaching position (whether they are special or general education teachers), (2) training (less versus more training on inclusive education for students with disabilities), (3) teachers’ levels of education, (4) grade level taught, (5) previous inclusive teaching experience, (6) teachers’ gender, and (7) having a family member with a disability.

This chapter presents a description of the research questions, the research design, independent and dependent variables, a description of the demographics, setting, participants, and procedures for selecting the sample. This chapter also discusses the instrumentation, including the survey instrument, its validity and reliability, the translation and back translation of the survey, and results of the pilot study. Finally, the data collection and analysis procedures are described.

Research Questions

The questions addressed by this research are as follows:

1) Are there significant differences in teachers’ perspectives based on their current teaching position (whether they are special or general education teachers), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

2) Are there significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on the teacher’s training (less training
or more training on inclusive education for students with disabilities), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

3) Is there a significant interaction effect between the current teaching position and teacher's training, after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

4) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on their level of education?

5) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on previous teaching experience with any kind of disabilities in inclusive settings (a public school setting)?

6) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on grade level taught (first grade, second grade, third grade, fourth grade, fifth grade, or sixth grade)?

7) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on teachers' gender?

8) Are there significant differences in teachers' perspectives regarding the inclusion of students with severe disabilities based on whether they have a family member with a disability?

9) What are overall teachers' perspectives in Saudi Arabia regarding the inclusion of students with severe disabilities in general education classrooms?
Research Design

The main purpose of this study was to investigate teachers' perspectives regarding inclusive education for students with severe disabilities in Saudi Arabia. Another goal of this research was to examine the relationship between teachers' perspectives as a dependent variable and their current teaching position, level of education, training, grade level taught, previous inclusive teaching experiences, gender, and having a family member with a disability as independent variables.

An appropriate research design that meets the research objectives of this study would be a non-experimental quantitative research design using a survey to collect the relevant data. According to Johnson, (2001) non-experimental quantitative research is a common and an important approach in the area of educational research for several reasons. First, the study contains some non-manipulated independent variables, such as gender that cannot be examined using quantitative experiments; therefore, using non-experimental quantitative research in this case is necessary. Even though this design allows the researcher to measure variables believed to be related, it is important to state that the main disadvantage of this method is that it does not allow the researcher to measure the causality between independent variables and dependent variables (Warner, 2008).

There are numerous non-experimental quantitative research methods that might be used; however, based on the objectives of this study, two types were used in terms of descriptive and correlation research. Descriptive research allows the researcher to describe the data and their characteristics in the population without examining the relationship between the variables in the study (Light, Singer, & Willett, 1990). In this
study, descriptive statistics were used to describe the overall perspectives of teachers regarding inclusive education for students with severe disabilities in Saudi Arabia.

By contrast, correlation research allows the researcher to determine association but not causation between independent and dependent variables or outcomes (Light et al., 1990). Therefore, in this study correlation research was used to examine the association between the dependent and independent variables. In short, non-experimental quantitative research was used in this study to assist in answering the research questions.

Variables and Demographics

Variables. There are two types of variables investigated in this study. The dependent variable in this study was the perspectives of teachers toward the inclusion of students with severe disabilities in general education settings in Saudi Arabia. In this study also there are seven independent variables which include: (1) current teaching position (whether they are special or general education teachers), (2) training (less training and more training on the inclusive education), (3) educators’ level of education, (4) grade level taught, (5) previous inclusive teaching experience, (6) teachers’ gender, and (7) having a family member with disability, with class size as a covariate. This study investigated the relationship of the independent variables and teachers’ perspectives regarding the inclusion of students with severe disabilities in a general education setting in Saudi Arabia.

Demographics. This study examined the perspectives of teachers regarding the inclusion of students with severe disabilities in general education settings. Therefore, this study examined the following participant demographics: (1) current teaching position (whether they are special or general education teachers), (2) the highest level of education
degree attained (associate, bachelor, master, doctoral, and other), (3) the number of years of teaching experience, (4) training (whether teachers attended conferences, workshops, courses, or professional development that discuss the concept of inclusion), (5) number of students in teachers’ classes, (6) the grade level taught (first grade, second grade, third grade, fourth grade, fifth grade, and sixth grade), (7) previous inclusive teaching experience (whether teachers have worked with students with disabilities in a general education setting or not), (8) participants’ gender (male or female), and (9) whether or not teachers have a family member with a disability.

**Population.** The target population for this research study included male and female general and special education teachers in public elementary schools, that taught in special education programs in the capital city of Riyadh in Saudi Arabia during the 2010-2011 academic year. There are approximately 23,000 elementary teachers working in Riyadh, including 2,083 special education teachers. The city of Riyadh has been chosen for this study because it is has the largest population of teachers (560,830 teachers) in Saudi Arabia (Ministry of Education, 2008). Riyadh also has more special education institutions for students with severe disabilities than other cities in Saudi Arabia (approximately four special education institutions).

**Setting and Participants**

This study was conducted in Saudi Arabia with elementary school teachers of boys and girls in the city of Riyadh that had special education programs. Participants were teachers who work in elementary schools that had special education programs under the supervision of the Ministry of Education.
Most of the general education teachers earned either a bachelor’s or master’s degree(s), from different universities in Saudi Arabia, such as King Saud University in Riyadh, in various fields, such as Islam, art, science, Arabic language, math, and so forth. In some cases, special education teachers have earned either a bachelor’s or master’s degree(s) in special education in three main areas (learning disability, mental retardation, and deafness) from the Special Education Department at King Saud University or they have a bachelor’s degree in general education with an associate’s degree in special education.

Sample Size

As indicated by Light and colleagues (1990) the “more people you include in your study, the better your chances of finding effects that really exist” (p. 186). However, this might come with a cost in time and effort; therefore, it was significant for the researcher to consider how many participants were needed for the study. Indeed, the researcher determined the sample size required by taking into consideration several issues.

The process of determining how many people are sufficient for the study to avoid making a Type II error (failure to reject H0, when it is false) is known as statistical power analysis (Light et al., 1990). Statistical power is always important to consider for any study to determine how many participants are needed for the research (Aron et al., 2007). Additionally, the level of power (low or high) used in the study might affect the probability of statistically significant findings (Aron et al., 2007). For instance, when the study has a low level of power, the probability of getting non-statistically significant findings will increase even though the research hypothesis might be true and vice versa.
Thus, taking into consideration these issues, carefully planned power should be considered.

After the researcher considered the previous issues, the G*Power 3 software program was used in order to estimate the required sample size. Power analysis requires defining many factors before estimating the required sample size using this program. First, the researcher needs to define the effect size to be used (measure of the distance between null hypothesis and alternative hypothesis). In this study, the useful guidelines of Cohen, commonly accepted by many researchers, were used (Light et al., 1990). Cohen (1988) suggests the effect size conventions as: (a) $d=0.20$, for small effect size, (b) $d=0.50$ for medium effect size, and (c) $d=0.80$ for large effect size. As a result, the researcher determined that a medium effect size ($d=0.50$) to be appropriate for this study.

Second, determining the level of alpha (e.g., 0.05 or 0.01) is another essential consideration in power analysis. For instance, an alpha level of (0.05) means that the researcher is willing to accept that there is a 5% chance that the results are due to chance. The researcher determined an appropriate level of alpha of (0.05) would be used, the most commonly used level of alpha.

Third, as a general guideline recommended by Light and his colleagues (1990), the study design should have a power between .70 and .90. Therefore, as a commonly used guideline of power, this study used .80, which means that the probability of the study producing statistically significant findings is .80 when the research hypothesis is true, and limits the probability of making a Type II error to .20 (Aron et al., 2007). A two-tailed test was appropriate for this analysis.
Finally, seven independent variables, one covariate and one dependent variable were considered in this study. Accordingly, after all of these factors were considered, using the G* Power 3 Program, the minimum number of participants required for this study was 128 (32 of each subgroup, male, female, general education teachers, and special education teachers) to achieve a power of 0.80 with an alpha level of 0.05 and a medium effect size of (.50).

Sample and Sampling Procedures

According to Leedy and Ormrod (2001), a good sample is representative of the study population. Furthermore, in research studies it is important to select an appropriate sample size that guarantees accuracy, precision, and a good representation of the population (Gall, Borg, & Gall, 1996). Therefore, the researcher decided to use multiple sampling strategies to select the sample in terms of stratified and cluster sampling.

Stratified sampling was the first strategy used in this study. This entails selecting an adequate representation of a certain subgroup in the population (Gall et al., 1996). The current study used this strategy to identify male and female teachers in elementary schools in Riyadh because this city is divided by the Ministry of Education into school regions (East, West, North, South, and the center of the city). The five strata define the schools for both male and female teachers in elementary schools in Riyadh in terms of North, South, East, West, and the Center regions.

Regarding the size of the sample that was recruited to complete the survey in this study, some research suggests that “there be at least 100 subjects in each major subgroup” (Borg & Gall, 1989, p. 233). Based on this suggestion, the researcher decided to randomly select 100 subjects from each subgroup (male and female teachers and
general and special education teachers) which means that the total sample size in this study would be 400 teachers. In order to reduce any response bias, the researcher decided to distribute the survey to 460 teachers with the hope that at least approximately 400 teachers would respond and return a completed survey.

A second sampling strategy used in this study was cluster sampling. Schools were the unit of sampling in this study. In the next section, the researcher describes the random selection of schools in each of the five school districts (East, West, North, South, and the Center regions of the city Riyadh), and the researcher invited all teachers in each location. Thus, the researcher first used stratified sampling to identify locations and then used clustering to choose all teachers in the selected schools.

The researcher selected a total of 20 schools from the five regions that have special education programs, four schools from each region (two male and two female schools), since the Saudi’s education system separates girls’ and boys’ schools for religious reasons. Next, the researcher randomly selected 23 teachers from each school to respond to the survey. Thus, this brings the total sample to more than 400 teachers as mentioned above.

**Instrumentation**

This study used a survey in order to measure teachers’ perspectives regarding the inclusion of students with severe disabilities in general education settings in Saudi Arabia.

The survey instrument used in this study was adapted from the Opinion Relative to Integration of Students with Disabilities (ORI), which is a modified version of the Opinion Relative to Mainstreaming (ORM) developed by Larrivee and Cook in 1979 to
investigate teachers’ attitudes toward mainstreaming students with disabilities in general classrooms (Antonak & Larrivee, 1995). The ORI scale includes 25 items divided into four factors: Factor I, benefits of integration, includes eight items (items 3, 7, 11, 14, 17, 20, 21, and 24); factor II, integrated classroom management, includes ten items (1, 4, 6, 9, 12, 15, 16, 18, 22, and 25); factor III, perceived ability to teach students with disabilities, includes three items (2, 10, and 19); and factor IV, special versus integrated general education teachers, that includes four items (5, 8, 13, and 23). Finally, the ORI scale has 12 negatively worded statements (items 2, 4, 6, 8, 9, 11, 12, 14, 18, 20, 23, and 24) and 13 positively worded statements (items 1, 3, 5, 7, 10, 13, 15, 16, 17, 19, 21, 22, and 25).

The survey completed by participants in this study contained three parts. The first part of the survey included a description of the purpose of study, instructions for answering the survey questions, and the rights of the respondents (See Appendix A for English version and Appendix C for Arabic version) in the form of a consent form.

The second part of survey included nine questions regarding the participants’ demographic characteristics: (1) current teaching position (whether they are special or general education teachers), (2) educators’ level of education, (3) years of teaching experience, (4) training, (5) number of students in teachers’ classes, (6) grade level taught, (7) previous inclusive teaching experience, (8) gender (female or male), and (9) having a family member with a disability.

After written permission for the study was given by Richard Antonak (Appendix E), the ORI, which includes 25 items, was used as the third part (perspectives of teachers regarding inclusive education for students with severe disabilities) of this survey with
some modifications based on the purpose of study. For instance, some words were changed, such as: inclusion instead of integration, and students with severe disabilities instead of students with disabilities as well as language appropriate for addressing teachers in Saudi Arabia. As mentioned above, the survey included a combination of 25 negatively and positively phrased statements in order to avoid response bias on the part of the respondents to the survey.

A Likert scale is common and helpful when the goal of the research is to examine attitudes regarding certain issues (Leedy & Ormrod, 2001). A Likert scale is also more efficient in terms of time and has high reliability when compared with other scales (Crano & Brewer, 2002). Therefore, a Likert scale was used in this study with five points that allowed teachers to respond based on their level of agreement (Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, and Strongly Disagree = 1).

The final part of the survey included open-ended questions that asked the teachers their comments and suggestions about educating students with severe disabilities in a public school either in a general classroom, or in a separate classroom within the public schools (See Appendix B for English version and Appendix D for Arabic version).

Translation

The quality of translation and validation of the translated instrument plays a significant role in ensuring that “the results obtained in cross-cultural research are not due to errors in translation” (Maneesriwongul & Dixon, 2004, p. 175). Brislin, Lonner, and Thordike (1973) suggest the researcher should consider one or more of the following ways in order to ensure the quality of a translated instrument used in a cross-cultural study: (1) bilingual techniques, (2) back-translation, (3) committee approach, and (4) a
pilot study. The instrument used in this study, (the ORI) exists in an English version that has been translated into an Arabic version and sent to teachers whose first language was Arabic; thereby, the researcher considered three methods to ensure the quality of the translated instrument.

**Committee approach.** The researcher considered the committee approach (team of bilingual people) by sending an English version to bilingual professionals or faculty in the Language and Translation College at King Saud University and Ohio University in order to translate to an Arabic version (see Appendix H).

**Back-translation.** In the back-translation technique, the translation from the Arabic version to the English version ensures the linguistic equivalence of the instrument and the quality of translation across cultures. The researcher translated the English version to an Arabic version and had a separate translator retranslate the instrument back into English without having seen the original English version.

**Pilot study.** Conducting a pilot study is a significant method to determine whether a data collection instrument has appropriate and clear language. Additionally, a pilot study is—often recommended to estimate response rate and investigate the feasibility of a study” (Johnson & Brooks, 2010, p. 1). In response, this study implemented a pilot study to examine the feasibility and utility of using the ORI for this research. Moreover, the pilot study explored the use of appropriate language, as well as survey length. The pilot study also analyzed the cultural relevance of the questions and all of the respondents‘ logical suggestions were considered in the final Arabic version.

**Participants in the pilot study.** Regarding the number of participants who participate in a pilot study, there is little research to suggest specific numbers in the pilot
study (Johnson & Brooks, 2010). However, Johnson and Brooks recommend 30 people as an appropriate number for participation in a pilot study. As a result, the pilot survey was distributed to 35 teachers. None of the pilot respondents were part of the actual study sample to avoid preset sensitization (Crano & Brewer, 2002). The researcher was also concerned that the pilot represent participants (35 teachers) similar to actual study participants. Therefore, the researcher selected respondents from the target population, such as special and general education teachers who work in private elementary (not public) schools with special education programs.

The pilot survey was administered using Qualtrics software. A list of email addresses of participating teachers was obtained from the principals of elementary schools that were randomly selected after obtaining the approval of the IRB as well as the school district of boys and girls in Riyadh (see Appendixes F & K). A total of 35 participants responded to the pilot survey.

Coefficient alpha for the ORI scale was 0.63. Generally, most of the items positively correlated with the total score except items 1, 3, 5, 16, and 25, which were negatively correlated with the total score (-.230, -.089, -.09, -.060, -.013) respectively. Additionally, some teachers indicated that items 12, 19, and 24 should be clarified due to the fact that these three items were complex and indirectly phrased. Therefore, the researcher decided to carefully examine these items to identify whether these items had more than one interpretation, proper grammar, used vocabulary that could be understood easily by the participants and took into consideration the comments and suggestions of the pilot study respondents. After the researcher considered teachers’ feedback and the
data analysis, the survey was constructed with 25 items (see Appendix B for English version and Appendix D for Arabic version).

Accordingly, the researcher considered these suggestions in the final version of the ORI-Arabic version as well as feedback from dissertation committee. Overall, these procedures improved the quality of the survey content and the validity of the scale, as well as improved some language and technical mistakes and helped to predict approximately how long the survey would take participants to complete.

Validity of the survey. Validity refers to "the extent to which a particular instrument, such as an attitude scale, measures what its developer intends for it to measure" (Antonak & Livneh 1988, p. 99). There are numerous procedures to determine the validity of an instrument. In this case, the validity of the instrument was established through a review of previous studies and an analysis of the validity of scales that are used to examine the perspective of teachers regarding the inclusion of students with disabilities in general education settings (Antona & Larrivee, 1995; Antonak & Livneh, 1988). Thus, face, content, and construct validity were used to describe the validity of the instrument.

Antonak and Livneh (1988) point out that face validity is the "extent to which the scale items may be considered to be an adequate, appropriate, complete, and representative sample of the hypothetical domain that is being measured" (p. 100). Content validity is "the degree to which the content of a measure truly reflects the full domain of the construct for which it is being used, no more and no less" (Furr & Bacharach, 2008, p. 173).

In this study, the face and content validity of the survey instrument were examined by a panel of experts in two stages. In the first stage, the researcher selected six
professionals from a panel of experts in the Arabic and English Language Department at King Saud University, Ohio University, and Imam University to assess the face validity in Arabic and English versions in terms of the clarity, wording, appearance, and ease of use of the survey (see Appendix H).

A second stage was conducted to ascertain the content validity. The researcher chose three professionals in the field of special education, who are particularly interested in the concept of inclusion for students with disabilities in general education settings. Faculty bilingual experts, who hold doctoral degrees in special education from universities in the US, were included as panel experts. Thus, the panel team experts examined the face and content validity prior to and after conducting the pilot study.

Construct validity is directly concerned with the theoretical relationship of a variable to other variables” (DeVellis, 1991, p. 46). There are many ways to measure construct validity in terms of an Analysis of Variance (ANOVA), correlation coefficients, and factor analysis. However, in this study, the researcher used factor analysis to examine the construct validity. Factor analysis has become a common way for researchers to measure construct validity (Goodwin, 1999). Factor analysis is valuable in the way that it allows for the researcher to identify of a relatively small number of factors that can be used to represent relations among a set of interrelated variables” (Goodwin, 1999, p. 86).

After the data were collected from the participants, a factor analysis was used to examine the validity of the ORI scale in the Arabic version. The total variance explained in Table 1, labeled, “Initial Eigenvalues” (see Appendix J) illustrates how much of the total variance of the observed variables was explained by each of principal-components. The first three principal-components having variances of 5.776, 2.918, and 2.067 account
for 23.106%, 11.673%, and 8.268%, of the variance, and these three components explained 43.047% of the total variance. Therefore, the 25 items representing the independent variables loaded on three dimensions as can be seen in Table 2 (see Appendix, J). Moreover, the scree plot in Figure 1 (see Appendix, J) showed the same result when looking for the natural bend or break point in the data where the curve flattens out at the 3 value on the x-axis. This was further supported by the results of parallel analysis with 25 items, 303 cases, and 1000 replications, which showed only three components, confirming a finding of three factors as can be observed from Table 3 (see Appendix, J). Thus, this result indicated that the three factors represented the 25 items, but not perfectly, since 25 items would load into four factors instead of three factors, as can be noted in Tables 4 and 5 (see Appendix, J). Therefore, it is highly recommended for other researchers who use this scale to revise the items of the fourth factor that were not represented by the 25 items.

**Reliability.** Reliability is the measurement of the internal consistency of a survey (Gay, 1996). Since the current study used the ORI to explore the perspectives of teachers in Saudi Arabia toward the inclusion of students with severe disabilities in general settings, it was important to consider the reliability of the ORI.

Antonak and Larrivee examined the reliability of ORI with 433 participants in 1995 and the Cronbach's alpha coefficient of ORI was determined to be 0.88. Moreover, the split-half reliability of the ORI as defined by Spearman-Brown's reliability coefficient was reported to be 0.82, with a standard error of measurement of 5.98 (Antonak & Larrivee, 1995). Other studies that used the ORI reported a high reliability of total scores on this scale; for instance, Al-Ahmadi (2009) reported the coefficient alpha of
ORI - Arabic version as 0.73. In the study conducted by Errol et al. (2005) the coefficient alpha of the ORI was 0.83. Finally, Jobe et al. (1996) indicated the coefficient alpha for the ORI scale in their study was 0.90. Accordingly, in previous studies the ORI scale demonstrated good reliability. In order to examine the reliability of the ORI - Arabic version using the study data, Cronbach Alpha was used. The coefficient alpha of the ORI total score had a good reliability (.84) and the coefficient alpha for each factor was as follows: Factor I (8 items) = .73, factor II (10 items) = .62, factor III (3 items) = .51, and factor IV (4 items) = .39 as shown in Table 6.

Table 6

*The Cronbach’s Alpha Values for the ORI-Arabic Version*

<table>
<thead>
<tr>
<th>Category</th>
<th>No. of Items</th>
<th>Cronbach’s Alpha</th>
<th>N of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall ORI Scale</td>
<td>25</td>
<td>.84</td>
<td>303</td>
</tr>
<tr>
<td>Factor I</td>
<td>8</td>
<td>.73</td>
<td>303</td>
</tr>
<tr>
<td>Factor II</td>
<td>10</td>
<td>.62</td>
<td>303</td>
</tr>
<tr>
<td>Factor III</td>
<td>3</td>
<td>.51</td>
<td>303</td>
</tr>
<tr>
<td>Factor IV</td>
<td>4</td>
<td>.39</td>
<td>303</td>
</tr>
</tbody>
</table>

**Data Collection and Analysis Procedures**

After the researcher obtained approval from the Committee for the Protection of Human Subjects in Research Institutional Review Board (IRB) at Ohio University, as
well as approval from the Ministry of Education (see Appendixes G & K) to ask the principals to distribute and collect the survey to teachers, assistance mediator researchers (men) distributed the questionnaire to the teachers in the selected schools. Based on the rules in Saudi Arabia, men cannot enter girls’ schools for any reason, including research purposes due to Islamic religious values. Therefore, assistance mediator researchers (women) contacted each principal of the girls' elementary schools that had been selected and asked the principals to choose 23 teachers and distribute the questionnaire to each teacher. The 460 teachers were selected by principals and invited to complete the questionnaire. In order to reduce any response bias, the researcher decided to distribute the survey to 460 teachers with the hope that at least approximately 400 teachers would respond and return a completed survey. The mediators returned to the schools in approximately three weeks to collect the completed surveys.

**Data Analysis Procedures**

The analysis procedures for the data from this study are described in the following sections.

**Inferential statistics.** As indicated by a large body of research that current teaching position, class size (number of students), and teacher’s training are significant factors that might relate to teachers’ perspectives regarding inclusive education for students with severe disabilities (Avramidis et al., 2000; Elhoweris & Alsheikh, 2006; Harvey, 1985; Forlin, 1995; Leyser et al., 1994; Scruggs & Mastropiere, 1996; Smith, 2000). Therefore, the researcher controlled class size as covariate, to identify the relationship of training (less training versus more training on inclusive education) and current teaching position (special education and general education teachers) with
teachers’ perspectives regarding the inclusion of students with severe disabilities. In this procedure, the researcher used a 2X2 Analysis of Covariance (ANCOVA) to conduct this analysis. This determined whether there was a main effect of the current teaching position and training, as well as an interaction effect for the training and current teaching position factor on teachers’ perspectives regarding the inclusion of students with severe disabilities. More specifically, this analysis assisted the researcher to answer research questions 1, 2, and 3.

1) Are there significant differences in teachers’ perspectives based on their current teaching position (whether they are special or general education teachers), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

2) Are there significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on the teacher’s training (less training or more training on inclusive education for students with disabilities), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

3) Is there a significant interaction effect between the current teaching position and teacher’s training, after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

To answer research question four, whether there are differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on their level of education, a one-way analysis of variance (ANOVA) was used to compare differences between group means.
To answer the fifth research question regarding differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on previous inclusive teaching experience (whether teachers worked with students with disabilities in inclusive settings or not), a t-test for independent means was used to compare differences between group means.

To answer the sixth research question regarding differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on grade level taught, a one-way analysis of variance (ANOVA) was used to compare differences between group means.

To answer the seventh research question regarding differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on gender, a t-test for independent means was used to compare differences in group means.

To answer the eighth research question regarding differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on whether they have a family member with a disability, a t-test for independent means was used to compare differences in group means.

**Descriptive statistics.** To answer the final research question regarding teachers’ overall perspectives of including students with severe disabilities in general education classrooms in Saudi Arabia, descriptive statistics (e.g., means, frequencies, percentages, and standard deviations) were calculated for all demographic data (e.g., current teaching position, level of teachers’ education, years of teaching experience) to summarize and describe the data collected from the participants.
**Assumptions.** There are three assumptions that must be met for a t-test for independent means that were considered. The first assumption is that the distribution for each group that is being compared on the dependent variable should be normal (Stevens, 1999). The second assumption is that the variance for each group should be the same. This assumption can be detected using Levene's test which assists the researcher in defining whether or not homogeneity of variance has been violated. For example, when the p-value of Levene's test is not significant (e.g., p-value > 0.05), it means this assumption is met; however, if it is significant, (e.g., p-value equal or ≤ 0.05) there is a violation of the homogeneity of variance assumption. The dependent variable should be quantitative (continuous) which is true for the ORI scale; therefore, this assumption is met (School of Psychology of University of New England, 2000).

The assumptions of an ANOVA: a normal distribution, homogeneity of variance, and dependent variables are either interval or ratio (continuous) were examined by the same methods for an independent t-test. Lastly, the assumptions of an ANCOVA were examined in terms normality of distribution, homogeneity of variance, and homogeneity-of-slopes were examined. For these statistical procedures, the researcher used the Package for the Social Sciences (SPSS-version 17) to analyze the data in this study.

**Summary of the Chapter**

In this chapter, the researcher presented a description of the study’s research design which is a non-experimental design. The researcher also discussed in detail, the target population, setting, participants, and sample size. Furthermore, the data collection instrument that was used in the study, the ORI, was explained in terms of validity, reliability, translation, and back-translation procedures, as well as the pilot testing of the
ORI was described. Finally, this chapter defined the data collection and analysis procedures.
Chapter 5: Results of the Study

The purpose of this study was to examine teachers’ perspectives regarding the inclusion of students with severe disabilities in general education settings in Saudi Arabia using quantitative research methods. In this chapter, the results of this study were presented in five sections: (1) the response rate, (2) the participants’ demographic information, (3) the findings in relation to the research questions, (4) the responses to the open-ended question, (5) and the summary of the chapter.

Response Rate

The questionnaires were distributed to 460 male and female education teachers in elementary schools in the city of Riyadh in Saudi Arabia; a total of 318 were returned resulting in a 69% response rate. However, a total of 303 surveys were useable for statistical analysis while a total of 15 were excluded due to incomplete answers for all of the questions in the survey, or the first part was answered but not the rest of the survey. As can be noted from Table 7, a total of 303 contained useable data for statistical analysis which means the response rate was approximately 66%. Of the 303 total participants, 161 were males (a response rate of 70%) 139 were female (a response rate of 60.43%) while three cases were missing data for gender yet were still considered useable data.
Table 7

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number Distributed</th>
<th>Useable Returned</th>
<th>Percentage Questionnaires</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>230</td>
<td>161</td>
<td>70</td>
</tr>
<tr>
<td>Female</td>
<td>230</td>
<td>139</td>
<td>60.43</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>157</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>460</td>
<td>303*</td>
<td>66</td>
</tr>
</tbody>
</table>

* Three cases were missing data for gender.

**Demographic Information**

The questionnaire was distributed to 460 teachers in 20 elementary schools that have special education programs from the five regions: East, West, South, North, and the Center of the City of Riyadh. Of the returned surveys, 303 were useable for the statistical analysis. The following section provides a description of the participants' demographic information as follows: (1) current teaching position, (2) level of education, (3) training of teachers on inclusive education, (4) number of years of teaching experience, (5) number of students in teachers’ classes, (6) grade level taught, (7) previous inclusive teaching experience, (8) participants’ gender, and (9) whether they have a family member with a disability.
Current teaching position. The percentage of special education teachers who responded to this study was 42.2% (n = 128), while the percentage of general education teachers was 57.8% (n = 175).

Level of education. The majority of the participants had a bachelor’s degree (n = 207 or 68.3%) and 72 (23.8%) had a diploma degree while nine (3%) had another degree (high school diploma). The number of participants that had a doctoral degree totaled eight cases (2.6%). However, the minority of participants had a master degree (n = 6 or 2%), and one case was missing data for level of education.

Training in inclusive education. Participants were asked to identify what types of training in inclusive education (a public school setting) they had received (whether they had attended conferences, courses, workshops, and professional development on the inclusive education of the students with disabilities). As can be noted from Table 8, the participants who attended courses on inclusive education (n = 96) which represents 31.7% of the respondents while 207 (68.3%) reported they did not attend any courses on inclusive education. This was followed by participants who attended workshops on the inclusive education (n= 73, or 24.1%); however, other teachers reported they had not attended any workshops on inclusive education (n = 230) which represent 75.9% of the sample.
Table 8

*Frequency and Percentage of Types of Training on Inclusive Education*

<table>
<thead>
<tr>
<th>Types of Training on the Inclusive Education</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Courses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>96</td>
<td>31.7</td>
</tr>
<tr>
<td>No</td>
<td>207</td>
<td>68.3</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100.0</td>
</tr>
<tr>
<td>Workshops</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>73</td>
<td>24.1</td>
</tr>
<tr>
<td>No</td>
<td>230</td>
<td>75.9</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100.0</td>
</tr>
<tr>
<td>Conferences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>72</td>
<td>23.8</td>
</tr>
<tr>
<td>No</td>
<td>231</td>
<td>76.2</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100.0</td>
</tr>
<tr>
<td>Professional Development</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>61</td>
<td>20.1</td>
</tr>
<tr>
<td>No</td>
<td>242</td>
<td>79.9</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100.0</td>
</tr>
</tbody>
</table>
With regard to conferences on inclusive education for students with disabilities, 72 participants attended (23.8%) whereas (n = 231 or 76.2%) reported they did not attend conferences on inclusive education. Finally, the minority of the participants attended professional development programs (n = 61) which represents 20.1% of the participants; however, 242 (79.9%) indicated they had not attended any professional development programs. Finally, Table 9 indicates that one hundred and fifty-six of the participants had more training on inclusive education (n=156, or 51.48%) whereas 142 (46.86%) had less training on inclusive education.

Table 9

<table>
<thead>
<tr>
<th>Training</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>More Training</td>
<td>156</td>
<td>51.48</td>
</tr>
<tr>
<td>Less Training</td>
<td>142</td>
<td>46.86</td>
</tr>
<tr>
<td>Missing</td>
<td>5</td>
<td>1.65</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100</td>
</tr>
</tbody>
</table>

Teaching experience. As noted in Table 10, the majority of the teachers (n = 116 or 38.3%) had 16 or more years teaching experience; 84 (27.7%) had between six and ten years teaching experience. Sixty-three of the respondents (20.8%) had between 11 to 15 years of teaching experience. Finally, twenty-six teachers (8.6%) had between one to five
years teaching experience; however, the minority of teachers (n = 11, or 3.6%) had less than one year teaching experience.

Table 10

<table>
<thead>
<tr>
<th>Teaching Experiences</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than one year</td>
<td>11</td>
<td>3.6</td>
</tr>
<tr>
<td>1-5 years</td>
<td>26</td>
<td>8.6</td>
</tr>
<tr>
<td>6-10 years</td>
<td>84</td>
<td>27.7</td>
</tr>
<tr>
<td>11-15 years</td>
<td>63</td>
<td>20.8</td>
</tr>
<tr>
<td>16+ years</td>
<td>116</td>
<td>38.3</td>
</tr>
<tr>
<td>Missing</td>
<td>3</td>
<td>1.0</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Class size. As can be noted in Table 11, the majority of teachers (n = 154, or 50.8%) had 21 or more students while 68 (22.4%) had six to ten students. This was followed by teachers who had from 11 to 15 students (n = 45 or 14.9%), whereas 22 (7.3%) had 16 to 20 students. Finally, the minority of the teachers (n = 12, or 4.0%) had one to five students. The average class size for special education was reported to be between 5-15 students while the average class size for general education was reported to be between 20-50 students.
Table 11

<table>
<thead>
<tr>
<th>Number of Students</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 students</td>
<td>12</td>
<td>4.0</td>
</tr>
<tr>
<td>6-10 students</td>
<td>68</td>
<td>22.4</td>
</tr>
<tr>
<td>11-15 students</td>
<td>45</td>
<td>14.9</td>
</tr>
<tr>
<td>16-20 students</td>
<td>22</td>
<td>7.3</td>
</tr>
<tr>
<td>21 or more students</td>
<td>154</td>
<td>50.8</td>
</tr>
<tr>
<td>Missing</td>
<td>2</td>
<td>0.7</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100.0</td>
</tr>
</tbody>
</table>

**Grade level taught.** Sixty-three (20.8 %) of the participants taught all grades.

Table 12 reports all of the grade levels taught by participants.
Table 12

*Frequency and the Percentage of Grade Level Taught*

<table>
<thead>
<tr>
<th>Grade Level Taught</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>First grade</td>
<td>46</td>
<td>15.2</td>
</tr>
<tr>
<td>Second grade</td>
<td>49</td>
<td>16.2</td>
</tr>
<tr>
<td>Third grade</td>
<td>43</td>
<td>14.2</td>
</tr>
<tr>
<td>Fourth grade</td>
<td>46</td>
<td>15.2</td>
</tr>
<tr>
<td>Fifth grade</td>
<td>34</td>
<td>11.2</td>
</tr>
<tr>
<td>Sixth grade</td>
<td>22</td>
<td>7.3</td>
</tr>
<tr>
<td>Other (all grades)</td>
<td>63</td>
<td>20.8</td>
</tr>
<tr>
<td>Missing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>303</td>
<td>100</td>
</tr>
</tbody>
</table>

**Experience with teaching in an inclusive (public school) setting.** Two hundred teachers (66%) had experience teaching any kind of disabilities in a public school setting, while 103 cases (34%) had no experience teaching in this setting.

**Gender.** One hundred sixty-one (53.1%) of the respondents were male while 139 (45.8%) of the participants were female.

**Family member with a disability.** The majority of teachers did not have a family member with a disability (n=200), which represented 66% of the respondents, whereas 102 (33.7%) of the teachers had a family member with a disability; there was one case of missing data for family member with a disability.
Responses to the Research Questions

There were nine questions explored in this study. The following sections illustrate these findings in detail.

Inferential Statistics

There were eight inferential research questions this study attempted to answer. The following sections state each question, as well as the findings relative to the questions.

Research question 1. Are there significant differences in teachers’ perspectives based on their current teaching position (whether they are special or general education teachers), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

Null hypothesis 1. There are no significant differences in teachers’ perspectives based on their current teaching position (whether they are special education or general education teachers), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities.

Research question 2. Are there significant differences in teachers’ perspectives based on their current teaching position (whether they are special or general education teachers), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

Null hypothesis 2. There are no significant differences in teachers’ perspectives based on the teacher’s training (less training or more training on inclusive education for students with disabilities), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities.
Research question 3: Are there significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on the teacher’s training (less training or more training on inclusive education for students with disabilities), after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia?

Null hypothesis 3: There is no significant interaction effect between the current teaching position and teacher’s training after controlling for the covariate of class size (the number of students), regarding the inclusion of students with severe disabilities in Saudi Arabia.

To answer these questions, following a re-coding of negatively worded items, the researcher used a two-way analysis of covariance (ANCOVA) using an alpha significance level of 0.05 to determine whether there were significant differences between the two groups of teachers (special and general education teachers) and whether there are significant differences of training between the two groups of teachers (teachers with less training or more training) on teachers’ perspectives regarding the inclusion of students with severe disabilities in Saudi Arabia.

The independent variables of (1) current teaching position, which included two levels (special and general education teachers), and (2) training in inclusive education for students with disabilities, which included two levels (teachers with less training or more training), and the dependent variable of teachers’ perspectives regarding the inclusion of students with severe disabilities. The covariate used in this analysis was class size (the number of students).
Preliminary assumption testing for an ANCOVA to identify normality of
distribution, homogeneity of variance assumptions and homogeneity-of-slopes were
examined and met. In particular, a Levene test for homogeneity of variance assumption
was done, $F(3, 297) = .726, p = .537$, which indicated no significant violation was found.
To assess the homogeneity-of-slopes assumption, an ANCOVA was performed using
SPSS GLM with a custom model. Findings indicated no statistically significant
interaction among the independent variables and the covariate of class size, $F(3, 294) =
2.598, p = .052$; thereby, the homogeneity-of-slopes assumption was not violated.

As shown in Table 13, the covariate, class size (number of students), was
significantly related to teachers’ perspectives regarding the inclusion of students with
severe disabilities, $F(1, 296) = 4.590, p = .033$, and partial eta squared was $\eta^2 = .015$. The
value in this case was only 1.5% (a small effect size according to Cohen’s guideline, $d = .2$) which means the covariate (class size) representing the number of students in the class,
explained only 1.5 % of the variance in teachers’ perspectives (dependent variable).

As can be seen in Table 13, the main effect of current teaching position on the
ORI total score (teachers’ perspectives), after statistically controlling the variable
representing class size (number of students), was statistically significant, $F(1, 296) =
5.183, p = .024$, with a partial eta squared of $\eta^2 = .017$. This value indicated a small effect
size according to Cohen’s guidelines $d = .2$, which means only 1.7 % variance in the
dependent variable (teachers’ perspectives) can be explained by the independent variable
(current teaching position). This result indicates that regardless of another independent
variable (training), teachers’ current teaching position (general or special education) had
a significant relationship with teachers’ perspectives.
As can be seen in Table 14, the general education teacher group had a higher adjusted mean (the effect of the covariate had been statistically removed) \( (M = 73.503) \) than the special education teacher group’s adjusted mean \( (M = 67.294) \) on the ORI scale. Thus, there were significant differences in teachers’ perspectives based on their current teaching position (whether they are special or general education teachers) regarding the inclusion of students with severe disabilities in Saudi Arabia, which means the first null hypothesis can be rejected.

The main effect of training on the ORI total score (teachers’ perspectives), after statistically controlling the variable representing class size (the number of students), was not statistically significant, \( F (1, 296) = 1.251, p = .264 \), as is reported in Table 13. This finding indicates that regardless of their current teaching position, training had no significant relationship with the teachers’ perspectives towards inclusion of students with severe disabilities in Saudi Arabia. The group that had more training had an adjusted mean \( (M = 69.376) \), while the group with less training had an adjusted mean \( (M = 71.421) \), as reported in Table 14. Accordingly, there were no significant differences in teachers’ perspectives based on their training (less training versus more training) regarding the inclusion of students with severe disabilities in Saudi Arabia, which means hypothesis two cannot be rejected.

Finally, there was no significant interaction effect between the current teaching position and training regarding teachers’ perspectives on the inclusion of students with severe disabilities, \( F (1, 296) = 1.643, p = .201 \), as can again be seen in Table 13 and Figure 2. This result suggests that the current teaching position (whether special or general education teachers) had equal effect on levels of training (less training versus
more training) with teachers’ perspectives towards inclusion of students with severe
disabilities. Thus, the third hypothesis cannot be rejected.
Table 13

*ANOVA for Main Effect and Interaction Effect for Current Teaching Position and Training*

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Mode</td>
<td>1511.513</td>
<td>4</td>
<td>377.878</td>
<td>2.088</td>
<td>.082</td>
<td>.027</td>
</tr>
<tr>
<td>Intercept</td>
<td>170816.787</td>
<td>1</td>
<td>170816.787</td>
<td>943.862</td>
<td>.000</td>
<td>.761</td>
</tr>
<tr>
<td>Number of students</td>
<td>830.664</td>
<td>1</td>
<td>830.664</td>
<td>4.590</td>
<td>.033</td>
<td>.015</td>
</tr>
<tr>
<td>Current Teaching Position</td>
<td>937.955</td>
<td>1</td>
<td>937.955</td>
<td>5.183</td>
<td>.024</td>
<td>.017</td>
</tr>
<tr>
<td>Training</td>
<td>226.447</td>
<td>1</td>
<td>226.447</td>
<td>1.251</td>
<td>.264</td>
<td>.004</td>
</tr>
<tr>
<td>Current Teaching Position *</td>
<td>297.356</td>
<td>1</td>
<td>297.356</td>
<td>1.643</td>
<td>.201</td>
<td>.006</td>
</tr>
<tr>
<td>Training Error</td>
<td>53569.045</td>
<td>296</td>
<td>180.977</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1541764.000</td>
<td>301</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>55080.558</td>
<td>300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 14

The Adjusted Mean and the Std. Error of Teachers on Current Teaching Position and Training

<table>
<thead>
<tr>
<th>Variable</th>
<th>Adjusted Mean</th>
<th>Std. Error</th>
<th>MS</th>
<th>Sig.</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>General education</td>
<td>73.503</td>
<td>1.439</td>
<td></td>
<td></td>
<td>175</td>
</tr>
<tr>
<td>Special Education</td>
<td>67.294</td>
<td>1.833</td>
<td>6.209</td>
<td>Sig.</td>
<td>128</td>
</tr>
<tr>
<td>Less training</td>
<td>71.421</td>
<td>1.205</td>
<td></td>
<td>Not</td>
<td>142</td>
</tr>
<tr>
<td>More Training</td>
<td>69.375</td>
<td>1.389</td>
<td>2.046</td>
<td>Sig.</td>
<td>156</td>
</tr>
</tbody>
</table>

Figure 2. The Interaction Effect for Current Teaching Position and Training
Research question 4. Are there significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on their level of education?

Null hypothesis 4. There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on their level of education.

A one-way analysis of variance (ANOVA) was used to identify whether there are significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on the teachers’ level of education at an alpha significance level less than or equal to 0.05.

Prior to the analysis, the assumptions of ANOVA in terms of a normal distribution, homogeneity of variance, and whether the dependent variable is either interval or ratio (continuous) were examined and met. For the homogeneity of variance assumption, a Levene test was done, $F(4.297) = .859, p = .489$, which indicated this assumption was tenable. The dependent variable should be quantitative (continuous), which is true for the ORI scale; therefore, this assumption was met.

As can be seen in Table 15, the difference between teachers who hold different levels of education (diploma, bachelor, master, doctoral or other) regarding the inclusion of students with severe disabilities was not statistically significant, $F(4,297) = .519, p = .722$. Accordingly, the one-away ANOVA demonstrated no statistically significant difference in teachers’ perspectives regarding the inclusion of students with severe disabilities based on teachers’ level of education, which means the fourth hypothesis cannot be rejected.
Table 15

ANOVA for Mean Perspectives Score and Teachers' Level of Education

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>N</th>
<th>Mean</th>
<th>St.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diploma</td>
<td>72</td>
<td>70.9583</td>
<td>13.50476</td>
</tr>
<tr>
<td>Bachelor</td>
<td>207</td>
<td>70.0531</td>
<td>13.65320</td>
</tr>
<tr>
<td>Master</td>
<td>6</td>
<td>67.0000</td>
<td>6.51153</td>
</tr>
<tr>
<td>Doctoral</td>
<td>8</td>
<td>67.2500</td>
<td>14.11939</td>
</tr>
<tr>
<td>Other</td>
<td>9</td>
<td>75.0000</td>
<td>14.57738</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F-value</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>382.286</td>
<td>4</td>
<td>95.571</td>
<td>.519</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Within Groups</td>
<td>54656.790</td>
<td>297</td>
<td>184.030</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>55039.076</td>
<td>301</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Research question 5. Are there significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on previous teaching experience with any kind of disabilities in inclusive settings (a public school setting)?

Null hypothesis 5. There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on previous teaching experience with any kind of disabilities in inclusive settings (a public school setting).

In order to answer this question, an independent sample t-test was used to determine if there were significant differences between teachers (whether or not they had
previous teaching experience with any kind of disability in inclusive settings) regarding the inclusion of students with severe disabilities at the 0.05 alpha level.

The assumptions of an independent sample t-test in terms of a normal distribution, homogeneity of variance, and having a dependent variable that is either interval or ratio (continuous) were examined and met. The Levene test for homogeneity of variance was done, $F = .369, p = .544$, which indicated no significant violation of this assumption. The dependent variable must be quantitative (continuous) which is true for the ORI scale; and as such, this assumption was met. Therefore, a t-test for equal variances was used.

As is reported in Table 16, the difference in teachers’ perspectives regarding the inclusion of students with severe disabilities based on previous teaching experience with any kind of disabilities in inclusive settings (a public school setting) was statistically significant, $t (301) = 2.099, p = .037$, two-tailed. The eta squared ($\eta^2$) was 0.0144, (a very small effect size) which means only 1.44% variance in teachers’ perspectives (dependent variable) can be explained by teachers’ previous teaching experience with any kind of disabilities in inclusive settings (independent variable).

The mean for teachers having previous teaching experience with any kind of disabilities in inclusive settings ($M = 71.4800, SD = 13.69222$) was higher than the mean for teachers who had no previous teaching experience with any kind of disabilities in inclusive settings ($M = 68.058, SD = 12.92878$). Thus, there were significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on previous teaching experience with any kind of disabilities in inclusive settings, meaning hypothesis five can be rejected.
Table 16

T-test for Mean Perspectives Score and Previous Teaching Experience with any Kind of Disabilities in Inclusive Settings

<table>
<thead>
<tr>
<th>Previous Teaching Experience in Inclusive Settings</th>
<th>N</th>
<th>Mean</th>
<th>St.D</th>
<th>T-value</th>
<th>Effect Size</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>200</td>
<td>71.4800</td>
<td>13.69222</td>
<td>2.099</td>
<td>0.0144</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>103</td>
<td>68.058</td>
<td>12.92878</td>
<td></td>
<td></td>
<td>Sig</td>
</tr>
</tbody>
</table>

Research question 6. Are there significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on grade level taught (first grade, second grade, third grade, fourth grade, fifth grade, or sixth grade)?

Null hypothesis 6. There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on grade level taught (first grade, second grade, third grade, fourth grade, fifth grade, or sixth grade).

To answer this question, a one-way analyses of variance (ANOVA) was performed to determine whether significant differences existed in teachers' perspectives regarding the inclusion of students with severe disabilities based on grade level taught at the alpha level of 0.05.

The assumptions of an ANOVA in terms of a normal distribution, homogeneity of variance, and a dependent variable that is either interval or ratio (continuous) were examined and met. Specifically, the Levene test for homogeneity of variance was done, $F (6,296) = .351, p = .909$, which indicated no significant violation was found.
The difference between teachers’ perspectives regarding the inclusion of students with severe disabilities based on grade level taught (first grade, second grade, third grade, fourth grade, fifth grade, or sixth grade) was not statistically significant, \( F(6, 269) = .789, p = .579 \), as can be seen in Table 16. This result indicates that null six hypothesis cannot be rejected. Accordingly, there are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on grade level taught.
Table 17

ANOVA For Mean Perspectives and Grade Level Taught

<table>
<thead>
<tr>
<th>Grade Level Taught</th>
<th>N</th>
<th>Mean</th>
<th>St.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>First grade</td>
<td>46</td>
<td>69.5652</td>
<td>13.23405</td>
</tr>
<tr>
<td>Second grade</td>
<td>49</td>
<td>70.6939</td>
<td>15.49624</td>
</tr>
<tr>
<td>Third grade</td>
<td>43</td>
<td>73.9535</td>
<td>13.50477</td>
</tr>
<tr>
<td>Fourth grade</td>
<td>46</td>
<td>69.9783</td>
<td>11.72175</td>
</tr>
<tr>
<td>Fifth grade</td>
<td>34</td>
<td>69.0588</td>
<td>12.76819</td>
</tr>
<tr>
<td>Sixth grade</td>
<td>22</td>
<td>67.2727</td>
<td>14.76863</td>
</tr>
<tr>
<td>Other</td>
<td>63</td>
<td>70.0794</td>
<td>13.36498</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Source</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F-value</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>868.137</td>
<td>6</td>
<td>144.690</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Within Groups</td>
<td>54285.447</td>
<td>296</td>
<td>183.397</td>
<td>.789</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>Total</td>
<td>55153.584</td>
<td>302</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Research question 7. Are there significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on teachers’ gender?

Null hypothesis 7. There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on teachers’ gender.

An independent sample t-test was used to assess differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on teachers’ gender (male versus female) at the 0.05 alpha level.
The assumptions of independent t-tests in terms of normality, homogeneity of variance, and dependent variables that are interval or ratio, were examined and met. The assumption of homogeneity of variance was examined using the Levene test, $F = 2.189, p = .140$, which indicate this assumption was met. Therefore, a t-test for equal variances was used.

As reported in Table 18, the difference in teachers’ perspectives regarding the inclusion of students with severe disabilities based on teachers’ gender was statistically significant, $t(298) = 2.387, p = .018$, two tailed. The eta squared ($\eta^2$) was 0.01876, (a small effect size) which means only 1.87% of the variance in teachers’ perspectives (dependent variable) can be explained by the teachers’ gender (independent variable). The mean for male teachers ($M = 72.0435, SD = 12.98477$) was higher than for female teachers ($M = 68.3381, SD = 13.87760$). This result indicates that teachers’ perspectives regarding the inclusion of students with severe disabilities was significantly different based on teachers’ gender; therefore, the seventh null hypothesis can be rejected.

Table 18

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>St.d</th>
<th>T-value</th>
<th>Effect Size</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>161</td>
<td>72.0435</td>
<td>12.98477</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>139</td>
<td>68.3381</td>
<td>13.87760</td>
<td>2.387</td>
<td>0.01876</td>
<td>Sig.</td>
</tr>
</tbody>
</table>

T-Test for Mean Perspectives Score and Gender
Research question 8. Are there significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on whether they have a family member with a disability?

Null hypothesis 8. There are no significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on whether they have a family member with a disability.

To answer this question, a t-test for independent means was performed to determine if there are significant differences in teachers’ perspectives regarding the inclusion of students with severe disabilities based on whether they have a family member with a disability at the 0.05 level of alpha.

The assumptions for independent t-tests in terms of normality, homogeneity of variance, and having a dependent variable that was either interval or ratio were examined and met. The assumption of homogeneity of variance was examined using the Levene test, $F = 1.455, p = .229$ which indicated that this assumption was tenable; therefore, a t-test for equal variances was used.

Table 19 indicates the difference in teachers’ perspectives regarding the inclusion of students with severe disabilities based on whether they have a family member with a disability was not statistically significant, $t (300) = -1.748, p = .081$, two-tailed. This finding suggests that null hypothesis 8 cannot be rejected, meaning that teachers’ perspectives regarding the inclusion of students with severe disabilities was not significantly different based on whether they had a family member with a disability.
Table 19

*T-Test for Teachers’ Perspectives and Having a Family Member with a Disability*

<table>
<thead>
<tr>
<th>Family member with a disability</th>
<th>N</th>
<th>Mean</th>
<th>St.D</th>
<th>T-value</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>102</td>
<td>68.5196</td>
<td>14.14615</td>
<td>-1.748</td>
<td>Not Sig.</td>
</tr>
<tr>
<td>No</td>
<td>200</td>
<td>71.3700</td>
<td>13.00263</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Descriptive.** There was only one descriptive question designed to examine the overall perspective of Saudi teachers regarding inclusive education of students with severe disabilities in elementary schools. As displayed in Table 11, three hundred three participants responded to the first question, which consisted of 25 items divided into four factors: Factor I examined the benefits of inclusion, which covered eight items (items 3, 7, 11, 14, 17, 20, 21, and 24); Factor II entitled inclusive classroom management, had ten items (1, 4, 6, 9, 12, 15, 16, 18, 22, and 25); Factor III was perceived ability to teach students with severe disabilities, which had three items (2, 10, and 19); and Factor IV was special versus inclusive general education teachers, which consisted of four items (5, 8, 13, and 23).

The teachers responded to these items on a five-point Likert scale as follows: strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1. The researcher also recorded the negatively worded items to be strongly agree = 1, agree = 2, neutral = 3, disagree = 4, and strongly disagree = 5. After the data were coded, they were input into SPSS to identify the descriptive statistics. The Likert scale with the mean
correlates coded responses from 5 to 1; higher scores indicated a more positive perspective and lower scores indicated a more negative perspective.

**Assessing the normality and outliers.** Prior to running the analysis, the researcher assessed whether the total score for the ORI was normally distributed which means the data follows a normal curve with “the greatest frequency of the scores in the middle, with small frequencies towards the extremes” (Pallant, 2007, p. 57). As can be noticed from Figure 3, the data was normally distributed. Additionally, the researcher examined the outliers which are an important consideration that might impact the finding of the study. There were some outliers as can be observed in the Boxplot in Figure 4, which appear as small circles with a number attached, cases (40, 72, 195, 2, 251, 227, 50, and 208). Even though there were eight outliers, the result of comparing the original overall mean of the total score with outliers (70.32) and without outliers (70.65) showed very similar results. Accordingly, the researcher decided to retain these outliers in the data analysis since they did not have a strong influence on the hypothesis testing results.
Figure 3. Histogram of the Total Score of Teachers' Perspectives.

Figure 4. Boxplot of the Outliers.
**Research question 9:** What are the teachers’ overall perspectives in Saudi Arabia regarding the inclusion of students with severe disabilities in general education classrooms?

The findings related to this question indicated that the teachers in this study expressed most agreement on items 1, 3, and 21, with a mean of 3.94, 3.68, and 3.65, respectively, out of 5 on the Likert scale as can observed from Table 20. Therefore, the participants had a mostly positive perspective that: most students with severe disabilities will make an adequate attempt to complete their assignments (item 1), inclusion offers mixed-group interaction that will foster understanding and acceptance of differences among students (item 3), and students with severe disabilities should be given every opportunity to function in a public school when possible (item 21).

According to teachers’ responses to these items, it can be said that Saudi teachers in this study demonstrated almost positive perspectives that students with severe disabilities in public schools will be able to complete their classrooms’ tasks; they also hesitantly believe that the inclusive setting will increase understanding and acceptance of differences among students with and without disabilities, and the teachers nearly positively indicated that schools should provide these students with every opportunity to function in inclusive setting when it is possible.

On the other hand, the teachers in this study expressed the most disagreement regarding inclusive education for students with severe disabilities on item 23 (teaching students with severe disabilities is better done by special education teachers instead of general classroom teachers) with a mean of 1.97, item 2 (inclusion of students with severe disabilities will necessitate extensive retention of general-classroom teachers) with
a mean of 1.80, and item 8 (inclusion of students with severe disabilities will require significant changes in public school procedures) with a mean of 1.75. These findings indicated that teachers in this study strongly disagree that the teaching of students with severe disabilities is better done by special education teachers instead of general classroom teachers, that the inclusion of students with severe disabilities will necessitate extensive retention of general-classroom teachers, and that the inclusion of students with severe disabilities will require significant changes in public school procedures.

Regarding neutral perspectives of teachers in this study toward inclusive education for students with severe disabilities, it can be noticed from Table 20 that there were three items: The behavior of students with severe disabilities will set a bad example for students without disabilities (item 12) with a mean of 3.16, and the challenge of being in a public school will promote the academic growth of the student with a severe disability (item 7), with a mean of 3.12, and the student with a severe disability will probably develop academic skills more rapidly in a public school than in a special school (Item 13) with a mean of 3.04. Thus, it can be concluded that these teachers neither agree nor disagree on whether or not the behavior of students with severe disabilities will set a bad example for students without disabilities, whether or not the challenge of being in a public school will promote the academic growth of the student with a severe disability, and whether or not the student with a severe disability will probably develop academic skills more rapidly in a public school than in a special school.

Generally, the overall mean of 2.81 for teachers’ responses indicated that the Saudi teachers’ perspectives toward the inclusive education for students with severe disabilities occurred between “disagree” and closely to “neither agree nor disagree.” With
a mean of 2.81, it can be said that the teachers’ perspectives toward the inclusive education for students with severe disabilities was slightly negative.
Table 20

Teachers’ Perspectives toward the Inclusive Education for Students with Severe Disabilities and the Mean, Standard Deviation, and the Rank of the Items

<table>
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<th>No.</th>
<th>Item</th>
<th>SA FQ (%)</th>
<th>A FQ (%)</th>
<th>N FQ (%)</th>
<th>D FQ (%)</th>
<th>SD FQ (%)</th>
<th>Mean</th>
<th>Recoded Mean</th>
<th>St.d.</th>
<th>Recoded Rank</th>
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Responses to Open-Ended Question

For this part of the survey, participants were asked to respond to an open-ended question and to provide any comments or suggestions regarding the education of students with severe disabilities in a public school either in a general classroom, or in a separate classroom, within the public school setting. As can be noted in Table 21 (see Appendix I), the frequency and percentage of the teachers' suggestions were listed from the most frequent to least frequent. However, participants who did not respond to this part and those who reported some suggestions that were not related to this question were excluded.

A content analysis was used to examine teachers' comments and suggestions regarding inclusive education for students with severe disabilities resulted in seven comment categories or themes (see Table 19 in Appendix, I). Major themes included: (a) favorable placement of the students with severe disabilities, (b) the facilities or components of successful inclusive education, (c) the training of teachers on the inclusive...
education setting, (d) the role of stakeholders, (e) the improvement of general education curriculum development, (f) pre-service programs of teachers in colleges and universities, and (g) Saudi regulations regarding inclusive education for students with disabilities. Each theme is now discussed in detail.

The first theme emerging from the data related to the favorable placement of the students with severe disabilities. For example, some teachers suggested that special classrooms in public schools would be a good placement for these students because it provides a supportive environment to develop their social and behavior skills, and they should only be included with students without disabilities in non-curricular activities (e.g., art, physical education, and field trips) and not included in academic or curricula activities.

The facilities or components of successful inclusive education that should be considered when these students are included in the public schools is the second theme that emerged. For example, some teachers suggested that the physical environment should be prepared for the inclusive education of students with severe disabilities by modifying stairs, entryways, cafeterias, and elevators. Additionally, respondents believed that public schools should be provided with some professionals or related service providers to support the needs of these students, such as doctors, nurses, social workers, and psychological therapists. They suggested schools should also be provided with related services, particularly speech-language therapists. Furthermore, some of the participants suggested that the Ministry of Education should provide public schools with learning tools to assist teachers. For instance, teachers indicated that the Ministry should provide paraprofessionals or teachers’ assistants for both special and general education
teachers to assist them in teaching students with severe disabilities in public schools. An age-appropriate setting should be considered when students with severe disabilities are included in general classrooms. Also, teachers indicated that school districts should provide schools with assistive technology to help teachers in teaching students with and without disabilities.

Some general education teachers indicated that the number of students without disabilities in the general classrooms must be reduced, (e.g., 15 students without disabilities and two students with disabilities in the general classrooms) which would allow teachers to be able to effectively teach these students. Some teachers also reported that the school administrators should reduce the number of class sections these teachers will have students with severe disabilities included in their general education classrooms.

School teams should collaborate in order to support the inclusion of students with severe disabilities. More specifically, teachers suggested that general and special education teachers should collaborate to solve any barriers or problems that can appear in the general classrooms, and in teaching these students. Finally, some teachers suggested that the Ministry of Education should offer financial incentives to general education teachers who will work with students with severe disabilities in public school settings.

Another theme that emerged from teachers’ suggestions regarding the inclusive education of students with severe disabilities was the training of teachers on the inclusive education setting. For instance, some teachers reported that extensive training should be provided to general education teachers and school administrators about the process of inclusion and characteristics of students with severe disabilities. Some of the participants
also suggested that special education teachers should also obtain training regarding any new approaches to educating students with severe disabilities in the inclusive setting.

*The role of stakeholders* (students without disabilities, families of students with severe disabilities, school staff) *in the public schools that include students with severe disabilities* is another theme that emerged under from teachers’ comments. For example, they suggested that schools should prepare and make students without disabilities aware of the educational needs of students with severe disabilities. Furthermore, families of students with severe disabilities should support the process of inclusive education for their children. Finally, inclusive education should be an integrative process for these students; meaning schools should not just place them in the public school (e.g., prepare the school staff for inclusive education).

*The improvement of general education curriculum development* was another theme teachers considered. They reported that current general education curriculum cannot meet the needs of all students, including students with severe disabilities. Therefore, they suggested that the general education curriculum should be further developed to include all of the skills that students with and without severe disabilities need in the general classroom.

The theme of *pre-service programs of teachers in colleges and universities* also emerged in teachers’ responses. They suggested that colleges of education should provide pre-service courses for general education teachers regarding students with disabilities and the inclusive education process. They indicated that special education departments should also design pre-service programs for individuals with severe disabilities and inclusive
education in order to prepare special education teachers who are experts in this area of disability.

The last theme that emerged from teachers related to the Saudi regulations regarding inclusive education for students with disabilities. Teachers pointed out that regulations regarding the education of students with disabilities in public schools in the Regulations of Special Education Programs and Institutes of Saudi Arabia (RSEPI) should be explained in detail and applied consistently.

**Summary of the Chapter**

This chapter presented the findings of this study, including the response rate to the survey, participants’ demographic characteristics, findings related to the descriptive and inferential research questions, and responses to the open-ended question.
Chapter 6: Discussion, Implications, and Conclusion

The main goal of this study was to examine teachers’ perspectives regarding the inclusion of students with severe disabilities in general education settings (a public school setting) in Saudi Arabia using quantitative research methods. This study investigated the perspectives of teachers based on seven independent variables: current teaching position (whether they are special or general education teachers); training (less training or more training in inclusive education for student with disabilities); educators’ level of education; grade level taught; previous inclusive teaching experience; teachers’ gender, and whether they have a family member with a disability. In this chapter, the researcher discusses the findings of the study and examines them in light of the current literature. Finally, this chapter outlines implications for the findings of the study in terms of special education services for students with severe disabilities in Saudi Arabia, components of successful inclusive education, Saudi legislation improvement and implementation, and future research.

Discussion

The first finding in this study indicates that Saudi teachers have slightly negative perspectives toward inclusive education for students with severe disabilities. This finding provides empirical support for the argument that when teachers were asked about their views regarding the inclusive education for a specific type of disability (mild and severe), they tended to be less accepting of serving students with severe disabilities in their general classroom (Cook, 2001). The results of the current study supported previous studies regarding teachers’ perspectives on inclusive education of students with severe disabilities. Studies conducted by Cook (2001) and Cook et al. (2000) concluded that the
inclusion of students with severe intellectual disabilities in general education classrooms is less accepted by teachers and administrators than the inclusion of students with learning disabilities and emotional disabilities. Another study done by Southern (2010) pointed out that the teachers had negative perspectives regarding inclusive education for students with severe disabilities. In another study, the authors indicated that physical education teachers prefer to work with students with moderate disabilities rather than students with severe disabilities in the inclusive education setting (Kozub & Lienert, 2003).

Even though the teachers reported slightly negative perspectives regarding inclusive education for students with severe disabilities in their survey responses, in the open-ended question they mentioned that special classrooms in public schools would be a good placement for students with severe disabilities because it provides a supportive environment for them to develop their social and behavioral skills, and they should only be included with students without disabilities in non-curricular activities (e.g., art, physical education, and field trips) and not included in academic or curricula activities.

These comments suggest that teachers are willing to include students with severe disabilities in public schools, but not in the general education classroom. Therefore, a continuum of alternative placements, including (general classroom, special education classroom, special schools, home instruction, or instruction in hospitals and institutions) should be considered by the IEP team or schools to identify appropriate educational placements that meet each student’s needs when a general education setting cannot be provided. Overall, the findings of the current research support previous findings that the level of severity of disability does impact teachers’ perspectives of inclusive education.
Another finding of this study indicates that the current teaching position (whether participants are special or general education teachers) is related to teachers’ perspectives of inclusive education of students with severe disabilities in Saudi Arabia. Interestingly, the general education teachers had more positive perspectives toward inclusive education of these students than special education teachers. Indeed, this study included some special education teachers who work with students with mild disabilities in the public school (inclusive setting) and there is a possibility they may have had unsuccessful experiences in inclusive settings. Therefore, negative experiences with unsuccessful inclusion might have a significant effect on special education teachers’ perspectives (Cook et al., 2001).

Participants in this study also included general education teachers who worked in public schools that have special programs for students with disabilities (e.g., students with mild cognitive disabilities); therefore, these teachers may have had an opportunity to interact with students with mild disabilities in non-curricular activities (e.g., art, physical education, breakfast-time). This interaction may have led their perspectives to be more positive toward inclusive education for students with disabilities. This finding supports those of a few previous studies. For example, a study conducted by Scruggs and Mastropieri (1996) pointed out that special education teachers had a more negative view of inclusive education than general education teachers. However, the findings of the previous research were mixed in this regard. Some studies concluded that special education teachers had more positive perspectives toward the inclusion of students with severe disabilities than do general education teachers (Alhamad, 2006; Elhoweris & Alsheikh, 2006; Richard & Roger, 2001; Tisdall, 2007). In others, the current teaching position (whether they are special or general education teachers) was not found to make a
difference for general and special education toward inclusive education of students with disabilities (Al-Ahmadi, 2009; Davis, 2010).

This study also found an interesting result related to teachers’ training in inclusive education. Prior training was not related with the teachers' perspectives toward the inclusive education of students with severe disabilities in Saudi Arabia. This finding is again supported by previous research. For example, Brady and Woolfson (2008), as well as Jane (2005), showed that training does not relate to teachers’ perspectives toward inclusive education of students with disabilities. Although there was no statistically significant relationship between training and teachers’ perspectives toward inclusive education, according to participants’ responses the open-ended question, teachers frequently suggested that extensive training should be provided to general education teachers and school administrators about the process of inclusion and characteristics of students with severe disabilities. Some participants also suggested that special education teachers should also obtain training regarding any new approaches to educating students with severe disabilities in the inclusive setting. Accordingly, this result indicates there is no statistically significant relationship between teachers’ training and their perspectives toward inclusive education of these students; however, the training factor is still an important concept that should be considered for successful inclusive education as suggested by the respondents.

This research also supports others’ findings in regards to the relationship between class size (number of students in the classrooms) and teachers’ perspectives of inclusion of students with severe disabilities. For example, Bender et al. (1995) found that teachers with a large number of students in the classroom had a negative perspective of inclusive
education of students with disabilities. Other studies concluded that when general education classrooms have a large number of students, teachers may possess negative perspectives regarding the inclusion of students with disabilities (Buysse, Wesley, & Keyes, 1998; Wesley, Buysse, & Tyndall, 1997).

According to responses to the open-ended question, participants suggested that the number of students without disabilities in the general classrooms must be reduced, (e.g., 15 students without disabilities and two students with disabilities in the general classrooms), which would allow teachers to be able to effectively teach students with severe disabilities. This suggestion was also supported by Scruggs and Mastropiere’s study in 1996, which indicated that the number of students in the classroom should be decreased to 20 students in the general education classroom to facilitate the inclusion effort. In summary, this study found teachers’ perspectives of the inclusion of students with severe disabilities was related to current teaching position and class size (the number of students in a class), while there was no relationship between teachers’ perspectives and training.

In this study, teachers’ level of education was not related to teachers’ perspectives of the inclusion of students with severe disabilities. This might be due to the fact that the majority of teachers (207 teachers) in this study had a bachelor degree; therefore, the level of education was not different enough among teachers to make a significant difference among them regarding perspectives toward the inclusion of students with severe disabilities. However, findings from previous research were mixed in this regard. Parasurma (2006) pointed out that teachers in India who hold master’s degrees have more positive perspectives toward inclusion of students with disabilities.
than those with bachelor's degrees. Other research indicated that the higher the level of education, the more positive the perspective of teachers toward inclusion of students with disabilities (Anotank et al., 1995). Some studies reported, however, that some teachers have negative perspectives toward inclusion for students with disabilities even though they had higher levels of education (Taylor et al., 1997).

Another result from this study was that previous teaching experience with any kind of disabilities in inclusive settings (a public school setting) is related to teachers' perspectives of inclusive education. As was reasonably expected, teachers who had previous teaching experience with any kind of disabilities in inclusive settings (a public school setting) had more positive perspectives than teachers with no previous teaching experience with any kind of disabilities in inclusive settings. This result supports previous studies in this regard. Earlier studies reported that teachers with previous teaching experience with different types of disabilities in inclusive settings possessed positive perspectives toward placement in an inclusive setting for students with disabilities than those that did not have this experience (Avramidis et al., 2000; Buysse et al., 2001; Thousand, 1998). Thus, this finding emphasized that previous teaching experience with any kind of disabilities in inclusive settings is related to Saudi teachers' perspectives on inclusive education.

Moreover, grade level taught was not related to teachers' perspectives regarding the inclusion of students with severe disabilities. This may be due to the fact that there was not much difference among the grade levels (from the first to sixth grade) in the elementary school included in this study. The results of prior research support this finding. For instance, studies found no significant correlation between teachers'
perspectives regarding inclusive education and grade level taught (Giacchi, 2003; Hanrahan & Rapagna, 1987). However, this factor might be related to teachers’ perspectives regarding the inclusion of students with severe disabilities when there are different grade levels taught across various stages of education (e.g., elementary school, middle school, and high school). This assumption can be supported by previous research. For example, Elhoweris and Alsheikh (2006) noted that high school teachers have more positive perspectives than elementary schools teachers toward the inclusion of students with severe disabilities. In other studies, teachers in elementary schools and middle school have more positive perspectives regarding inclusive education than teachers in high schools (Avramidis & Norwich, 2002).

The current research also found teachers’ perspectives regarding the inclusion of students with severe disabilities was related to teachers’ gender. An interesting result was that male teachers had more positive attitudes than female teachers. This result supported a previous Saudi study that concluded male teachers had more positive attitudes toward the integration education of students with learning disabilities than female teachers (Al-Ahmadi, 2009). This result was obviously different from studies conducted in Middle Eastern countries and Western countries in which female teachers expressed more positive perspectives toward the inclusion of students with disabilities than male teachers (Alghazo & Gaad, 2004; Aksamit et al., 1987; Harvey, 1985). The difference between this finding from the current research and previous studies, with the exception of one, might be due to religious and cultural differences by gender.

Finally, this research found that having a family member with a disability was not related to teachers’ perspectives of the inclusion of students with severe disabilities, a
result that is supported by previous studies (Al-Ahmadi, 2009; Parasuram, 2006). Some studies however, reported that teachers who had a family member with a disability expressed more positive perspectives than teachers who did not have a family member with a disability (Subban & Sharma, 2006).

The open-ended question that asked participants about their suggestions or comments regarding educating students with severe disabilities in public schools provided beneficial suggestions that should be considered by school districts, policy makers, and educators. The themes of their suggestions can be summarized as follows: facilities or components of successful inclusive education; the role of stakeholders; the improvement of general education curriculum development; pre-service programs for teachers in colleges and universities; and Saudi regulations regarding inclusive education for students with disabilities. These themes will be considered in implications for practice in terms of special education services, components of successful inclusive education, improvement and implementation of Saudi legislation, and future research.

**Implications for Practice**

In the following sections, the researcher presents implications drawn from both the literature and from the findings from this research and should be considered by the Ministry of Education, policy makers, stakeholders, and researchers regarding the inclusive education of students with severe disabilities in Saudi Arabia.

**Implications for Special Education Services**

**Definition of students with severe disabilities.** In Saudi Arabia the definition of severe disabilities has not been discussed either in the Saudi legislation (RSEPI), or in the literature. It can be said that the RSEPI only defines the term “multiple disability” as a
child who has more than one type of disability, which might include deafness and blindness, cognitive disability and blindness, and which might affect the educational performance of the child. Additionally, this child cannot obtain special education services that are designed for children with a specific type of disability (e.g., cognitive disability) (Ministry of Education of Saudi Arabia, 2002). Accordingly, there is a lack of a specific definition of severe disability in the Saudi law and in the literature.

Some recommendations that should be considered by the Ministry of Education represented by the Special Education Department in Saudi Arabia regarding the definition of severe disability are outlined here. The term severe disability should be discussed and clarified by the Special Education Department in the RESPI to refer to either the severity level of each type of disability (e.g., a severe learning disability, severe communication disorder) or the severity level of a cognitive disability that might affect other major life skills of the person in terms of learning, communication, self-care, and mobility; and the special education services designed for each disability that might still meet the needs of children with severe disabilities. The distinction between the terms multiple disabilities and severe disabilities as discussed earlier should be clarified in the RESPI. This clarification might assist educators, service providers, and researchers in understanding the distinction between the terms in order to provide appropriate special education services for students with severe disabilities. Finally, the RESPI should clarify the eligibility requirements for severe disability.

**Assessment of students with severe disabilities.** As discussed in the second chapter, assessments of students with severe disabilities are lacking a multidisciplinary team-based approach and appropriate instruments. For example, assessment of students is
usually only performed by school psychologists and special education teachers. Additionally, the screening procedures to determine whether or not a student has a disability do not start prior to beginning school (at the age of six). Therefore, there are many recommendations that should be considered by the Ministry of Education to improve the assessment procedures for students with severe disabilities in Saudi Arabia.

The first suggestion is for the Ministry of Education to collaborate with the Ministry of Health to consider beginning assessment procedures early. For instance, it can be determined if newborn infants have severe disabilities by requiring medical staff to assess newborns for any type of delays using different instruments which assist in identification of disabilities, and enable the provision of early intervention programs that might reduce the severity of the disability (Heward, 2006).

The Ministry of Education represented by the Special Education Department should consider enforcing the assessment requirements of the RSEPI, taking into consideration various assessment tools, such as formal tests in terms of IQ tests, adaptive behavior scales, and academic scales, or informal tests, such as observations and interviews (Collins, 2007; Snell, 2003; Snell & Brown, 2006).

This assessment should be conducted by an interdisciplinary team. The Special Education Department also must collaborate with other professional agencies (e.g., universities) to either create or adapt assessment scales (e.g., IQ tests, adaptive behavior scales, and academic scales) in order to make them appropriate for the Saudi culture.

Finally, ecological inventories are a helpful approach to assess the needs of students with severe disabilities and must be explained and clarified by researchers in the Saudi literature. All of these suggestions might assist the Special Education Department
in Saudi Arabia to improve the reality of the assessment procedures for students with severe disabilities.

**Related services for students with severe disabilities.** According to the participants' suggestions, as well as results from the Saudi studies, there are some related services unavailable for students with severe disabilities that are needed in the public schools; for instance, speech and language therapy, physical therapy, occupational therapy, health and medical services, and social work services (Al-Otaibi & Al-Sartawi, 2009; Al-Quraini, 2007; Al-Wabli, 1996). Based on the reality of the provision of related services for students with severe disabilities in Saudi Arabia discussed above, a set of recommendations for the Ministry of Education to improve related services for these students follows.

Procedures for related services should be clearly identified, under RSEPI, to ensure that school districts completely understand their position and requirements to adequately provide each service for students with disabilities that need them. Specifically, they should consider the cost of related services; who is responsible for providing financial support; and what procedures should be taken when the school district does not have enough funds to supply these services for students.

One approach that would support related services for students with disabilities is collaboration between the schools of physical therapy, occupational therapy, speech pathology, nursing, and school districts for providing these services for students with disabilities. Collaboration assists school districts in clearly understanding the policy of related services and their obligation to students who need these services.
Schools can also benefit from specific procedures for related services identified in the RSEPI by taking the necessary time to review their policy and their ability to provide the level of care needed for those difficult instances when students have heightened physical, health, speech, and motor skill needs, which in turn will lead them to become more proficient and capable professionals.

As a temporary solution, pre-service therapists can complete their internships with students with severe disabilities in the schools to improve their skills in different areas. School administrators could make a rotation for specialists to travel to help with the general lack of service providers in schools. This is only a short-term solution, but it would still help the problem by making sure students with disabilities get these services on a daily basis. Accordingly, these recommendations might assist the Ministry of Education to improve the reality of the provisions of related services for children with severe disability in Saudi Arabia.

**Implications for Components of Successful Inclusive Education**

**Improving teachers’ perspectives.** This study found that teachers had slightly negative perspectives toward educating students with severe disabilities in the public schools. It can be said that improving attitudes toward inclusive education for students with severe disabilities is a complicated process because there are many factors of perspective formation. For instance, people’s perspectives can be impacted by their cultural background. Therefore, many community agencies, policymakers, educators, and the media can contribute to improving teachers’ attitudes toward inclusive education for students with severe disabilities. Additionally, educating students at early ages in special classrooms in the public schools, as suggested by the teachers in this study, can change
teachers’ perspectives toward inclusive education of students with severe disabilities. It can also improve the attitudes of general teachers, children without disabilities, and other staff at the schools toward inclusion of students with severe disabilities. The general education setting will allow teachers to explore their characteristics understand their needs, and see positive results.

The media, researchers, legislators, and other societal agencies should recognize that they must use positive language whenever they describe people with disabilities, including people with severe disabilities. Kendrick (1998) emphasized that “person-first” language has led to positive changes; the preferred term is “person with (who has) a disability” rather than “the disabled person.” Pre-service teacher programs in universities should teach future teachers that inclusion is a part of education and present the positive impact of inclusion on students with severe disabilities as well as on their typically developing peers. This might assist teachers in understanding inclusive education and be more willing to accept this challenge and the benefits.

According to teachers’ comments in this study, school districts must provide extensive workshops, conferences, and professional development programs on inclusive education and characteristics of students with severe disabilities for general education teachers, special education teachers, administrators or principals, and families of students with severe disabilities. Another type of training might include simply providing experience with children with severe disabilities instead of more formal training for the stakeholders in the form of supports to go along with in-classroom experiences. These types of training might play an important role in improving teachers’ perspectives
regarding inclusion and assist them in collaborating with other school staff in order to create successful inclusion for students with severe disabilities.

**Modifying the physical environment.** As indicated by some teachers in this study, the current physical environment of the public schools must be prepared to meet the unique needs of students with severe disabilities and to be safe and appropriately accessible for these students through modifications to stairs, entryways, cafeterias, and elevators. It is recommended that the Ministry of Education or school districts require that schools adapt the physical environment to help students with severe disabilities access the regular classrooms, as well as participate in other activities with their typically developing peers; for example, using the elevators in the schools makes it easy for students with physical disabilities and other students who are using wheelchairs to move to different places.

**Paraprofessional role.** In Saudi Arabia, the schools are lacking paraprofessionals that are supportive of both teachers and students in different ways (e.g., that assist the teachers in adapting and modifying curricular activities). As suggested by some participants in this study, as well as a large body of research, paraprofessionals or educational assistants are an important key to successful inclusion for students with severe disabilities by assisting them to learn positively and experience success in inclusive settings (Angelides, Constantinou, & Leigh, 2009; Giangreco, Edelman, Broer, & Doyle, 2001).

Therefore, the Ministry of Education in Saudi Arabia should consider providing paraprofessionals to improve the quality of education programs. This suggestion can be
accomplished by employing people who have at least high school diploma and pass a specific test that determines whether they are qualified for the job.

**Developing the general curriculum.** According to the teachers’ comments regarding inclusive education for students with severe disabilities, the general education curriculum should be developed to include all of the skills that students with and without severe disabilities need in the general classroom. Therefore, the Ministry of Education should reconsider the current general curriculum and expand this curriculum to include skills that allows for all learners to access and progress in this curriculum (Al-Herz, 2008).

This newly developed curriculum should be flexible and address the various differences among students, including learners with severe disabilities, and should include educational, academic, personal, social, and career-based domains (Wehmeyer, Sands, Knowlton, & Kozleski, 2002). The team assigned to develop the general curriculum in Saudi Arabia must consider characteristics of the curriculum that support all learners in inclusive schools that were suggested by Pugach and Warger (1996), such as:

(a) a focus on in-depth coverage of content within meaningful context; (b) attention to students' abilities to think critically, manage their own learning, work collaboratively, foster peer relationship, and solve problem; (c) a focus on students' interests, needs and previous experiences; and (d) an allowance for differences in the manner in which students interact with and learn from the curriculum and demonstrate their learning. (p. 70)
Thus, addressing these characteristics in the new curriculum might promote the access and progress of students with severe disabilities in the general curriculum in a general education setting. IEP teams should consider adding to the general curriculum an alternative curriculum – individualized curriculum that focuses on the characteristics and needs of students with severe disabilities in terms of social, behavioral, emotional, cognitive, and vocational skills – since most students with severe disabilities do not obtain skills in the same sequence as other students without disabilities, and they still need to be linked to the general education curriculum.

Collaboration among stakeholders. As suggested by the teachers in this study, as well as the larger body of literature, collaboration, particularly between general and special education teachers is an essential key in order to solve any barriers or problems that appear in general classrooms (Dettmer, Thurston, & Dyck, 2002; Westling & Fox, 2009). Therefore, following are some suggestions that must be considered by universities, school districts, and school principals.

Universities should educate general as well as special education teachers about the importance of having children with disabilities in regular classes and the importance of their collaboration as a key to creating successful inclusion. This can be done by adding coursework that discusses how teachers can collaborate and learn about some models of collaboration that can be practiced in schools. For instance, teachers can use a collaborative or co-teaching model, where more than one teacher shares the responsibility in providing better academic, social, and communicative activities for the diversity of students in the general education setting.
Teachers must also recognize important skills that might facilitate their collaboration in terms of using appropriate communication skills and working as a team. Additionally, school principals must make sure professionals have enough time to collaborate. School districts and professional associations such as the Saudi Association of Students with Autism, the Saudi Association of Students with Deafness, and others might work to develop skills and training for in-service teachers as well as the families of students with disabilities about the important elements of successful inclusion through conferences and workshops. This kind of training should address these elements in terms of collaboration among professionals (e.g., special education teachers, general education teachers, service providers and others), and adaptations and accommodations that can be made to schoolwork.

Other elements that can be considered in conferences and workshops are effective instructional practices that improve access to core general curriculum, peer support for students with disabilities, assistive technology, and administrative support, professional development training for educators, and effective involvement and support of parents or families in inclusive settings. Moreover, teachers and service providers should work as a team to assist students with disabilities to access and progress in general curriculum education through different strategies in terms of modification and accommodations.

**Assistive technology.** As the literature indicates, students with severe disabilities face limitations in their physical and communication skills; thereby, these students often need to use devices that can assist them to verbally express their preferences and complete their daily activities (Heward, 2006). Additionally, some teachers in this study
pointed out that assistive technology should be used with students with severe disabilities in a public school setting.

It is highly recommended that teachers and schools consider using assistive technology with students with severe disabilities in order to support their engagement in regular classes and access to the general curriculum. There are several types of assistive technology that can be used with these students: either low technology (highlight tape, manila file folders, photo albums, and large keyboards) or high technology (adaptive communication devices, switches, and others). However, the main issue of applying high technology with students with severe disabilities in Saudi Arabia is that most of these devices use only the English or Spanish language which makes it difficult for these students. The companies that produce these devices must consider including the Arabic language so these devices might allow students with severe disabilities to use them. Creating low technology that can be easily made at a lower cost should be an important consideration for teachers.

Class size. As reported in the demographic findings in this study, fifty percent of the teachers in this study had 21 students or more in their classrooms. Additionally, the study found a relationship between the number of students in a classroom and teachers’ perspectives towards inclusion of students with severe disabilities. As a result, the teachers in this study suggested that schools reduce the number of students in the general classroom to 15 students without disabilities and two students with severe disabilities. This might play an important role in assisting general education teachers to accept these students in their classrooms and to effectively work with them in the general education setting.
Saudi Legislation: Improvements and Implementation

Although the Saudi legislation (RSEPI) has outlined all students’ rights to receive their education in general classrooms, it has not been implemented for students with severe disabilities in Saudi Arabia. Therefore, policy makers in Saudi Arabia should revise the current RSEPI that was passed almost one decade ago, according to suggestions from teachers in this study. Policy makers should amend the content of the legislation taking into consideration main features of the IDEA with more detail. The amendment of the RSEPI should consider adding many regulations, such as the following:

**Least restrictive environment (LRE).** The term LRE should be clarified to mean that the appropriate place to educate students with disabilities is a general education setting to the maximum extent possible; however, when the level or severity of disability does not allow for the student to be placed in this setting, the continuum of alternative placement options should be considered, including the general classroom, the special education classroom, special schools, home instruction, or instruction in hospitals and institutions.

The RSEPI should also include general standards for determining the LRE for students with disabilities while considering that these standards should be based on individual cases. Therefore, the most important standards for school districts, IEP teams, and others to consider that were suggested by Yell (2006) are the following:

1. Can the education of the student with disabilities be carried out in a regular education classroom with the addition of aids and services for that student?
2. If the student is placed in a separate education classroom, is he or she still being educated in an integrated setting to the maximum extent possible?
3. What are the benefits of education in a general classroom for students with disabilities (with necessary aids and services) contrasted with the possible gains of education in a special classroom considering nonacademic benefits, such as social skills?

4. How will the presence of the student with disability affect the regular classroom, considering these three secondary questions:
   a. Can the student with disability learn?
   b. Can the teacher teach all of the students in the classroom?
   c. Can the student without disability learn?

5. What is the financial cost of including the child with disability?

6. The continuum of alternative placements, (including the general classroom, special education classroom, special schools, home instruction, or instruction in hospitals and institutions) should be stated clearly in RSEPI to assist the IEP team or schools to identify appropriate educational placements that meet each student’s needs when a general education setting cannot be provided. The RSEPI should also require the school team to explain in the IEP why the student cannot be educated in the general education setting.

**Procedural safeguards.** Under this regulation, an amendment to the RSEPI should be made for identifying procedures (procedural safeguards) that guarantee the right of parents or guardians of children with severe disabilities regarding settling education disputes. This part should outline procedures that assist students with disabilities to be educated using special education services.
For example, parents or guardians should receive a written letter that informs them about any procedures that might be conducted by the schools with their children regarding educational placement. This letter should be sent by the school to the parents with sufficient notice (Yell, 2006). This letter also ought to explain clearly the description of the action, reasons for this action, and the further procedures that might be conducted with the student.

This legislation must also define that the parent has the right to discuss the educational placement pertaining to their child that was made by the school and requires further procedures. There are some times when the parents disagree with the decision made by the schools about educational placement. Therefore, another agency should be involved in solving this disagreement. For instance, the school districts might establish an office of hearing in each school district that aims to facilitate the problem between the schools or service providers and the parents (Yell, 2006).

Additionally, when the parents of the student cannot solve the dilemma with the school or the school district, further procedures might be considered in terms of taking the issue to the local court in each city or the Supreme Court (the highest level of court in Saudi Arabia). The final decisions of the courts should be reported and published in a specific database that might assist policy makers and researchers in developing special education policy regarding the placement in the general education setting for students with severe disabilities in Saudi Arabia.

**Responsibility for implementation.** A regulation that should be considered in the amendment of the RSEPI should identify the name of the agency or department that has the responsibility for the implementation of this legislation. This part should also
identify responsibility to enforce the implementation of the RSEPI. For example, the Special Education Department should have the power and responsibility to monitor and enforce special education services, particularly educating students with disabilities in the LRE under this legislation.

**Developing an effective system of accountability.** The main reason behind many of the problems with the implementation of the RSEPI in Saudi Arabia is that lack of a system of accountability that enforces the requirements of this legislation in the real world. Therefore, it is a significant recommendation that an effective system needs to be put in place to assist the Special Education Department in Saudi Arabia to investigate whether the requirements of the RSEPI have been carried out for students with disabilities, particularly educating students with disabilities in the LRE.

The main goals of this system would be enforcing and monitoring these requirements and ensuring continued improvement in educational outcomes for children with disabilities who are eligible for special education and related services. The main features of this system should be explained in terms of the aspects of accountability, the role of the agency that has responsibility for accountability of the RSEPI, and main steps or procedures that might be considered to make sure that school districts and the service providers follow these regulations.

**Implications for Future Research**

According to the findings of the study as well as the literature review, there are implications that might be considered for future research. First of all, this study was conducted in one city (Riyadh) of Saudi Arabia; therefore, other research might examine
teachers’ perspectives regarding inclusive education of students with severe disabilities with a larger sample that includes teachers from different cities throughout the country.

Second, this study included only special and general education teachers; therefore, future research might investigate the perspectives of administrators, service providers, and parents regarding the inclusive education of students with severe disabilities.

Third, this study used only a quantitative approach to explore teachers’ perspectives regarding inclusive education of students with severe disabilities. As a result, other research might use qualitative research methodology or mixed methods to examine teachers’ perspectives regarding this concept in depth.

Additionally, components of successful inclusive education identified in this study and in the literature, might also be examined by future research to identify the barriers of implementation of these components of inclusion in Saudi schools. This study included only teachers in the elementary schools; therefore, future research might examine teachers’ perspectives regarding inclusive education of students with severe disabilities in upper levels (middle and high schools).

Next, future research might also use mixed methods or qualitative research methods to examine the relationship between the gender factor and teachers’ perspectives regarding inclusive education, particularly the reasons behind why male teachers had more positive perspectives than female teachers. Finally, other research might replicate this study across cultures to determine whether there are differences in teachers’ perspectives regarding the inclusive education of students with severe disabilities due to cultural differences.
Conclusion

This study was the first Saudi study that explored teachers’ perspectives regarding inclusive education for students with severe disabilities. This study revealed that teachers had slightly negative perspectives regarding educating these students in general education or public school settings, which emphasizes the argument that the level of severity of disability negatively affects teachers’ perspectives regarding inclusive education. The findings also indicate a relationship between teachers’ perspectives regarding inclusive education of students with severe disabilities and their current teaching position, class size, previous teaching experience with any kind of disabilities in inclusive settings, gender, and having a family member with a disability. However, this study did not find a relationship between training in inclusive education of students with severe disabilities, years of teaching experience, level of grade taught, and teachers’ level of education. The open-ended question asking for comments and suggestions provides valuable information considered in the discussion section, as well as implications for practice. Finally, this study presents the major implications for practice regarding educating students with severe disabilities in Saudi Arabia in terms of special education services, components of successful inclusive education, Saudi legislation improvement and implementation, and future research.
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Appendix A: Consent Form to Participate in Research (English Version)

Title of the research: Teachers’ perspectives of inclusion of students with severe disabilities in elementary schools in Saudi Arabia.

Dear Teacher:

I am a graduate student at Ohio University and I am conducting a study to examine teachers’ perspectives toward inclusion of students with severe disabilities in elementary schools in Saudi Arabia. This research will provide insights regarding the perspectives of teachers toward the inclusion of students with severe disabilities in Saudi Arabia for decision-makers in special education to consider. This study will also offer some relevant information that universities and colleges might consider regarding training and educating teachers concerning inclusion. Finally, this research could prompt other researchers to investigate other barriers that restrict inclusion for students with severe disabilities in general education classrooms.

In this study, the term —severe disabilities”— refers to students with severe intellectual disabilities from 6-12 years of age (the age group that encompasses elementary school students in Saudi Arabia) who have an IQ score of 50 and below with a deficit in two or more adaptive behaviors skills in terms of daily living skills, communication, and social skills. The term of “inclusion” for students with severe disabilities refers to educating students with severe disabilities in public schools alongside their typically developing peers as much as possible (either in the same classroom, or in a separate classroom within public school) with support from the school’s staff.

You are being asked to participate in research. For you to be able to decide whether you want to participate in this study you should understand some issues as follows: First,
the survey aims to gather general information from you (e.g., your current teaching position, level of education, years of teaching experience, training, the number of students in your classes(s), your level taught, your previous inclusive teaching experience, your gender, and whether or not you have a family member with a disability), as well as understand your perspective towards inclusive education for these students. The data will be recoded without possibility of identification and no known risks or discomforts are anticipated. By completing this survey, you are giving me permission to use this data and you understand completely that your cooperation is freely given and without any compensation. Your participation is important to this study and your effort and time are appreciated.

Please complete this survey while taking into consideration that since you do not write your name on the questionnaire, your responses will be kept confidential and will only be used for the purpose of the study. Thank you so much and I appreciate your cooperation in advance.

If you have any questions regarding this study, please contact

Researcher: Turki A. Alquraini

Email: ta197507@ohio.edu OR Tel: 009661-740-274-2744
Appendix B: Survey (English Version)

Part One: General Information

Please read each of the following questions and check the appropriate choice that best describes you:

1- What is your academic qualification?

☐ Diploma
☐ Bachelor
☐ Master
☐ Doctoral
☐ Other, please specify_______

2- What is your degree area (subject area)?

☐ Special Education
☐ General Education

3- How many years of teaching experiences do you have?

Please, specify _______ year(s)

4- How many students are in your class?

Please, specify ________ students

5- Have you ever attended:

A- Any conferences on inclusive education for students with disabilities?

☐ Yes ☐ No

B- Any courses on inclusive education for students with disabilities?

☐ Yes ☐ No

C- Any workshops on inclusive education for students with disabilities?

☐ Yes ☐ No

D- Any professional development on inclusive education for students with
6-Which grades have you taught? (Check all that apply)

☐ First grade
☐ Second grade
☐ Third grade
☐ Fourth grade
☐ Fifth grade
☐ Sixth grade
☐ Other, please specify ______

7-What is your gender?

☐ Male
☐ Female

8- Have you worked with students with any kind of disabilities in a public school setting?

☐ Yes  ☐ No

9- Do you have a family member with a disability?

☐ Yes  ☐ No
Part Two: Perspectives toward inclusion of students with severe disabilities in a public school.

Please carefully read each of the following items and refer to what extent you agree or disagree by checking the appropriate cell:

<table>
<thead>
<tr>
<th>NO</th>
<th>Item</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neither agree nor disagree</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Most students with severe disabilities will make an adequate attempt to complete their assignments.</td>
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<td>2</td>
<td>Inclusion of students with severe disabilities will necessitate extensive retraining of general-classroom teachers.</td>
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<td>3</td>
<td>Inclusion offers mixed group interaction that will foster understanding and acceptance of differences among students.</td>
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<td>4</td>
<td>It is likely that the student with a severe disability will exhibit behavior problems in a public school.</td>
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<td>5</td>
<td>Students with severe disabilities can best be served in a public school.</td>
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<td>6</td>
<td>The extra attention students with severe disabilities require will be to the detriment of the other students.</td>
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<td>7</td>
<td>The challenge of being in a public school will promote the academic growth of the student with a severe disability.</td>
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<td>8</td>
<td>Inclusion of students with severe disabilities will require significant changes in public school procedures.</td>
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<td>9</td>
<td>Increased freedom in a public school creates too much confusion for the student with a severe disability.</td>
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<td>10</td>
<td>General-classroom teachers have the abilities necessary to work with students with severe disabilities.</td>
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<td>11</td>
<td>The presence of students with severe disabilities will not promote acceptance of differences on the part of students without disabilities.</td>
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<td>12</td>
<td>The behavior of students with severe disabilities will set a bad example for students without disabilities.</td>
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<td>13</td>
<td>The student with a severe disability will probably develop academic</td>
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<td>14</td>
<td>Inclusion of the student with a severe disability will not promote his or her social independence.</td>
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<td>15</td>
<td>It is not more difficult to maintain order in a public school that contains a student with a severe disability than in one that does not contain a student with a severe disability.</td>
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<td>16</td>
<td>Students with severe disabilities will not monopolize the public school teacher's time.</td>
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<td>17</td>
<td>The inclusion of students with severe disabilities can be beneficial for students without disabilities.</td>
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<td>18</td>
<td>Students with severe disabilities are likely to create confusion in a public school.</td>
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<td>19</td>
<td>Public school teachers have sufficient training to teach students with severe disabilities.</td>
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<td>20</td>
<td>Inclusion will likely have a negative effect on the emotional development of the student with a severe disability.</td>
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<td>21</td>
<td>Students with severe disabilities should be given every opportunity to function in a public school when possible.</td>
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<td>22</td>
<td>The classroom behavior of the student with a severe disability does not generally require more patience from the teacher than does the classroom behavior of the student without a disability.</td>
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<td>23</td>
<td>Teaching students with severe disabilities is better done by special education teachers instead of general classroom teachers.</td>
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<td>24</td>
<td>Isolation in a special school has a beneficial effect on the social and emotional development of the student with a severe disability.</td>
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<td>25</td>
<td>The student with a severe disability will not be socially isolated in a public school.</td>
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Part Three: Open-ended question

Do you have any comments or suggestions regarding the education of students with severe disabilities in a public school either in a general classroom, or in a separate classroom within the public school?

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3-  

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Appendix C: Consent Form to Participate in Research (Arabic Version)

لا يجوز التدخل في الاختبارات إلا على مسئولية العلماء والباحثين. 

السماح عبدي ورحمة الله وبركة، ذكر طبّت عذ:

تعتبر الل تقدير تنفيذ التدريبات للعلماء الذوي الافضل الشيف، مصمّم شرف الذي يشترك في

أنْ أَنْ أَنْ مَعْتَمِدَ فِي الْبَشْرِ وَلَا يَذَّكَّرُوا بِاللهِ وَيَأْفُكُونَ إِلَى الْأَخْنَافِ.

لذا قُضِيَ بالتلبسم رَبِّي الإفلاش، فَلَكَنَّ ابْنَتُكِ يَحْمَدُهُمَا حَذَاهُمَا فَكَيْفَ عَدّ دَخَلَتْ خِلَالَهَا، يَعْبُدُ أَميَّةَ بَنَاتُكِ حَالَاء، يَغْفِرُ لَهُمَا وَيَغْفِرُ لِلْمُتَّقِينَ.

يَجِلُّ الْعِلْمَانَ تَكُونُ رَكْفَٰلَهُمْ وَلَا يَكُونُ وَأَلْحَاجَ.

إِنْ أَحْذِرْكَ وَأَطْلَكْ عَلَى مَعْطِيَّكِ لَحَيْثُ نَأْفُكُ عَلَى الْكَالِمِ الْعَزِيزِ، عَزِّ اللَّهِ وَرَحْمَةٌ وَبَرْكَةٌ.

Email: ta197507@ohio.edu OR Tel: 009661-740-274-2744
Appendix D: Survey of the Study (Arabic version)

لا يوجد نص يمكن قراءته بشكل طبيعي من الصورة المقدمة.
<table>
<thead>
<tr>
<th>الهدف</th>
<th>الذهاب</th>
<th>لا يتلبي</th>
<th>وافق</th>
<th>لا وافق</th>
</tr>
</thead>
<tbody>
<tr>
<td>التعليم ذو الإعاقات الشديدة سوف يبديلون جهدها كبيرة لحل الواجبات المدرسية التي تطلب منهم في الصرف الدراسي العادي.</td>
<td>يتفق</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>يتطلب الدمج الشامل للطلاب ذو الإعاقات الشديدة إعادة تدريب مكثف لمعلمي التعليم العام.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>يؤدي دمج الطلاب ذو الإعاقات الشديدة في مدارس التعليم العام الى تحسين قدرتهم على التفاعل مع الآخرين.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>من المحتمل أن يخرج من الطالب ذي الإعاقة الشديدة مشكلات سلوكي داخل مدارس التعليم العام.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>من الأفضل للطلاب ذو الإعاقات الشديدة ان يتحقوا بالمدارس العامة القريبة من سكنهم.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>سيؤثر الامتنان البالغ الذي يتحاجه الطلاب ذو الإعاقات الشديدة سلبًا على غيرهم من الطلاب.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>تواجد الطلاب ذو الإعاقات الشديدة في مدارس التعليم العام سوف يساعدهم على تعلم المهارات الأكاديمية كالقراءة والكتابة.</td>
<td>لا تتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>سيطلب دمج الطلاب ذو الإعاقات الشديدة إجراء تغييرات هامة داخل مدارس التعليم العام.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>تواجد الطلاب ذو الإعاقات الشديدة في مدارس التعليم العام سوف يؤثر سلبًا على رتبة المدرسة.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>المعلمين في مدارس التعليم العام قادرون على التعامل مع الطلاب ذو الإعاقات الشديدة.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
<tr>
<td>لن يدعم وجود الطلاب ذو الإعاقات الشديدة في مدارس التعليم العام قبول الطلاب غير المعيدين للاختلافات بينهم.</td>
<td>لا يتلبي</td>
<td>لا</td>
<td>لا</td>
<td>لا</td>
</tr>
</tbody>
</table>
سوف يكون سلوك الطلاب ذوي الإعاقات الشديدة في مدارس التعليم العام نموذجاً سيداً للطلاب غير المعاقين.

يحتل أن ينمّي الطلاب ذوي الإعاقات الشديدة مهاراتهم الأكاديمية في مدارس التعليم العام أسرع من معاهد التربية الخاصة.

لن يساعد دمج الطلاب ذوي الإعاقات الشديدة في مدارس التعليم العام في تعلم المهارات الاجتماعية.

سوف لن يكون هناك أي عقبات أو مشكلات في ضبط النظام داخل مدارس التعليم العام التي تدمج بها طلاب ذوي إعاقات شديدة.

لا يحتاج الطلاب ذوي الإعاقات الشديدة لوقت كبير من التعليم العام عندما يقوم بتدريسهم في الصف العادي.

يعد معلمو الصفوف العامة مدربين كافيين لتدريس الطلاب ذوي الإعاقات الشديدة في الصفوف العادية.

قد تؤثر عملية التمثيل سلباً على النمو الاجتماعي للطلاب ذوي الإعاقات الشديدة.

لا يتعين أن يُعطى الطلاب ذوي الإعاقات الشديدة كل فرصة للقيام بآية مهم ممكنة داخل الفصل العام.

لا يلزم أن يتطلب سلوك الطلاب ذوي الإعاقات الشديدة في الصف الدراسي العادي من العلم حضوراً أكثر مما يتطلبه سلوك الطلاب غير المعاقين.

لا يعتبر الطلاب ذوي الإعاقات الشديدة معزولين اجتماعياً في مدارس التعليم العام.
قينالي ان اقتراح: الاقتراحات انا تصرّف حسن ارتفاقي لشب، رحياة في تلاميذ رويا الإعاقات التقليديات.

فما ذلك الذي اقترح، ان تصرّف على أن تعرف بذي، تلاميذ، الإعاقات التقليديات نسراء في فقط كلي انع او في?

1-

2-

3-
Appendix E: Permission to Use Survey Instrument

Dear Inquirer:

Thank you for your inquiry about the scale entitled Opinions Relative to Mainstreaming Special-Needs Children. This scale was completely revised recently. It is now entitled Opinions Relative to the Integration of Students with Disabilities. I have enclosed with this letter a copy of the most recent version of the ORI scale and a scoring key for your use.

You may reproduce the ORI scale in any form that suits your research needs. The only requirement that we have for the use of the instrument is that you ascribe authorship to Dr. Larrivee and me somewhere on the instrument and acknowledge us as the authors of the instrument, using the citation below, in any publication that may arise from your use of it.

Good luck with your research. Please call or write if I can assist you further.

Very truly yours,

s/Richard F. Antonak
Richard F. Antonak, Ed.D.
Vice Provost for Research

Appropriate citation:
Appendix F: Human Subject Approval (Ohio University- Athens) of the Pilot Study

A determination has been made that the following research study is exempt from IRB review because it involves:

Category 2. research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior

Applicant: Teachers' Perspectives of Inclusion of Students with Severe Disabilities in Elementary Schools in Saudi Arabia

Primary Investigator: Turki Abdullah Al-Quaini

Co-Investigator(s):

Advisor: Dianne M. Gut

Department: Teacher Education

Rebecca Cale, AAB, CIP
Office of Research Compliance

Date: 12/02/10

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved (as an amendment) prior to implementation.
Appendix G: Human Subject Approval (Ohio University- Athens) of the Final study

A determination has been made that the following research study is exempt from IRB review because it involves:

Category 2. research involving the use of educational tests, survey procedures, interview procedures or observation of public behavior

Project Title: Teachers’ Perspectives of Inclusion of Students with Severe Disabilities in Elementary Schools in Saudi Arabia

Primary Investigator: Turki Abdullah Al-Quraini

Co-Investigator(s): 

Advisor: Dianne M. Gut

Department: Teacher Education

Rebecca Cale, AAB, CIP
Office of Research Compliance

Date 02/11/11

The approval remains in effect provided the study is conducted exactly as described in your application for review. Any additions or modifications to the project must be approved (as an amendment) prior to implementation.
The amendment, detailed below, and submitted for the following research study has been approved by the Institutional Review Board at Ohio University.

Project: Teachers' Perspectives of Inclusion of Students with Severe Disabilities in Elementary Schools in Saudi Arabia

Amendment: Revised Survey

Primary Investigator: Turki Abdullah Al-Quraini
Co-Investigator(s):

Advisor: Dianne M. Gut

Department: Teacher Education

Rebecca G. Cale, AAB, CIP
Office of Research Compliance

Date 2/15/11
Appendix H: Panel of Experts Information

Name: Saeed Ahmed Shaban, Ph.D.
English Language instructor in Language Unit, College of Languages and Translation in King Saud University
Address: King Saud University College of Languages and Translation, P.O. Box 301334, Riyadh 11652, Saudi Arabia
Email: saeedshaban2007@yahoo.com
Name: Mohamed Atif Mogahed, Ph.D.
English Language instructor in Language Unit staff, College of Languages and Translation, King Saud University
Address: King Saud University College of Languages and Translation, P.O. Box 87907, Riyadh 11652, Saudi Arabia
Email: mammideso@hotmail.com
Name: Saleem Ramadan, Ph.D. Student, Ohio University
Address: Stocker Center, 294, Athens, OH, 45701, United States of America
Email: sr108707@ohio.edu
Name: Fahd Al-Olyan
Arabic Language instructor in Language Department at Imam University, Riyadh, Saudi Arabia
Address: 186 Mill St. Apt. 202, Athens, OH 45701
Email: abu-yazeed.f@hotmail.com
Name: Inas A’lian, Ph.D. student, Ohio University
Email: inas2000@yahoo.com
Name: Dr. Samer Sawalmeh
Ph.D. in Special Education
College of Education, University of Hail
Email: samers_1977@yahoo.com
**Appendix I : Open-ended Question: General Comments and Suggestions**

Table 21.  
*Frequency and Percentage of the Teachers' Suggestions*

<table>
<thead>
<tr>
<th>Item number</th>
<th>Comments and Suggestions</th>
<th>Frequency</th>
<th>Parentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>No Comments and Suggestions</td>
<td>155</td>
<td>51.15</td>
</tr>
<tr>
<td>2</td>
<td>Prepare the physical environment of the public schools and the general classrooms to be safe and appropriately accessible for these students through accommodations of stairs, entry ways, cafeterias, and elevators.</td>
<td>28</td>
<td>9.24</td>
</tr>
<tr>
<td>3</td>
<td>Provide extensive training to general education teachers about inclusion and students with severe disabilities through conferences and workshops.</td>
<td>24</td>
<td>7.92</td>
</tr>
<tr>
<td>4</td>
<td>Special classrooms in public schools, which provide a supportive environment to develop their social and behavior skills, would be a good placement for students with severe disabilities.</td>
<td>10</td>
<td>3.3</td>
</tr>
<tr>
<td>5</td>
<td>Reduce the number of students without disabilities in the general classrooms, (15 students without disabilities and two students with disabilities) which would allow teachers to be able to teach these students.</td>
<td>9</td>
<td>2.97</td>
</tr>
<tr>
<td>6</td>
<td>These students should be educated in special classrooms in public schools. They should only be included with students without disabilities in the non-curricula activities (e.g., art, physical education, field trips).</td>
<td>9</td>
<td>2.97</td>
</tr>
<tr>
<td>7</td>
<td>The general education curriculum should be developed to include all of the skills that students with severe disabilities and without disabilities need in the general classroom.</td>
<td>8</td>
<td>2.64</td>
</tr>
<tr>
<td>8</td>
<td>In order to include these students in public schools, the general education teachers and special education teachers should collaborate to solve any barriers or problems that appear in the general classrooms, in teaching these students.</td>
<td>5</td>
<td>1.65</td>
</tr>
<tr>
<td>9</td>
<td>Provide paraprofessionals or assistant teachers either for special education teachers and general education teachers to assist them in teaching these students in public schools.</td>
<td>5</td>
<td>1.65</td>
</tr>
<tr>
<td>10</td>
<td>Give financial incentives to the general education teachers who will work with students with severe disabilities in public schools.</td>
<td>4</td>
<td>1.32</td>
</tr>
<tr>
<td>11</td>
<td>Reduce the number of daily sections for general education teachers who will work with these students in inclusive education.</td>
<td>3</td>
<td>0.99</td>
</tr>
<tr>
<td>12</td>
<td>School districts should provide doctors in schools that will meet these students health needs.</td>
<td>3</td>
<td>0.99</td>
</tr>
<tr>
<td>13</td>
<td>The schools should provide some related services, such as speech and language and physical therapists in the schools that will serve the students with severe disabilities.</td>
<td>3</td>
<td>0.99</td>
</tr>
<tr>
<td>14</td>
<td>Colleges of education should provide pre-service general education teachers courses regarding students with disabilities and inclusive education,</td>
<td>3</td>
<td>0.99</td>
</tr>
<tr>
<td>15</td>
<td>Provide public schools with learning tools that assist teachers.</td>
<td>3</td>
<td>0.99</td>
</tr>
</tbody>
</table>
Table 21. –Continued”

Understand the needs and the differences among students with and without disabilities in curricula and non-curricula activities.  2  0.66
Prepare general and special education teachers in pre-service programs in colleges to work with students with severe disabilities in public schools.  2  0.66
Prepare and make students without disabilities aware of the educational needs of students with severe disabilities.  2  0.66
Age-appropriate settings should be considered when students with severe disabilities are included in general classrooms.  2  0.66
Inclusive education should be an integrative process for these students; therefore, we should not just place them in the public school (e.g., prepare the school staff for the inclusive education).  2  0.66
Students without disabilities should understand the abilities and needs of these students and they should improve their attitudes toward students with severe disabilities through festivals.  2  0.66
Provide integrated school teams that support the inclusion of these students  2  0.66
Educate society regarding the importance of inclusion of these students.  2  0.66
Schools should provide related services, particularly speech-language therapists.  2  0.66
Educate general education teachers and administrators regarding these students and the process of inclusion  2  0.66
These students should be educated in the public schools and included in social activities.  1  0.33
Special education teachers should obtain training regarding a new approach to inclusion of students with severe disabilities.  1  0.33
Educate the families of students with severe disabilities about the importance of inclusion for their children and importance of their participation in this process.  1  0.33
Provide public schools with some professionals that support the needs of these students, such as doctors, nurses, social workers, and physiological therapists.  1  0.33
Families of the student with severe disabilities should collaborate with schools in order to create successful inclusion for these students.  1  0.33
Regulations of educating students with disabilities in public schools should be explained in detail and applied.  1  0.33
Special education departments should design in-service programs about students with severe disabilities and inclusive education in order to prepare special education teachers who are experts in this type of disability.  1  0.33
Families of students with severe disabilities should support the process of inclusive education for their children.  1  0.33
The schools should provide some related services, such as speech and language and physical therapists in the schools that will serve the students with severe disabilities.  1  0.33
The school districts should provide the schools with assistive technology that assists the teachers in teaching either students with disabilities or other students.  1  0.33
Appendix J: The Factor Analysis and Principal Component Analysis.

Table 1
Total Variance Demonstrated

<table>
<thead>
<tr>
<th>Component</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of Total Variance</td>
<td>% of Total Variance</td>
</tr>
<tr>
<td></td>
<td>Cumulative %</td>
<td>Cumulative %</td>
</tr>
<tr>
<td>1</td>
<td>5.776</td>
<td>23.106</td>
</tr>
<tr>
<td>2</td>
<td>2.918</td>
<td>11.673</td>
</tr>
<tr>
<td>3</td>
<td>2.067</td>
<td>8.268</td>
</tr>
<tr>
<td>4</td>
<td>1.216</td>
<td>4.864</td>
</tr>
<tr>
<td>5</td>
<td>1.114</td>
<td>4.455</td>
</tr>
<tr>
<td>6</td>
<td>1.004</td>
<td>4.014</td>
</tr>
<tr>
<td>7</td>
<td>.955</td>
<td>3.818</td>
</tr>
<tr>
<td>8</td>
<td>.872</td>
<td>3.489</td>
</tr>
<tr>
<td>9</td>
<td>.820</td>
<td>3.281</td>
</tr>
<tr>
<td>10</td>
<td>.791</td>
<td>3.162</td>
</tr>
<tr>
<td>11</td>
<td>.729</td>
<td>2.917</td>
</tr>
<tr>
<td>12</td>
<td>.691</td>
<td>2.763</td>
</tr>
<tr>
<td>13</td>
<td>.672</td>
<td>2.687</td>
</tr>
<tr>
<td>14</td>
<td>.618</td>
<td>2.474</td>
</tr>
<tr>
<td>15</td>
<td>.561</td>
<td>2.245</td>
</tr>
<tr>
<td>16</td>
<td>.538</td>
<td>2.150</td>
</tr>
<tr>
<td>17</td>
<td>.498</td>
<td>1.994</td>
</tr>
<tr>
<td>18</td>
<td>.472</td>
<td>1.888</td>
</tr>
<tr>
<td>19</td>
<td>.463</td>
<td>1.854</td>
</tr>
<tr>
<td>20</td>
<td>.424</td>
<td>1.696</td>
</tr>
<tr>
<td>21</td>
<td>.396</td>
<td>1.585</td>
</tr>
<tr>
<td>22</td>
<td>.388</td>
<td>1.553</td>
</tr>
<tr>
<td>23</td>
<td>.350</td>
<td>1.399</td>
</tr>
<tr>
<td>24</td>
<td>.342</td>
<td>1.369</td>
</tr>
<tr>
<td>25</td>
<td>.324</td>
<td>1.297</td>
</tr>
</tbody>
</table>

% of Cumulative %
Figure 1. Scree Plot of Dimension.
Table 2.

Component Matrix of the Principal Component Analysis

<table>
<thead>
<tr>
<th>The Definition of the Variable</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inclusion offers mixed group interaction that will foster understanding and acceptance of differences among students.</td>
<td>.681</td>
</tr>
<tr>
<td>Increased freedom in a public school creates too much confusion for the student with a severe disability.</td>
<td>.667 -.304</td>
</tr>
<tr>
<td>Students with severe disabilities can best be served in a public school.</td>
<td>.660 .324</td>
</tr>
<tr>
<td>The challenge of being in a public school will promote the academic growth of the student with a severe disability.</td>
<td>.634 .344</td>
</tr>
<tr>
<td>The student with a severe disability will probably develop academic skills more rapidly in a public school than in a special school.</td>
<td>.621</td>
</tr>
<tr>
<td>Students with severe disabilities are likely to create confusion in a public school.</td>
<td>.598 -.358</td>
</tr>
<tr>
<td>General-classroom teachers have the abilities necessary to work with students with severe disabilities.</td>
<td>.592 .335</td>
</tr>
<tr>
<td>The behavior of students with severe disabilities will set a bad example for students without disabilities.</td>
<td>.574 -.422</td>
</tr>
<tr>
<td>The inclusion of students with severe disabilities can be beneficial for students without disabilities.</td>
<td>.565 .311</td>
</tr>
<tr>
<td>Inclusion will likely have a negative effect on the emotional development of the student with a severe</td>
<td>.563 -.449</td>
</tr>
<tr>
<td>The extra attention students with severe disabilities require will be to the detriment of the other students.</td>
<td>.544 -.336</td>
</tr>
</tbody>
</table>
Table 2. (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>Correlation Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolation in a special school has a beneficial effect on the social and</td>
<td>.504 .390</td>
</tr>
<tr>
<td>emotional development of the student with a severe disability.</td>
<td></td>
</tr>
<tr>
<td>Inclusion of the student with a severe disability will not promote his</td>
<td>.475 .334 .303</td>
</tr>
<tr>
<td>or her social independence.</td>
<td></td>
</tr>
<tr>
<td>It is not more difficult to maintain order in a public school that</td>
<td>.434 .375</td>
</tr>
<tr>
<td>contains a student with a severe disability than in one that does not</td>
<td></td>
</tr>
<tr>
<td>contain a student with a severe disability.</td>
<td></td>
</tr>
<tr>
<td>The student with a severe disability will not be socially isolated in a</td>
<td>.401 .398</td>
</tr>
<tr>
<td>public school.</td>
<td></td>
</tr>
<tr>
<td>It is likely that the student with a severe disability will exhibit</td>
<td>.392 .311 .345</td>
</tr>
<tr>
<td>behavior problems in a public school.</td>
<td></td>
</tr>
<tr>
<td>Students with severe disabilities should be given every opportunity to</td>
<td>.374</td>
</tr>
<tr>
<td>function in a public school when possible</td>
<td></td>
</tr>
<tr>
<td>The presence of students with severe disabilities will not promote</td>
<td>.363 .339</td>
</tr>
<tr>
<td>acceptance of differences on the part of students without disabilities.</td>
<td></td>
</tr>
<tr>
<td>Students with severe disabilities will not monopolize the general-</td>
<td>.321 .528 .353</td>
</tr>
<tr>
<td>classroom teacher's time.</td>
<td></td>
</tr>
<tr>
<td>Public school teachers have sufficient training to teach students with</td>
<td>.510 .35</td>
</tr>
<tr>
<td>severe disabilities</td>
<td></td>
</tr>
<tr>
<td>The classroom behavior of the student with a severe disability does not</td>
<td>.340 .494 .332</td>
</tr>
<tr>
<td>generally require more patience from the teacher than does the</td>
<td></td>
</tr>
<tr>
<td>classroom behavior of the student without a disability.</td>
<td></td>
</tr>
</tbody>
</table>
Table 2. (continued)

Inclusion of students with severe disabilities will necessitate extensive retention of general-classroom teachers. .553

Inclusion of students with severe disabilities will require significant changes in public school procedures. .455

Most students with severe disabilities will make an adequate attempt to complete their assignments. -.437

Teaching students with severe disabilities is better done by special education teachers instead of general classroom teachers. .399

Extraction Method: Principal Component Analysis
a. 3 components extracted.

Table 3.  
Comparison of Eigenvalues from Principal Component Analysis and Criterion Values from Parallel Analysis

<table>
<thead>
<tr>
<th>Component number</th>
<th>Actual eigenvalue from PCA</th>
<th>Criterion values from Parallel analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>5.776</td>
<td>1.648</td>
</tr>
<tr>
<td>2</td>
<td>2.918</td>
<td>1.542</td>
</tr>
<tr>
<td>3</td>
<td>2.067</td>
<td>1.394</td>
</tr>
</tbody>
</table>
Table 4.
*Rotated Loading Matrix*

<table>
<thead>
<tr>
<th>The definition of the variable</th>
<th>Component</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Inclusion will likely have a negative effect on the emotional development of the student with a severe.</td>
<td>.705</td>
</tr>
<tr>
<td>Increased freedom in a public school creates too much confusion for the student with a severe disability.</td>
<td>.697</td>
</tr>
<tr>
<td>The behavior of students with severe disabilities will set a bad example for students without disabilities.</td>
<td>.691</td>
</tr>
<tr>
<td>Isolation in a special school has a beneficial effect on the social and emotional development of the student with a severe disability.</td>
<td>.683</td>
</tr>
<tr>
<td>Students with severe disabilities are likely to create confusion in a public school.</td>
<td>.647</td>
</tr>
</tbody>
</table>
Table 4. (continued)

| Inclusion of the student with a severe disability will not promote his or her social independence. | .641 |
| The extra attention students with severe disabilities require will be to the detriment of the other students. | .572 |
| Inclusion offers mixed group interaction that will foster understanding and acceptance of differences among students. | .499 | .491 |
| The presence of students with severe disabilities will not promote acceptance of differences on the part of students without disabilities. | .476 |
| Students with severe disabilities will not monopolize the general-classroom teacher's time. | .670 |
General-classroom teachers have the abilities necessary to work with students with severe disabilities.

The classroom behavior of the student with a severe disability does not generally require more patience from the teacher than does the classroom behavior of the student without a disability.

Students with severe disabilities can best be served in a public school.

The challenge of being in a public school will promote the academic growth of the student with a severe disability.

It is not more difficult to maintain order in a public school that contains a student with a severe disability than in one that does not contain a student with a severe disability.
Public school teachers have sufficient training to teach students with severe disabilities.  .604

The inclusion of students with severe disabilities can be beneficial for students without disabilities.  .570

The student with a severe disability will probably develop academic skills more rapidly in a public school than in a special school.  .538

Students with severe disabilities should be given every opportunity to function in a public school when possible.  .407

Inclusion of students with severe disabilities will necessitate extensive retention of general-classroom teachers.  .570
Table 4. (continued)

| Inclusion of students with severe disabilities will require significant changes in public school procedures. | .527 |
| Most students with severe disabilities will make an adequate attempt to complete their assignments. | -.513 |
| Teaching students with severe disabilities is better done by special education teachers instead of general classroom teachers. | .466 |
| It is likely that the student with a severe disability will exhibit behavior problems in a public school. | .458 |
| The student with a severe disability will not be socially isolated in a public school. | -.422 |
Table 5.
Communalities Values

<table>
<thead>
<tr>
<th>The definition of the variable</th>
<th>Initial</th>
<th>Extraction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Most students with severe disabilities will make an adequate attempt to complete their assignments.</td>
<td>1.000</td>
<td>.280</td>
</tr>
<tr>
<td>Inclusion of students with severe disabilities will necessitate extensive retention of general-classroom teachers.</td>
<td>1.000</td>
<td>.348</td>
</tr>
<tr>
<td>Inclusion offers mixed group interaction that will foster understanding and acceptance of differences among students.</td>
<td>1.000</td>
<td>.540</td>
</tr>
<tr>
<td>It is likely that the student with a severe disability will exhibit behavior problems in a public school.</td>
<td>1.000</td>
<td>.369</td>
</tr>
<tr>
<td>Statement</td>
<td>p-value 1</td>
<td>p-value 2</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
</tr>
<tr>
<td>Students with severe disabilities can best be served in a public school.</td>
<td>1.000</td>
<td>.583</td>
</tr>
<tr>
<td>The extra attention students with severe disabilities require will be to the detriment of the other students.</td>
<td>1.000</td>
<td>.427</td>
</tr>
<tr>
<td>The challenge of being in a public school will promote the academic growth of the student with a severe disability.</td>
<td>1.000</td>
<td>.576</td>
</tr>
<tr>
<td>Inclusion of students with severe disabilities will require significant changes in public school procedures.</td>
<td>1.000</td>
<td>.302</td>
</tr>
<tr>
<td>Increased freedom in a public school creates too much confusion for the student with a severe disability.</td>
<td>1.000</td>
<td>.539</td>
</tr>
<tr>
<td>General-classroom teachers have the abilities necessary to work with students with severe disabilities.</td>
<td>1.000</td>
<td>.539</td>
</tr>
</tbody>
</table>
Table 5. (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>p-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>The presence of students with severe disabilities will not promote</td>
<td>1.000</td>
<td>.246</td>
</tr>
<tr>
<td>acceptance of differences on the part of students without disabilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The behavior of students with severe disabilities will set a bad example</td>
<td>1.000</td>
<td>.508</td>
</tr>
<tr>
<td>for students without disabilities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The student with a severe disability will probably develop academic</td>
<td>1.000</td>
<td>.435</td>
</tr>
<tr>
<td>skills more rapidly in a public school than in a special school.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inclusion of the student with a severe disability will not promote his or</td>
<td>1.000</td>
<td>.428</td>
</tr>
<tr>
<td>her social independence.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>It is not more difficult to maintain order in a public school that</td>
<td>1.000</td>
<td>.390</td>
</tr>
<tr>
<td>contains a student with a severe disability than in one that does not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>contain a student with a severe disability.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5. (continued)

<table>
<thead>
<tr>
<th>Statement</th>
<th>p-value</th>
<th>α-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students with severe disabilities will not monopolize the general-classroom teacher's time.</td>
<td>1.000</td>
<td>.506</td>
</tr>
<tr>
<td>The inclusion of students with severe disabilities can be beneficial for students without disabilities.</td>
<td>1.000</td>
<td>.428</td>
</tr>
<tr>
<td>Students with severe disabilities are likely to create confusion in a public school.</td>
<td>1.000</td>
<td>.489</td>
</tr>
<tr>
<td>Public school teachers have sufficient training to teach students with severe disabilities.</td>
<td>1.000</td>
<td>.433</td>
</tr>
<tr>
<td>Inclusion will likely have a negative effect on the emotional development of the student with a severe.</td>
<td>1.000</td>
<td>.521</td>
</tr>
<tr>
<td>Students with severe disabilities should be given every opportunity to function in a public school when possible.</td>
<td>1.000</td>
<td>.275</td>
</tr>
</tbody>
</table>
Table 5. (continued)

| The classroom behavior of the student with a severe disability does not generally require more patience from the teacher than does the classroom behavior of the student without a disability. | 1.000 | .470 |
| Teaching students with severe disabilities is better done by special education teachers instead of general classroom teachers. | 1.000 | .288 |
| Isolation in a special school has a beneficial effect on the social and emotional development of the student with a severe disability. | 1.000 | .471 |
| The student with a severe disability will not be socially isolated in a public school. | 1.000 | .370 |
Appendix K: The School District of Riyadh Letter of Approval for the Boys’ and Girls’ Schools
 بشأن: تهيئة ميدان البحث

المؤتمر الدولي

الأعمال الإسلامية

السلام عليكم ورحمة الله وبركاته،

بناءً على تعليمات معالي الوزير رقم 2011/11199 وتاريخ 09/09/2011، بشأن تشريع الإدارات العامة للتدريب والتعليم، تم نشر خطابات السماح للباحثين بأن يستغلوا المواقع الترموشية لإجراء دراسة في مجالات التدريس الخاصة بجامعة أوروبا. يتطلب إجراء دراسة بعنوان "مواقع توجيهات الطلاب والمدارس: دور التدريس الشامل للمدفوعات" (المنتهى في الصف المزايدي) تنفيذ الدراسة بدرجة الباحث على مستوى من المدارس في المدارس الإسلامية بعيدة الرياك.

وبناءً على الإشراف الأول المتنوع دائم تسهيل مهمة البحث، مع ملاحظة أن البحث يتضمن تحليل المسؤولية المتعلقة بجهات الموقوفة البحث ولا يعني سماح الإدارة العامة للتدريب والتعليم موافقتها بالضرورة على مشاركة البحث أو على الطرق والأساليب المستخدمة.

وألاية يحفظكم الله.

صالح بن إبراهيم الجوادي

مدير إدارة التخطيط والتخطيط،

http://65.55.72.39/att/GetAttachment.aspx?file=4cd13c70-e7ae-437c-88de-988b3340a4e6... 12/20/2010