ABSTRACT

DISSERTATION: Professional Development Needs of Early Intervention Providers of Preschoolers with Moderate and Severe Disabilities in Saudi Arabia

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Research literature indicates that ongoing professional development makes a difference in enhancing the knowledge, abilities, and necessary skills for early intervention providers of preschoolers with moderate and severe disabilities (MSD). The purpose of this study was to assess the professional development needs of early intervention providers of preschoolers with MSD in Saudi Arabia. This research implemented a descriptive survey design to provide quantitative research findings. The study included a sample size of 92 early intervention providers (EIPs). The researcher used descriptive statistics to analyze the demographic characteristics of the participants and to determine participants’ responses towards the basic characteristics, objectives, and standards of professional development programs at the Disabled Children’s Association (DCA) in Saudi Arabia as well as their perceived teaching abilities. The Somers’ D tests were conducted to compare several proportions among the items. ANOVA also was used to determine whether a significant difference existed among all independent and dependent variables.

The research results discovered that the basic characteristics, objectives, and standards of professional development programs at the DCA in Saudi Arabia that provide early intervention

The research results discovered that the basic characteristics, objectives, and standards of professional development programs at the DCA in Saudi Arabia that provide early intervention
providers with the knowledge, skills, and abilities were in the high level of quality. The findings also indicated that perceived teaching abilities of EIPs were in the high level, while “teaching Self-Help skills” was in the moderate level. There was a significant difference between perceived teaching abilities and the number of hours spent in a professional development course, at \( p < .05 \). Providers who spent five or more hours of professional development during the past year had higher means and influences in teaching the five achievement skills researched in this study. Overall, there was agreement between the criteria of the programs offered in the centers of the DCA and the perceptions of the early intervention providers about their professional development needs, which were both at the high level.

The researcher recommends that stakeholders in Saudi Arabia and the Gulf countries should develop appropriate and effective early intervention programs like the ones offered at the DCA centers, which will contribute to enhancing the quality of education for providers and their students with disabilities, including preschoolers with MSD.
DEDICATION

To my father, mother, brothers, sisters, and friends: You all helped make this dissertation possible through your continuous encouragement and support. Thank you for care and support you have provided me during my academic journey.

To my wife, Sarah: Your love and support has been a tremendous contribution to my work. I truly appreciate your sacrifice, patience, understanding, and encouragement.

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To the stakeholders and educators in Saudi Arabia: I hope that this dissertation may be useful in benefiting special education teachers and children.
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CHAPTER ONE

Introduction

Context for Inquiry

According to the U.S. Census Bureau (2004), more than six million children with disabilities, aged three and four, attended preschool programs for part of the day. The estimated percentages of programs for preschoolers that register one or more child with a disability differ significantly. The percentage of preschool programs reporting children with disabilities in attendance in 1999 was approximately 34% for child care settings and 74% for early childhood education settings (Buysse, Wesley, Bryant, & Gardner, 1999). Furthermore, the amount of young children with disabilities enrolled in public school preschool programs has increased significantly (p. 125). Therefore, Early Intervention (EI) plays a critical role in providing support, special education programs, and related services for all individuals with disabilities, including those with moderate and severe disabilities (MSD). This is important in order for young children to gain many skills in the early stages of development (Hallahan, Kauffman, & Pullen, 2009; McCain & Mustard, 1999; Robert et al., 2008; Sexton, Snyder, Rheams, Sharps, & Perez, 1991).

It is essential to meet the professional development needs of the providers who work with young children with disabilities in order to provide the appropriate services in the preschool setting. Providers should be highly qualified to teach these young children with disabilities. Guskey (2000) defined professional development as “those processes and activities designed to
enhance the professional knowledge, skills, and attitudes of educators so that they might, in turn, improve the learning of the students” (p. 16). Guskey (2000) also showed that, unlike many jobs, education is a career which requires continuous learning. Therefore, professional development should be an ongoing process so that educators gain new knowledge, strategies, and information. Gwynne-Atwater (2011) discussed the characteristics of professional development for teachers by stating, “Ongoing professional development should provide for these ideals using a variety of methods ranging from observations, in-services, curriculum reviews, and professional readings. Opportunities to partake in peer discussions should also be encouraged as sharing practices can be mutually beneficial to all” (p. 25).

Both general and special education teachers have responsibilities for educating all children, including those with disabilities. Therefore, the improvement of education for children with disabilities requires that more of these children be served in a general education classroom, which leads to several challenges for teachers. These challenges include an increasing number of students who are identified as having disabilities and who must be provided with special education services, according to the Individuals with Disabilities Education Act (IDEA) of 2004 (Data Accountability Center, 2004; 2007). The number of children with disabilities who “are taught in integrated preschool settings is increasing more than the number of children with disabilities who are taught in self-contained classrooms (U.S. Department of Education, Office of Special Education Programs, Data Analysis System” (DANS), OMB, 2003, p. 180, as cited in Anderson, 2010, p. 2). In addition, No Child Left Behind (NCLB, 2001) requires all states to develop appropriate curriculum standards and create assessments in order to evaluate the students’ achievement during the learning process.
Guetzloe (1999) mentioned that it is important for general education teachers to know some teaching methods that special education teachers use in the classrooms, such as direct instruction and cooperative teaching. Importantly, any teacher who works with children with disabilities needs training in special education laws, regulations, and procedures. Training is needed in areas such as Individual Education Plans (IEP), effective learning strategies, social and communication skills, classroom management for children who have problem behaviors, and helpful group procedures. In addition, special education teachers must be informed about general education policies, procedures, and curriculum.

Teachers have to be knowledgeable about all children’s needs. Furthermore, it is important for them to know how to implement the appropriate curriculum for all students when children with disabilities are taught in general education classrooms. The laws and regulations from 1975 to present include children with disabilities in general education school settings. However, Stodden, Galloway, and Stodden (2003) reported, “most teachers have little or no preparation in addressing students’ individual needs to help them learn standards based curriculum” (p. 14).

The United States government encouraged general education teachers to acquire effective training regarding inclusion of students with disabilities in general education school classrooms. Several universities understood the needs of teacher preparation in the area of training and established training requirements (Anderson, 2010). Ganschow, Weber, and Davis (1984) conducted a study in the 1980s. At that time, approximately 33 states did not have special education requirements or only had one special education course for the general education teacher who sought a license. “Five years later, another study conducted by Fender and Fieldler reported that 40 states required a special education course for teacher certification. The National
Association of State Directors of Teacher Education and Certification (NASDTEC) knowledge base indicated that 11 of the 37 reporting states had ‘no special education component’” (Anderson, 2010, p. 48). Moreover, states are continuing to understand the importance of special education training for general education teachers.

Bos, Mather, Narr, and Babur (1999) conducted an important study on professional development projects. The study was conducted to provide a deeper understanding of teachers’ knowledge of phonology. The study evaluated the impact of teachers’ knowledge of phonology on kindergarten through second grade early elementary teachers and special education teachers. Reading Instructional Methods of Efficacy (Project RIME) was based on three assumptions. First of all, EI is critical. Secondly, teachers must be up-to-date on the most effective ways to teach reading to students who are at risk. Finally, teachers must have opportunities to participate in interactive professional development and cooperation to better address the educational needs of children. The results from this study indicated that teachers who participated in Project RIME, when compared with teachers from other schools, were more positive about their attitude toward explicit, structured language instruction. This study importantly indicated that there was significant improvement in teachers’ knowledge of professional development groups based on the Structure of Language assessment. Teachers were also able to change practices by integrating new strategies into their instruction in the classroom. Furthermore, they reported that they were able to meet all obstacles in implementation of the recommended strategies through collaboration with the project staff. This process demonstrated that the collaboration among staff in the professional development aspect helped both children and teachers to enhance the quality of education.
O’Connor (1999) compared the effectiveness of two professional development models on reading acquisition for children in kindergarten. One model was considered the intensive model, while the other model was considered the traditional model. The intensive professional development model contained a two-week summer institute training followed by weekly observation sessions and discussions among teachers and researchers during the academic year. Teachers in the traditional professional development model attended only three half-day sessions spread throughout the year. Results indicated that teachers who participated in the intensive professional development model had higher levels of implementation of activities during classroom instruction. More importantly, this finding established the importance of intensive professional development programs for both general and special education teachers in order to teach children targeted skills. For instance, children who were in the intensive professional development classrooms performed at a higher level in many skills. Skills included blending, segmentation, rapid letter naming, word identification, and dictation.

The information that has been discussed indicates the importance of professional development for early intervention teachers in order to enhance skills, abilities, and knowledge in teaching young children with disabilities. Furthermore, the current study focused on young children with MSD in Saudi Arabia; therefore, it is important to indicate some definitions of this population. The Association for Persons with Severe Handicaps (TASH, 1991) describes people with severe disabilities as, “individuals of all ages who require extensive ongoing support in more than one major life activity in order to participate in integrated community settings and to enjoy a quality of life that is available to citizens with fewer or no disabilities” (p. 19).

The National Information Center for Children and Youth with Disabilities (2001) defined people with severe disabilities as people:
Who traditionally have been labeled as having severe to profound mental retardation.
These people require ongoing, extensive support in more than one major life activity in
order to participate in integrated community settings and enjoy the quality of life
available to people with fewer or no disabilities. Often, these individuals have additional
disabilities, including movement difficulties, sensory losses, and behavior problems (p.
1).

As Collins (2007) cited, students with moderate, severe, and profound cognitive
disabilities or mental retardation fall in the category of low-incidence disabilities. In addition,
this category included students with autism or multiple disabilities. Children with moderate
disabilities may be able to learn functional academic skills (reading sight words), domestic skills
(cooking with picture recipes), and community skills (using a next dollar strategy to make
purchases). Students with severe disabilities may be able to learn basic skills in some areas such
as communication (using picture symbols or adaptive devices) and self-help (eating and
dressing).

Bricker and Filler (1985) pointed out that a person with severe mental retardation is one
whose condition arose during the developmental period, has impairments in adaptive behavior,
and has obtained a score on an IQ test which falls between four and five standard deviations
below the mean of the particular test employed. In another study, Downing (2002) mentioned
that students with severe and multiple disabilities have varying strengths and needs.

Students with severe and multiple disabilities have been assigned many terms by the
educational system: severely disabled, multi-handicapped blind, multi-handicapped deaf, deaf-
blind, and severe-profound-multi-handicapped. Houston and Torgesen (2004) defined the term
“moderate disability” as a term that “refers to individuals with ability levels that are expected to
require ongoing support for adult living. This typically includes students with disabilities such as trainable mental handicaps, autism, autism-spectrum disorders, and significant language impairments” (p. 9).

**Purpose of the Study**

The purpose of this study was to assess the professional development needs of early intervention providers (EIPs) of preschoolers with MSD in Saudi Arabia. Currently, effective EI services do not exist in Saudi Arabia. Until now, there have not been any studies conducted on the professional development of EIPs. Thus, the goal of this study was to identify the needs of EIPs who work with this population. This study evaluated the academic and professional level of EIPs, as well as the knowledge and basic skills necessary for these providers to offer high-quality services for young children with MSD. The hypothesis of this study was that professional development makes a difference in enhancing the knowledge, abilities, and necessary skills for EIPs of preschoolers with MSD in Saudi Arabia. The assumption was that while EIPs of preschoolers with MSD are skilled, the field is constantly changing; therefore, teachers need to be up-to-date on the latest methods and research to teach this population in preschool program settings.

**Research Questions**

Professional development needs of EIPs of preschoolers with MSD were measured via a survey questionnaire. In order to examine the question of whether there was a need for professional development for EIPs in Saudi Arabia, the study focused on three primary research questions.

1. What are the basic characteristics, objectives, and standards of professional development programs in Saudi Arabia that provide early intervention providers with the knowledge,
skills, and abilities necessary to meet the needs of children with moderate to severe disabilities?

2. To what extent does a professional development program at Disabled Children's Association (DCA) affect the perceived teaching abilities of early intervention providers in meeting the educational needs of preschoolers with moderate to severe disabilities?

3. What is the degree of agreement between the criteria of programs offered in the centers of the Disabled Children's Association (DCA) and the perceptions of early intervention providers about their professional development needs?

**Rationale of Study**

There is a shortage of early childhood and EI services for young children with MSD in Saudi Arabia (Merza, 2012). Additionally, there is a lack of professional development among those working with young children. Several centers, both public and private, provide services to young children with MSD. However, these centers are in need of highly qualified and competent EIPs (Merza, 2012). EIPs can gain competency through effective training and development of skills and capabilities to effectively teach young children with MSD at an early age.

**Significance of the Study**

This study contributes to a better understanding of the professional development needs of EIPs of preschoolers with MSD. Additionally, this study contributes to a better understanding of teachers’ knowledge, skills, and abilities necessary to meet the needs of children with MSD. The results of the study provide research-based data for stakeholders in Saudi Arabia to help them formulate appropriate and effective preschool programs. These preschool programs will contribute to improving the education of young children with special needs in general and of children with MSD in particular. The results of the study will also help to develop
recommendations about professional development for EIPs who work with young children with MSD. Ultimately, the results of this study will provide a window for further studies in Saudi Arabia about the professional development that is available for EIPs within preschool settings.

Assumptions and Limitations

In this study, one of the assumptions was that participants (EIPs) responded to the survey questionnaire accurately and honestly. Another assumption in this study was that the sample represented the population from which it was drawn. A major limitation of this study was the restricted number of EIPs of preschoolers with MSD in Saudi Arabia. There were only a few centers that provided EI services for young children with MSD. Due to the small sample in this study, it might not be representative of the population of EIPs in all of Saudi Arabia. Another limitation of this study was that the Disabled Children’s Association (DCA) centers were not available in the eastern regions of Saudi Arabia; therefore, this limited the number of EIPs who were able to participate in this study.

In order to understand the terminology that the researcher used in this study, it is important to define these terms to help the reader better understand their meaning.

Definition of Terms

Age of Population. The age of the population in this study was EIPs who worked with young children with MSD from birth to six years old.

Intellectual Disability (ID). A cognitive disability is “manifested during the developmental period, characterized by significant limitations in cognitive functioning, demonstrated through limitations in adaptive behavior, and adversely affects educational performance” (Indiana, Article 7, 2010, p. 68).
**Moderate and Severe Disability (MSD).** This category includes students with autism or multiple disabilities. In addition, Collins (2007) mentioned that students with moderate, severe, and profound cognitive disabilities or mental retardation fall in the category of low-incidence disabilities.

**Moderate Disability (MD).** Houston and Torgesen (2004) defined moderate disability as a term that “refers to individuals with ability levels that are expected to require ongoing support for adult living. This typically includes students with disabilities such as trainable mental handicaps, autism, autism-spectrum disorders, and significant language impairments” (p. 9).

**Severe Disability (SD).** The Association for Persons with Severe Handicaps (TASH) describes people with severe disabilities as “individuals of all ages who require extensive ongoing support in more than one major life activity in order to participate in integrated community settings and to enjoy a quality of life that is available to citizens with fewer or no disabilities” (p. 19). The National Information Center for Children and Youth with Disabilities defines people with severe disabilities as those “who traditionally have been labeled as having severe to profound mental retardation. These people require ongoing, extensive support in more than one major life activity in order to participate in integrated community settings and enjoy the quality of life available to people with fewer or no disabilities. They frequently have additional disabilities, including movement difficulties, sensory losses, and behavior problems” (p. 1).

**Early Intervention (EI).** Under part C of IDEA 2004, EI is defined as “developmental services that are provided under public supervision; are provided at no cost except where Federal or State law provides for a system of payments by families, including a schedule of sliding fees; and are designed to meet the developmental needs of an infant or toddler with a disability” (IDEA, 2004, 118 STAT. 2744-2745).
**Early Intervention Providers (EIPs).** Gallagher and Malone (1997) argued that EIPs can be represented in several disciplines; “audiology, nutrition, family training/counseling, occupational therapy, physical therapy, speech/language therapy, physician, social work, nursing, psychology, special education teachers, early intervention coordinators, and paraprofessionals” (p. 26). EIPs are professional service providers who work with children aged birth to 6 years.

**Professional Development Needs.** The focus of this study was the knowledge, skills, abilities, and training needed for EIPs of preschoolers with MSD, which improve the quality of early childhood education.

**Summary**

Young children with disabilities need to learn many developmental skills in the early stages of their lives; therefore, it is necessary for providers to have adequate knowledge, abilities, and necessary skills to teach them effectively in early childhood settings. EIPs should be highly qualified to teach young children with disabilities (Guskey, 2000). At the time of this writing, there were no known studies published in Arab countries, specifically in Saudi Arabia, that explored the professional development needs of EIPs. Therefore, this study was the first to examine such a topic in the Arabian Gulf population. This study explored the professional development needs of EIPs of preschoolers with MSD in Saudi Arabia. It was expected that this study will provide comprehensive information about EI services in Saudi Arabia, which will lead to the development of further studies in regard to the needs of the professional development of EIPs of preschoolers with disabilities. This study will also provide a database for Saudi Arabia and Gulf governments to develop appropriate and effective EI programs that will contribute to
enhancing the quality of education for providers and their students with disabilities, especially young children with MSD.
CHAPTER TWO

Literature Review

This chapter presents the literature review of the study. The literature review includes the following topics: education in Saudi Arabia, Early Intervention (EI), preschool programs and laws, and professional development needs for early intervention providers (EIPs) of preschoolers with moderate to severe disabilities (MSD). The literature review for each section concludes with a summary. Importantly, the researcher focused on EI in Saudi Arabia in this dissertation. For this reason, it was necessary to provide relevant content about Saudi Arabia’s school system in general and specifically special education.

Education in Saudi Arabia

Educational policy in Saudi Arabia is aligned with the general principles of religion. Educational principles are derived from the belief that the process of education and performance of duty should be based on the values of God and religion, which meets the needs of society and achieves the objectives of the nation. These needs and objectives include the fields of education, plans, curricula, and methods of educational and administrative systems, as well as hardware based on education and other related fields. Saudi Arabian educational policy was developed from Islam, which guides the country’s ethics, doctrine, worship, law, and judgment leading to an integrated system of life (Saudi Arabia Education Policy, 2012).

In Saudi Arabia, the educational system was the first important social institution developed. The Directorate of Education was established in 1925 and was considered to be the
starting point of the development of the education system. More importantly, the government created the basic instructions and guidelines that created the foundations for the educational system in Saudi Arabia. The Ministry of Education was established in 1953 and was considered to be a new period of evaluation for the educational system. At that time, King Fahd bin Abdul Aziz was appointed to be the first Minister of Education. He contributed greatly in expanding educational resources that were available during that time period. Since its inception, more schools have opened and public education has expanded across the country. With the rapid expansion of education, the Ministry of Education found it essential to establish ‘School Districts’ in various areas of the nation. The ‘School Districts’ were established to support the Ministry with the distribution of some of its duties. In 1958, Saudi Arabia, as well as other members of the League of Arab States, confirmed on a unified system of education. The unified system of education provided primary education for the first six years, middle education for a period of three years, and a separate three-year program for secondary education. This revised educational system stressed plans for national development using the basic philosophy of the successful renovation of Saudi Arabia. “This philosophy was based on two key principles: (1) the development of necessary human resources through education and training, and (2) building a comprehensive economic infrastructure” (p. 3). These principles were of high priority in national development plans, as well as human resource development, including education (Ministry of Education, 2006).

The educational system has several levels. The pre-primary level prepares boys and girls for primary or elementary education; however, it is optional for young children. Children are educated for two years at this level. At age four, children are enrolled in nursery school and in pre-elementary school at age five. The next level, primary, is a required level in Saudi Arabia.
This level is also considered the basis for educational program development in general. At the age of six, children begin school and spend six years total in elementary school. Upon finishing primary school, students between ages 12 and 14 are required to continue their intermediate level of education (corresponding to grades seven through nine in the United States’ educational system). Lastly, secondary education last for three years and generally includes students ranging from 15-19 years of age (Ministry of Education, 2006, p. 3).

Saudi Arabia Education Policy (2012) indicated several educational objectives for the nursery phase and kindergarten. The policy defines nurseries, kindergartens, and primaries of education as characterized by gentle directive treatment of children. In addition, the policy attempts to create a sound early upbringing in which the child learns life values. Other objectives include childcare and development of the child’s morals, mental skills, and physical skills in normal conditions. These objectives must be in accordance with the family atmosphere and with the foundation of Islam. The nursery and kindergarten phase directs children’s tendencies based on religious uniformity. Education teaches ethical behavior and facilitates the absorption of Islamic virtues. It teaches the child to adapt to the educational environment, and it gently shifts from central self to social life. It provides the child with a wealth of age appropriate expressions and information related to his or her surroundings. It also trains the child with motor skills, pro-social habits, and educational senses. Furthermore, it trains the child to use these skills and habits effectively. Education encourages creative activity, meets the needs of childhood, and meets the happiness of the child. Lastly, it protects children from dangers, treats signs of abnormal behavior, and confronts the problems of childhood (Saudi Arabia Education Policy-Arabic, 2012).
Special Education

Saudi Arabia is currently focused on upgrading education to advanced levels to keep abreast of progress in science, technology, and human knowledge. In the past, Saudi Arabia did not separate special education from general education, but has begun to increase attention and education towards special groups in this area with all available means. For example, today special education classrooms are included within public schools and integrated in society (Ministry of Education, 2012).

Special education began in Saudi Arabia in 1950 through individual efforts. These efforts provided the opportunity for people who were blind to learn and master braille, as well as expand braille programs. These efforts individually began the enthusiastic pursuit to convince some educational entities to adopt braille and make accommodations for individuals with blindness. In 1957, the government gave approval for scientific institutes and colleges to open evening classes. This allowed students with blindness to study with those students who were not blind. Then, in 1958, the Ministry of Education School Gabra opened evening classes for students who were blind as well as those trained in braille (Ministry of Education, 2012).

The real beginning of special education in Saudi Arabia was formed by the progress made in providing educational services for students with blindness along with training opportunities for learning braille. The Ministry of Education created the first special education institute in 1960, to teach students with blindness in the capital, Riyadh. The institute was called the Noor Institute in Riyadh and was comprised of five primary chapters and three professional classes. The Noor Institute taught 40 students with blindness and became the first specialized program on care and attention for those with disabilities in Saudi Arabia (Ministry of Education, 2012).
The Special Education Department was established in 1962 in order to provide educational, professional, and social services for three categories: blind, deaf, and intellectual disability. This department was developed through the Ministerial Decree No. 2385 19.11.1382e and gave the responsibility of blind schools to the administration of special education. This required the administration to make public special education accessible, as well as expand it to individuals with deafness and other disabilities. The decree also provided a preamble to the resolution concerning the establishment of the Department of the Public Interest to take care of a category of citizens who need special care during the period of education (Ministry of Education, 2012).

The special education department established additional Noor institutes in Makkah city, Anayzah city, and Hofuf city in 1963. Institutes for individuals with blindness were established in Riyadh in 1964, in Medina and Qatif in 1967, and in Buraidah in 1968. These institutes have brought together institute classes at the primary level. Earlier professional divisions were later transferred to the Ministry of Labour and Social Affairs. For the most part, these institutes also include middle school classes and additional classes at the secondary level (Ministry of Education, 2012).

Further Institutes for the Deaf were established in Riyadh in 1964 for boys and girls, and others were opened in 1971 in Jeddah. These included all classes for both preparatory and elementary. In 1972, two elementary institutes for boys and girls were established in Riyadh. This was also the year that two educational institutes were opened for boys and girls with an intellectual disability. In 1972, special education management became known as the Directorate General of Special Education Programs under the Ministerial Decree No. 40/36/4/61 (Ministry of Education, 2012).
Based on statistics from the Ministry of Education in Saudi Arabia (2012), there are about 141,422 children in pre-school and there are about 27,439 special education students in Saudi Arabia at all levels of education (around 1% of the population). However, one weakness in Saudi Arabia’s special education system is the lack of exact statistics of students with special needs. We need to focus more on this population to obtain sound data to offer the appropriate services for them. As a result, the General Administration of Special Education attempted to identify gifted and disabled children with special needs from early ages. Furthermore, they developed plans and built strategies appropriate to the specific needs of the disabled and gifted with different categories. The General Administration of Special Education also worked on the development of children’s talents, upbringing, education, and training in order to reach their best possible abilities and harmonize their potential by motivating them in the best possible way (Ministry of Education, 2012).

With the implementation of strategic inclusiveness in education and large strides in qualitative and quantitative developments, the Directorate General of Special Education has been developing plans and programs needed not only to serve individuals with blindness, individuals with deafness, and individuals with intellectual disabilities, but also to include sponsorship and interest in other categories. Other categories include those with hearing impairments, visual impairments, learning difficulties, multiple disabilities, behavioral and emotional disabilities, autism, communication disorders, and physical impairments (Ministry of Education, 2012).

Gifted and talented classes have also allocated more care, attention, and follow-up because they are very important for the enhancement of education. A qualitative leap was shown when looking statistically at the quick growth of institutes and special education programs, and
quantity was achieved by that effort over the last four years. The number increased from 87 institutes and programs in 1996 to 2,577 institutes, programs, and centers in 2006 (Ministry of Education, 2012).

Reports from the Ministry of Education have shown improvements in the safety and health of persons with disabilities. This led special education in Saudi Arabia to become a priority among the Middle Eastern nations of the world. It also led Saudi Arabia to play a leading role among the countries of the region in the application of modern educational methods in the area of special education. When compared with other Arabic countries, Saudi Arabia has designated vast resources towards the improvement of special education and has given more attention to enhancing program services for individuals with disabilities (Ministry of Education, 2012).

Laws and Policies

The Law of Persons with Disabilities. This law, the first public school regulation for individuals with disabilities in Saudi Arabia, was passed in 1987 to ensure the societal equality of individuals with disabilities. It describes prevention and intervention programs, evaluation and diagnostic procedures, and rehabilitation services and training programs to assist individuals with disabilities with independent living (Alquraini, 2011; Ministry of Health Care, 2012).

Provision Code for Persons with Disabilities. In 2000, the Saudi government mandated the Provision Code for Persons with Disabilities to require more public school agencies to help students with disabilities find appropriate eligible health, recreational, psychological, social, educational, and career services (Prince Salman Center for Disability Research, 2012).

organized, in cooperation with the Arab League, a regional symposium to help Arab states put forward a work plan to implement the Arab Decade of Disabled Persons and the Convention on the Rights of Persons with Disabilities” (Al-Mousa, 2010, p. 16). One important aspect of the Convention was to ensure inclusive education for persons with disabilities at all levels of learning.

These policies promote equal rights for individuals with disabilities to have the opportunity to obtain a free and appropriate education. However, these policies are not practiced in the everyday life with individuals with disabilities even though they were created a decade ago. They are not practiced due to lack of proper implementation. They are also not practiced in the real world with students with disabilities because individuals with disabilities did not effectively gain positive outcomes. In fact, they may have created a deficiency of effective implementation as a result of a gap between the implementation of services and the framework of these legislations. This deficiency of effective implementation may have resulted in a deficiency of services for special education for some students with disabilities despite an increasing number of special education programs. In the ten years, there has been improvement in special education practices and services for individuals with disabilities in Saudi Arabia. This improvement has helped these individuals to obtain education services to the greatest extent possible in the least restrictive environment so that they can gain many important skills. Despite the effort to improve services, there is still a need for further improvement (Alquraini, 2011).

**Students with Severe Disabilities**

In 2007 and 2008, the Ministry of Education in Saudi Arabia reported that 96% of students with severe and multiple disabilities were taught in institutions separated from the mainstream public school system. While these institutions offer accommodation, health support,
food, and financial support, students remain in school during the week, only returning to their homes on weekends. This separated them from family and society and also prevented them from improving social, communication, and academic skills through interaction with their normally-functioning peers (Alquraini, 2011).

**Disabled Children's Association (DCA)**

The DCA was founded to provide free integrated care for children with multiple disabilities or MSD from birth until the age of twelve. This association offers programs for treatment, education, and rehabilitation. The DCA also has an important role in building public awareness on the causes of disabilities and how to cope with them. In 1986, Prince Salman bin Abdul-Aziz (Governor of Riyadh) opened a rehabilitation center for children with disabilities in Riyadh (DCA, 2012). Several centers have opened across the country since the opening in Riyadh.

**Riyadh’s center.** This center was the first and one of the largest centers of specialized care for children with disabilities in the Arab world, with an area of about 50 thousand square meters. It includes a medical center with therapeutic and rehabilitative sections, and the center collaborates with the Department of Education to accommodate various levels of education for more than 400 boys and girls, as well as children’s housing. Since opening, this center has been successful in providing a high level of care, treatment, and rehabilitation for thousands of children with disabilities. This center has served hundreds of children and enabled them to enroll in the public schools within the integration program. Moreover, the center includes a team of specialists in the areas of treatment, rehabilitation, and special education. The center’s services offer programs for about 1,500 children annually. Additional centers have opened in most regions of Saudi Arabia since the opening of the first center (DCA, 2012).
**Jeddah’s center.** This center was opened in 1999 and includes many sections. One section specifically, the medical department, includes an advisory unit for physiotherapy, occupational therapy, and a workshop for creating splints as well as housing for children. This center provides services to about 1,000 children annually (DCA, 2012).

**Mecca’s center.** This center was opened in 1998 and serves 298 boys and girls each year. Fifty-one of these children are affiliated with the Department of Education center in the three stages of education (early childhood, kindergarten, and primary) (DCA, 2012).

**Madinah’s center.** This center opened in 2001 and provides therapeutic, educational, and rehabilitative services for about 300 children annually (DCA, 2012).

**Aljouf’s center.** This center opened in 1995 and has a capacity for about 100 children. There has been an increasing number of children enrolled under the auspices of the center, and enrollment is currently at 115 boys and girls. Additionally, the center provides curative and rehabilitative care, educational services, and social activities (DCA, 2012).

**Hail’s center.** This center was opened in 2007 and accommodates approximately 160 children. The center provides children with free curative, educational, and rehabilitative services (DCA, 2012).

Only one study to date has been published on the topic of early intervention (EI) services in Saudi Arabia. The study was conducted by Tashkandi (2000) on EI for children with moderate and severe disabilities (MSD). This study focused on the “relationship between the needs of mothers of physically and intellectually impaired children, and current early intervention services in the Kingdom of Saudi Arabia” (p.1). As discussed by Hallahan and Kauffman (1994; 1997), the birth of a child with a disability has a profound impact on parents and the family dynamics. This impact may negatively influence the effectiveness of family relationships, as well as the
child's relationship with his parents, the surrounding environment, and thus the growth of the child. Therefore, Tashkandi worked to make educators aware that services should be provided to family members based on their different emotional needs (Tashkandi, 2000).

Tashkandi’s (2000) survey demonstrated that there were not enough centers in Saudi Arabia to satisfy all the needs of children with MSD. The survey also revealed that there were no available statistics for these services or the quality of the results of tests since they were established. With this in mind, the mission of Tashkandi’s research was to help detect the effect of EI programs on the needs of mothers of children with disabilities. Tashkandi suggested changing the sample size and the type of disability in EI research by focusing on the needs of mothers and families (Tashkandi, 2000). She also noted the importance of early detection for young children with disabilities by specialists in hospitals for cases of special groups of children. Furthermore, Tashkandi (2000) stressed the need to have specialists working in hospitals and primary care clinics in different regions of Saudi Arabia. She felt that it was important for specialists to be aware of and contact both the centers and the agencies that provide services for special groups in order to facilitate the conversation process. This is also important in order to educate families on how to benefit from these services. Additionally, the establishment of a central management body is responsible for all agencies that provide EI services in Saudi Arabia and helps with coordination between the individual agencies and hospitals (Tashkandi, 2000).

This section began with a discussion of both general and special education in Saudi Arabia. As mentioned earlier, educational policy in Saudi Arabia is aligned with the general principles of religion. Saudi Arabian educational policy was developed from Islam, which guides the country’s ethics, doctrine, worship, law, and judgment leading to an integrated system of life (Saudi Arabia Education Policy, 2012). Special education began in Saudi Arabia in 1950 through
efforts of individuals (Ministry of Education, 2012). This section included an overview of laws and policies in special education in Saudi Arabia that explain special education and related services for individuals with disabilities. In addition, three important laws were explained: the Law of Persons with Disabilities, the Provision Code for Persons with Disabilities, and the Convention on the Rights of Persons with Disabilities. This section also included information about the history of the educational system and special education in Saudi Arabia, as well as the evolution that has increased appropriate services for all individuals with disabilities in different categories. However, there are currently no studies published on Gulf countries’ educational institutions concerning the professional developmental needs of EIPs in early childhood settings. Consequently, the researcher has depended essentially on known American and European studies (Merza, 2012).

**Early Intervention (EI)**

After imparting important information about available education and special education services in Saudi Arabia, it is necessary to mention significant information about special education services from research from the United States and other countries. Hallahan, Kauffman, and Pullen (2009) indicated that EI is very important for children with disabilities or developmental delays. Professionals believe that children, three years old and younger, who receive EI services are more likely to gain positive outcomes through effective EI practices. EI plays a significant role in the lives of children who are at risk of having disabilities starting from birth to three years old, and EI helps to build a strong foundation for future learning as well as prepare children at an early age for complicated skills. Furthermore, providing EI at an early age could prevent possible problems that might appear in the future. Therefore, EI programs and services play an important role in offering appropriate settings for these children. EI programs
help families adapt to having a child with a disability, acquire the appropriate skills that they might use with their child at home, and find suitable support and related services in real practice.

It is necessary to underline the history of important law definitions of EI in the United States because all EI services are mandated by several laws. According to the Handicapped Children’s Early Education Assistance Act (PL 90-538) of 1968, EI emphasized the critical role of education for all children with disabilities from birth to eight years old. This law required individual states to seek the appropriate EI programs and activities for children with disabilities. Increased access to the greatest resources possible was ensured through family involvement in all programs.

According to part H of The Education for All Handicapped Children Act Amendments (EHA) (PL 99-457) of 1986, EI was defined as:

Part H encouraged states to design and implement a comprehensive system of intervention for infants and toddlers with developmental delay or disabilities. Each state was to define eligibility criteria for "developmental delay" therefore services could differ from state to state. Each state was to also appoint a lead agency and establish an interagency coordinating council to oversee program services. Currently all states have programs in place for infants and toddlers with disabilities” (Cengage Learning, n.d. Para. 4).

According to Raver (2009), the Individuals with Disabilities Education Act (IDEA) of 1990 extended the PL 101-476 (EHA). This law included the transition services for infants and toddlers at each state’s choice. This law also extended special education services for children with disabilities from three to five years of age and ensured the implementation of the six principles of this law. Raver (2009) also cited that the IDEA PL 105-17 of 1997 stated that
appropriate program services for young children should be provided in natural environments in order to take full advantage of these supports.

EI under Section 632 of (IDEA, 2004) defined “early intervention services” to mean that the child must meet all developmental milestones for infants and toddlers with disabilities as written in an Individualized Family Service Plan (IFSP). It is important to meet all the standards of the states that support the special and related services. Additionally, all educators have to be qualified to work with infants and toddlers with disabilities. EI should be provided in natural environments so that these infants and toddlers with disabilities can learn from and generalize the skills in various settings, such as their home, school, and community (p. 118 STAT. 2744-2746).

The IFSP is a very important document for children from birth to three years old. Under 511 IAC 7-32-49 of Article 7 (Indiana’s special education statutes of 2010), the IFSP is described as:

Sec. 49, “Individualized Family Service Plan” or “IFSP.” This document is the written plan for providing first steps early intervention services to an eligible child and family, from the child's birth up to three (3) years of age, under Part C of the Individuals with Disabilities Education Act, 20 U.S.C. 1436. The IFSP is a process and document that lists a family's: (1) priorities; (2) concerns; and (3) resources; in regard to their infant or toddler with a disability (p. 12).

Further, 511 IAC 7-32-49 of Article 7 (2010) stated that the IFSP is a very important document for infants and toddlers with disabilities from birth to 3 years of age. It is important because it helps to determine which services and supports are appropriate and considered vital for them. Also, the IDEA (2004), 20 U.S.C. 1436 indicated that the IFSP is a critical document provided for infants and toddlers’ families that includes parents’ fears, expectations, and needs. It is a
critical document because it helps to address these needs and assists to support families effectively.

By mentioning the important laws regarding EI services, it becomes essential to mention studies that showed the role of EI in the lives of young children with disabilities. McCain and Mustard (1999) found out in their report that, due to neurological development, the most significant period in children’s lives is from birth to six years of age. They investigated this fact by building new knowledge from neuroscience, developmental psychology, sociology, learning, and economic growth in Canada, the United States, and Europe. They also met a wide range of parents, organizations, teachers, educators, and all members who are related to the early childhood education field to find out about critical needs of EI for young children. This means that EI helps to identify children who might have disabilities and provides the appropriate services in the early stages of the child’s life. Furthermore, this report highlighted the importance of diagnosing young children in order to provide suitable services and supports for them, as well as assisting them to overcome the barriers of their disabilities. The report also stated that it is important to take advantage of this significant time period of brain development.

Recently, Robert et al. (2008) found there are main points that demonstrate the importance of EI for children with disabilities as well as for children who are at risk of having disabilities. EI helps to decrease the intensive risk that might affect neurodevelopmental negative outcomes. Even though EI is very important for children, newborn children do not tend to have advocate EI services that assist them. In addition, the lack of EI services has a significant impact and leads to social problems that influence the normal developmental stage in children. Robert et al. highlighted the importance of EI for infants and toddlers. EI is considered vital for young children to get appropriate assistance in order to participate successfully through their lifespans.
They emphasized that EI critically impacts the ability to reduce the disadvantages of disabilities. These disadvantages can lead to several problems in future life.

Robert et al. (2008) implemented research of 236 children who were born in an early period of pregnancy. They examined two year old children with disabilities, and they interviewed parents of young children with various disability levels to collect information about EI and social risk. The various disability levels included mild, moderate, and severe disabilities. From this important study, researchers found that children with severe disabilities received more EI services than those with moderate disabilities, while children with mild disabilities did not obtain any EI services until two years of age. Additionally, the children who were not provided with EI services were more likely to have higher social risk families. The main point of this study was to indicate the importance of EI services for all levels of disabilities, and the study also indicated that it is important to make diagnoses for all disabilities in order to provide the appropriate services needed.

It is important to mention the role of participation in EI activities. According to Wilcox and Woods (2011), developing communication and language of children increased the participation in EI activities. In other words, children will develop new skills and move to a higher level of participation by increasing their participation in activities. This means that it will help them to be effectively involved in EI activities and increase the chances of obtaining the outcomes of EI goals as determined. In fact, children who are at risk of having disabilities should get the appropriate EI services with effective participation. The researchers pointed out the importance of participating at an early stage in EI settings for children with disabilities. This helps them improve their skills such as language and communication.
Sexton et al. (1991) conducted a study that surveyed 45 mothers of infants or toddlers who had disabilities and 25 service providers working in EI programs. This study highlighted the importance of EI programs in identifying and meeting family needs and strengths as based on the IFSP and that met the mandate of P.L. 99-457 Part H. This study supports Wilcox and Woods’s study (2011) about assisting parents in finding appropriate services and support from early stages in order to increase the quality of parents’ lives. The main point of these studies was to provide the EI services in order to identify the needs and wants of the children with disabilities at an early stage. It is important to know the strengths and weaknesses these children with disabilities have in order to create appropriate curricula for them.

Another recent study, conducted by Richman (2008), showed the importance of EI programs for young children with disabilities that was mentioned earlier by Sexton et al. (1991). He focused on young children with developmental disabilities who demonstrated self-injurious behaviors (SIB). He found that the EI services led to a decrease in the SIBs that cause negative outcomes for these young children with developmental disabilities. Also, the EI programs helped these children to acquire new adaptive and academic skills by preventing negative behaviors. The point of this study was to provide EI in order to obtain new skills and avoid negative behaviors.

Another recent study by Sandberg and Liliedahl (2008) also supported the interaction between the EI program and young children who have speech language delays. Moreover, they believed that EI at early stages had a significant role in enhancing children’s language, socialization, communication, and development. There is evidence in their study that showed the communicative interaction between children with severe speech language impairments and their typical peers contributed to increased vocabulary gradually in order to improve their language
ability. Therefore, EI has a significant impact on children’s language development and improves their participation as a result of language and social development.

Parents should be aware of their children’s disabilities in order to activate their role in their child’s learning. Rix and Paige-Smith (2008) mentioned that family-center practicum experience plays an important role. In addition, Rix has a son with Down syndrome and is an owner of an agency. His experiences enabled him to find that, in order to support their child, parents need to be effectively involved with professionals when they have a great deal of knowledge about their child’s disability, learning needs, and accessible resources. In other words, if parents and professionals are on the same page, it helps to adapt the same values and goals that will reach the EI plan. For more clarification, the authors indicated the importance of effective participation in the learning process for children and parents to reach their desired goals.

In addition to the important role of family involvement in offering EI services, an adequate number of EIPs in rural schools is also very important. For example, the study of Ludlow, Conner, and Schechter (2005) found a lack of vision, hearing, and severe disabilities specialists in rural school districts. This shortage affected the children with disabilities, especially in their needs for EI supports and services. The shortage of special education teachers can have negative outcomes in the long term. As a result, preparation for teachers, which is supported by federal laws IDEA and No Child Left Behind (NCLB, 2001), will be beneficial for low incidence disabilities and will gain positive educational outcomes for children with disabilities in rural schools.

Several laws require the provision of suitable services for infants and toddlers to meet their needs and to minimize the effects of disabilities. The problems are a lack of financial
resources ‘especially in rural school districts,’ lack of effective EI programming, and insufficient training for EI professionals (Cohen, 2009). Furthermore, raising the need for greater collaboration between parents, educators, and the EI system enhances parents’ participation. In addition, laws advocate for parents by helping them overcome their difficulties and gain a great deal of knowledge about the special education system and EI accessible services. The laws also ensure that their children receive ongoing supports and services that they need (Cohen, 2009).

The IDEA (1997) (PL 105-17) provided many advantages for children from birth to five years old by offering grants and allocations for agencies and programs that support EI. In addition, the earlier EI services are provided for children, the more public education will benefit in the future. Providing EI service programs is expensive, but will save a lot in the public schools in the long term. From the National Early Intervention Longitudinal Study (2009), the total cost of EI services per child was about $15,740, with a monthly average cost of $916.00. The cost varies from disability to disability. The importance of EI is considered a successful foundation to effective transition services in practical life (Hebbeler, Levin, Perez, Lam, & Chambers, 2009; Rothstein, 2000).

It is obvious that EI and related services make significant contributions to the lives of infants and young children with disabilities. It is very important that young children develop their language during the first three years of their lives. Several studies showed that EI has proven to be vital to language development in children who have developmental delay, especially language delay. Without intervention these children may not develop language abilities which will impact their interaction with typically developing children as well as acquisition of other developmental milestones (Fey, 1986).
The literature reviewed here demonstrates the effects of EI on young children with MSD, and how laws, such as IDEA 2004 and Article 7, support the EI services for this population by providing the appropriate services in early educational settings. Also, many studies demonstrated that EI plays a critical role in the early stages of life for young children with disabilities because it helps them gain many developmental skills that they need. There is no doubt that many studies and research have indicated the importance of EI for young children with disabilities. These studies also showed the effective role that EI plays to prevent the possibility of having disabilities for these children or else reducing the effects of their disabilities. Additionally, research has demonstrated the important role of family involvement with EI services, as well as how families can advocate for these services in order to support their children.

**Preschool Programs and Laws**

It is appropriate to indicate the preschool programs and laws in the educational preschool settings since the critical role of EI for young children with disabilities has been established. According to Polloway, Patton, and Nelson (2011), the development of preschool programs depends on the degree of intervention and identification for individuals with intellectual disabilities. Part B of the IDEA (2004) mandated that all children who are from three to five years old have the right for free appropriate public education (FAPE). Yet, eighty-two percent of young children with intellectual impairments are placed in separate classrooms. Of these children, 56% are removed from general classrooms for at least 60% of the day. This means these children are generally taught in separate classrooms rather than inclusive settings.

In addition, the World Health Organization (WHO; 2007) mentioned that most young children with intellectual disabilities are provided with special education services in addition to educational services in mainstream or local educational agencies. In fact, integration of children
with disabilities varies from each school district. Shulman, Flores, Iarocci, and Burack (2011) pointed out the importance of inclusion for young children with intellectual disabilities with their peers without disabilities. They also mentioned that children with intellectual disabilities benefit from inclusion in mainstream classrooms. Benefits are seen through the enhancement of functional and academic skills, as well as social and communication skills.

The IDEA (2004) and NCLB (2001) mandate school districts to help all students, including students with disabilities, to improve reading, math, science, and other academic skills. It is significant for each teacher to be well prepared to work with all students with disabilities, including students with MSD. For that, the IDEA (2004) requires “preparing personnel who provide services to children with low incidence disabilities and limited English proficient children” (p. 132). Moreover, SEC. 654 of the IDEA (2004) mentioned the important point of providing effective curriculum for children with MSD at schools (p. 125). This means to help this population to the greatest extent possible by providing appropriate services.

NCLB (2001) also supports all students from ages 3 to 21, including students with disabilities, to get special and related services as needed, and it aims “to close the achievement gap with accountability, flexibility, and choice, so that no child is left behind” (p. 1). This means that equal opportunities are provided to every student to learn and obtain the services that they need at school. In fact, all children with disabilities, especially children with intellectual impairments, benefit from these laws and regulations to enhance their performance across their lifespan.

Lowden (2005) mentioned that the NCLB (2001) regulation indicated the significance of professional development by describing it as “activities that are high quality, sustained, intensive and classroom focused in order to have a positive and lasting impact” (p. 2). The study of
Schubert (2007) also showed the importance of training and cited, “Organizations approach training in a variety of ways. Too often training is viewed as nothing more than an inconvenient requirement mandated by a regulatory agency. Or, training is proposed as a ‘quick fix’ to remedy a problem that is creating current concern” (p. 53). Gwynne-Atwater (2011) importantly pointed out that professional development has to impact the students’ achievement as well as their teachers’ performance.

The preceding section briefly mentioned the percentages of young children with disabilities in the United States, specifically those who have intellectual impairments, and it also discussed that they have the right for FAPE at early ages. Furthermore, the development of preschool programs depends on the degree of intervention and identification for all individuals with disabilities. Several laws, such as IDEA 2004 and NCLB 2001, mandate EI services for children with disabilities by providing appropriate services in early educational settings. Also, these laws mentioned the importance of professional development that helps teachers to teach children with disabilities in a successful way.

**Professional Development Needs for Service Providers of Preschoolers with MSD**

After summarizing information about legislation regarding preschool programs, it is essential to mention the importance of professional development in various preschool settings, such as Head Start, integrated and self-contained settings, and to review the substantial literature about these settings. Werts, Wolery, and Snyder conducted an important study in 1996. They surveyed 158 general and special education teachers in a state survey, and they also surveyed 1,430 general and special education teachers in a national survey regarding support. The purpose of this was to know about teachers’ perceptions of needs for the enrollment of students with significant disabilities in their classrooms. All survey participants identified three areas of
support. These areas included training that helps all teachers to meet their individual requirements, communication and consultation among the team of the professionals, and extra class assistance. This study also mentioned other requirements, such as administrative support, funds, enough time to collaborate with other team members, and smaller class sizes.

Several experimental studies were conducted about professional development that had a special emphasis on the areas of literacy and student achievement (O’Connor, Notari-Syverson, & Vadasy, 1996; O’Connor, Harty & Fulmer, 2005; Van Keer & Verhaeghe, 2005). O’Connor, Harty, and Fulmer (2005) did a study that included a control group of teachers and their students who were in special education settings. The purpose of the study was to examine whether this ongoing professional development could produce different results for children who were in small group intervention and those in daily individual or groups of two interventions. Also, there was an experimental group that included 20 teachers from kindergarten to grade three (around 100 children) who participated in continual professional development. Intervention was created from the National Reading Panel’s (2000) results. In this design, “the main characteristics of duration (time span and contact hours) and the reform type” (Desimone, Porter, Garet, Yoon, & Birman, 2002, p.85) were utilized. In fact, the data of the children’s achievement were provided through many standard tests, such as the Woodcock Reading Mastery Tests – Revised – Normative U (Woodcock, 1998) as well as professional development and placement rates of children into special education. The findings of this study showed that children who were in the control group had lower scores on the assessment when compared to children who were in the experimental group. In addition, the rate of placement into special education services declined for the experimental group. Based on student achievement scores, teachers who participated in the experimental group of professional development were more successful in implementing the
training strategies that reduced the special education placement rate when compared to teachers who participated in the traditional control group.

Professional development opportunities are significant in supporting the effective use of technology to teach young children. The National Staff Development Council (NSDC; 2001) pointed out that effective professional development impacts the teachers’ instructional methods, and it also results in improvement for children’s achievement. In fact, one of the most important areas is how special education successfully uses assistive technology with young children with MSD. Many studies indicated some important factors that help the development of technology skills for teachers. These factors might play a role in how the administrators or principals can offer appropriate or effective opportunities that are based on the teachers’ learning styles. This will help them to gain more knowledge and skills in teaching. Additionally, it is important to consider the time that was provided for these teachers by providing effective communication and collaboration among all education personnel. Also, by providing ongoing professional development and assistance for teachers and children, all the needs of both teachers and children could be met (Ball, 1996; Birman, Desimore, Porter, & Garet, 2000; Cole, Simkins, & Penuel, 2002; Hallahan, Kauffman, & Pullen, 2009; Hutinger & Johanson, 2000; Inge, Flippo, & Barcus, 1995; Parette & Murdick, 1998; Mouza, 2002).

All special and general education teachers should collaborate with families effectively in order to help children with disabilities at an early age. Also, family plays a critical role in enhancing children’s achievements by communicating with teachers or providers successfully. Therefore, the term “family-centered” defines the important practices considered by focusing on the family’s strengths, helping families make better decisions about services, and communicating effectively between parents and professionals (Blue-Banning, Summers, Frankland, Lord-
Nelson, & Beegle, 2004; Bruder, 2000; Hallahan & Kauffman, 1997; Osher & Huff, 2000; Osher & Osher, 2002; Sexton et al., 1991; Rix & Paige, 2008; Summers, Hoffman, Marquis, Turnbull, & Poston, 2005). Each setting will be described in detail to indicate the needs of professional development for EI teachers to support skill development for young children with MSD.

**Head Start**

According to Shonkoff and Meisels (2000), the Economic Opportunity Act Amendments (PL 92-424) of 1972 “mandated that all Head Start centers reserve at least 10% of their enrollment for children with identified disabilities” (p. 15). The Education of the Handicapped Act Amendments (PL 98-199) of 1983 reauthorized PL 90-538 which focused on the importance of establishing procedures in providing effective services for younger children with disabilities from birth to three years old.

In order to have a better understanding of EI services and programs, it is necessary to be aware of EI programs that help children with disabilities at early ages such as First Steps and Head Start. Jeon et al. (2011) found that children who were in a low-income status had 60% lower cognitive scores than other children. The authors also indicated that poverty had a significant impact on a child’s development, especially between two and three years of age. The data collected by the Early Head Start Research and Evaluation Longitudinal Follow-Up study (1996-1998) found that children with developmental delays and who did not obtain EI based on part C of the IDEA had less readiness to enroll in kindergarten when compared to children who received EI. The authors also noted that poverty had a negative influence on the lives of children with disabilities, and emphasized the need to provide the EI services for all socioeconomic levels.
The study of Wall et al. (2005) showed that Early Head Start (EHS) played an important role in helping families accept and understand their child’s disability or developmental situation. EHS also helped families seek out EI services under Part C of the IDEA, and the evidence from this study determined that families’ participation in an EHS program enabled them to access Part C programs. The study further showed that families with low income who enrolled children with disabilities were more likely to be aided by Part C programs than families who do not enroll.

EI is a critical component under Part C of the IDEA. Peterson, Mayer, Summers, and Luze (2010) supported the importance of EI in their study. They examined 3,001 children who were at risk of having a disability and lived in poverty. Results from the study found that children who received EI services were able to avoid delays in both cognitive and language development from the beginning. The authors in both studies of Wall et al. (2005) and Peterson et al. (2010) mentioned the importance of EHS and how it helped families who were in poverty obtain special and related services throughout the early stages of a child’s development. EHS plays a significant role in teaching and preparing children with disabilities for academic life.

Folsom-Meek (1994) conducted a study that demonstrated the importance of training programs and workshops for service providers in preschool settings. This study aimed to examine the effectiveness of training on Head Start providers’ perceptions regarding young children with disabilities and their awareness of motor development concepts. Thirty child care providers participated in this study (10 Head Start Directors /Teachers), (10 Head Start Assistant Teachers), and (10 control group participants). The results from this study indicated a significant difference among all three groups regarding perceptions toward young children with disabilities, while there was no significant difference among all groups with motor development knowledge.
Interestingly, the Head Start Assistant Teacher group showed greater positive perceptions regarding young children with disabilities than the Head Start Director/Teacher group.

A great deal of research supports the importance of training and employing high-quality providers to work with young children with disabilities. Positive outcomes for young children increase when these children are taught by providers who have specialized training in EI among children with disabilities (Helburn, 1995; Whitebook, Howes, & Phillips, 1989; Whitebook et al., 2004). Nevertheless, a large percentage of Head Start teachers continue to work as lead teachers in classrooms with only a Childcare Development Associate (CDA) credential, or perhaps a bachelor’s degree to work with young children with MSD, and do not have the specialized skills that are important to have when working with young children with disabilities, so “most child care is mediocre in quality, sufficiently poor to interfere with children’s emotional and intellectual development” (Helburn, 1995, p. 1).

Providers of young children in the Head Start setting must meet children’s needs and desires, and teacher training can be one of the biggest challenges related to meeting the needs of young children with disabilities. Appropriate training should include information on implementing effective strategies with this population in order to assist them to succeed (Bredekamp, Knuth, Kunesh, & Shulman, 1992). Additionally, legislators and researchers anticipate that with the educational improvements from the associate degree track, Head Start teachers might be able to change their attitudes and also positively change their practices in order to help all young children, with and without disabilities, have better results during the academic year (Schwartz & Brand, 2001; Schumacher & Rakpraja, 2003; Tomlinson & Allan, 2000; Weiner, 2003). Researchers point out that young children will have better outcomes when taught by early childhood teachers who have advanced degrees, or are highly qualified in EI. These
outcomes include increasing social and academic skills for young children (Helburn, 1995; Whitebook et al., 1989; Whitebook et al., 2004).

Early childhood teachers in the Head Start setting need effective training in order to help young children with disabilities achieve the greatest gains. This training is needed, even though training programs currently exist in Head Start classrooms (National Association for the Education of Young Children (NAEYC), 1991; NAEYC, 1997). Similarly, professional development interventions have a significant part in improving children’s learning and teachers’ knowledge. In addition, the mission of professional development intervention is to progress children’s learning when providers use evidence-based approaches for instruction with young children with disabilities. A developing intervention of professional development highlights the provision of continued opportunities for providers to be educated on key areas of teaching requirements that young children must learn, truly understand characteristics of real-world classroom environments, and enable children to learn actively (Powell & Diamond, 2011; Supovitz, 2001; Wayne, Yoon, Zhu, Cronen, & Garet, 2008).

Darling-Hammond (2000) conducted a study that suggested an effective relationship between the high qualifications of teachers or providers and the academic achievement of the children in their classrooms. Therefore, if providers or teachers do not have the appropriate level of education and training to appropriately support young children with disabilities, professional development is important in order to enhance the content and educational knowledge of teachers (Guskey, 2003). Many studies show positive results for teachers of children with disabilities when ongoing professional development programs are provided for teachers during the academic school year (Barlow & Cates, 2006; Bloom & Sheerer, 1992; Borko & Putman, 1995; Campbell & Milbourne, 2005; Kinnucan-Welsch, Rosemary, & Grogan, 2006; Li, 2004; Palsha & Wesley,
1998; Thomas 1992). For example, a study conducted by Thornton, Crim, and Hawkins (2009) mentioned a professional development program to teach mathematics skills within practices in pre-kindergarten settings, such as preschool programs, Head Start, and child care settings. After participation in this program, providers indicated that there was a strong link to the national mathematic standards and increasing awareness related to developmentally appropriate mathematics in early childhood classrooms. Research recommended that the important features of teaching quality include providers’ instructional practices and the quality of relationships between providers and young children. These features play an effective part in enhancing developmental skills and school readiness of children (Albatayneh, 2004; Bierman et al., 2008; Mashburn & Pianta, 2006; Pianta, 2003; Vandell & Wolfe, 2000).

An important research study was conducted concerning high quality teaching in Head Start settings and how it could be improved by using evidence-based curriculum or instruction. Domitrovich et al. (2009) selected 44 Head Start teachers, which included both lead and assistant teachers. After their participation in this study, all teachers from the experimental group reported that they talked with young children more frequently than those from the control group. The teachers also talked with these children with more cognitively multifaceted habits, built a more positive and appropriate classroom environment, and implemented more effective behavior management strategies. This led to positive outcomes for young children within the learning process.

Head Start teachers must have adequate knowledge in order to develop and implement IEPs, and they must collaborate with families and other professionals in order to satisfy young children with disabilities’ needs (Hammitte & Nelson, 2001; Rush, Sheldon, & Hanft, 2003). Many researchers have mentioned that the training skills for Head Start teachers were considered
on an individual basis to teach young children with disabilities (Noonan & McCormick, 2000; Santos, Innocenti, Odom, Cardella, & Cardella, 2001; Schwartz & Brand, 2001). One recent study conducted by Bruns and Mogharreban (2008) supported previous research studies by investigating Head Start teachers’ perceptions about the skills they possessed and professional development programs needed in order to better support young children with disabilities. The authors determined that teachers had positive perceptions about including these children in Head Start classrooms and these teachers were able to teach young children in appropriate learning environments by monitoring children’s developmental skills and using effective strategies. In addition, teachers’ perceptions were related to their skill level in working with families of children with disabilities and other professionals who were involved in the learning process.

**Integrated Preschool Settings**

Since comprehensive information was previously discussed concerning the Head Start setting (an integrated setting for impoverished children), this section will address integrated settings more generally. Integrated preschool settings are defined as EI or early childhood programs that include preschool children with and without disabilities from age three to age six. Many scholars recognized that there was a need for additional studies about inclusion in preschool settings such as Head Start (Allen & Schwartz, 1996; Brown, Odom, & Zercher, 1999; Kontos, Moore, & Giortetti, 1998; Odom & Diamond, 1998; Odom et al., 1996). In addition, it is necessary to note some studies which examined inclusion in preschool settings, because inclusion helps students with disabilities gain many important skills. Peck (1989) conducted a qualitative study in order to examine sources of opposition to inclusion among teachers, parents, and administrators in preschool programs in the state of Washington. The results of this study were that participants were concerned about the sufficient preparation needed for parents,
teachers, and children to be involved in integrated settings. Additionally, participants were concerned about the availability of sufficient resources for the implementation of integrated preschool programs. Because of this, it is important to provide resources to appropriate integrated programs in early childhood settings for young children and their teachers.

It is important to understand teachers’ attitudes toward integrated preschool settings because they play a necessary role in enhancing the inclusion of young children with disabilities. Gemmell-Crosby and Hanzlik (1994) revised a version of the Regular Education Initiative (REI) survey, developed by Phillips, Allred, Bruelle, and Shank (1990), in order to measure preschool providers’ job requirements, expectations, and satisfaction with training and support services from related service personnel. The results of this study indicated that there was a significant positive correlation with providers’ attitudes toward inclusion among three variables. These variables included perception of their ability to meet the needs and wants of children with disabilities, satisfaction with the amount of support, and satisfaction with ongoing training. Providers indicated that they were less able to serve children who have severe disabilities. These results highlighted the importance of in-service training for general early education teachers in integrated settings.

Buysse, Wesley, Keyes, and Bailey conducted another important study about integrated settings in 1996. They surveyed 52 general early childhood teachers from community programs in North Carolina which included children with disabilities. The sample did not include Head Start teachers. This study’s goal was to provide information about the teachers’ level of comfort in dealing with children with several disability types, their perception of advantages and disadvantages towards inclusion, and factors linked to comfort and perceptions. The findings from this study indicated that comfort levels among general early childhood teachers varied by
several variables, such as severity of disability, teacher education, the number of consultative sessions, and ratings of the disadvantages of inclusion. For example, comfort scores were higher among teachers who held associates’ degrees than those who had high school diplomas. Overall, teachers indicated a higher level of comfort in helping children with mild disabilities than in working with children with MSD. In addition, teachers who mentioned more disadvantages to inclusion for these children with MSD had the lowest comfort scores. Importantly, in spite of the benefits of inclusion for children with severe disabilities, Buysse et al. (1996) believed that placing a young child with a severe disability in a general preschool classroom would not work unless the teachers had sufficient support to meet that child’s needs.

Evidence that supported Buysse et al. (1996) was cited by many scholars suggesting that early childhood teachers might not be sufficiently prepared to assist young children with disabilities who are registered in integrated programs (Chang, Early, & Winton, 2005; Dinnebeil, McInerney, Fox, & Juchart-Pendry, 1998; Early & Winton, 2001). Additionally, teachers need to be supported within integrated settings so that they can provide the everyday specialized instruction for young children with disabilities (McWilliam, Wolery, & Odom, 2001; Wolery, 2003; Dinnebeil, Pretti-Frontczak, & McInerney, 2009). Several studies reported that while general education preschool teachers are accepting of young children with disabilities, they have a lack of knowledge, training, and confidence to sufficiently teach and support these young children with MSD while in inclusive settings (Chang et al., 2005; DeBettencourt, 1999; Dinnebeil et al., 1998; Knoche, Peterson, Edwards, & Jeon, 2006). As a result, it is important to provide general early education teachers with the support needed to implement best practices among children with disabilities in integrated preschool settings.
For example, in a survey of 202 child care providers or teachers from 189 child care centers, 90% of these providers agreed with the philosophy of inclusion and 76% of them believed young children with disabilities benefit from inclusion. Nevertheless, 68% of the providers thought that young children with disabilities were disruptive to classroom routines and 62% believed that inclusion was a burden on providers (Hadadian & Hargrove, 2001).

Furthermore, providers expressed varied perceptions when researchers asked about their needs in regards to assisting young children with disabilities in inclusive preschool classrooms. For instance, Eiserman, Shisler, and Healey (1995), Hadadian and Hargrove (2001), and Marchant (1995) indicated the importance of support during the academic year. Other studies, such as Eiserman et al. (1995) and Hadadian and Hargrove (2001), showed the importance of providing resources such as personnel and time for these providers, while additional studies mention training programs for providers (Buysse, Wesley, & Keyes, 1998; Eiserman et al., 1995; Folsom-Meek, 1994; Wesley, Buysse, & Tyndall, 1997).

Notably, early intervention teachers need to know how to solve problems, motivate other educational members to learn new skills, and then provide professional support for staff (Buysse & Wesley, 2005). Most early intervention teachers in early childhood special education lack the knowledge and skills needed in order to change present practices in effective ways. Not only do these teachers have a lack of knowledge and skills, they are uncomfortable in the consulting role (Cohen, 2009; Buysse & Wesley, 2005; Dinnebeil, McInerney, Roth, & Ramaswamy, 2001; Wesley, Buysse, & Skinner, 2001), as they have a tendency to deal directly with the child in community-based settings, while they seldom consult with the primary caregiver(s).

Many educators in the field of special education are concerned about school-based pre-K programs. Pre-K programs supply EI service programs with possible predictors that seem to be
successful in helping the development of young children with disabilities. For instance, the developmental advantages of high quality EI service programs appear to focus on the developmental skills and support of young children by providing effective instructional strategies. It is also important to design appropriate curricula that consider the developmental practices for these young children in preschool settings (Graham & Bryant, 1993; Guralnick, 2005; Guralnick, 1998; Odom & Diamond, 1998; Shonkoff & Hauser-Cram, 1987; Thomaidis, Kaderoglou, Stefou, Damianou, & Bakoula, 2000). It is important to note that EIPs in inclusive settings have a lack of training in early childhood special education. Additionally, special education professionals do not have enough time to provide training for these providers within inclusive preschool settings (Buysse et al., 1996; Copple & Bredekamp, 2009; McDonnell, Brownell, & Wolery, 1997; Whitebook et al., 2004; Wolery & Wilbers, 1994).

Hestenes, Cassidy, Shim, and Hegde (2008) conducted an important study about the quality of inclusive settings for preschool children with special needs. The quality of integrated settings and nonintegrated settings was investigated in two studies. The first study was a comparison of 1,313 classrooms. This study confirmed that integrated classrooms were higher than nonintegrated classrooms in global quality and in two dimensions. The dimensions studied included activities/materials and language/interactions as factor scales. The second study (Hestenes et al., 2008), which examined 44 classrooms (20 integrated and 24 nonintegrated), did not exhibit a difference in global quality. However, there was a difference among teacher and children interactions. In addition, the quality of interactions among teachers or providers in the integrated settings were higher and more effective with all participating young children compared to teachers who taught in the nonintegrated settings. As a result, many previous, important studies about integrated settings or inclusive classrooms have confirmed that early
intervention teachers who teach in integrated or inclusive classrooms might be more involved with young children with special needs than early intervention teachers who work in non-integrated settings (Allen & Schwartz, 1996; Brophy & Hancock, 1985; Chow & Kasari, 1999; Evans, 1992; Hundert, Mahoney, & Hopkins, 1993).

**Self-Contained Preschool Settings**

Self-contained settings are defined as special education classrooms which include only children with disabilities who are not referred into regular classrooms or integrated settings. It is important to mention that children with disabilities in preschool settings enrolled in EI service programs gain important developmental skills beyond what they would have gained naturally (Odom & Diamond, 1998; Odom & McEvoy, 1988). Few studies exist which compare developmental and academic outcomes for young children with MSD in inclusive versus segregated settings. These studies found that the performance of young children with MSD did not differ in the settings in which these young children were placed, such as inclusive or self-contained settings (Buysse & Bailey, 1993; Fewell & Oelwein, 1990; Guralnick & Groom, 1988; Hallahan & Kauffman, 1997; Harris, Handleman, Kristoff, Bass, & Gordon, 1990; Jenkins, Odom, & Speltz, 1989; Rule et al., 1987). Most of the early childhood educators mentioned that the inclusive settings would not be successful, effective, and complete without specialized curriculum for young children with disabilities (Guralnick & Groom, 1988; Johnson, 1999; Kochanek & Buka, 1999; Odom, 2000; Sandall, McLean, & Smith, 2000; Voltz, Brazil, & Ford, 2001). Additionally, some researchers show empirical evidence that supports segregated (self-contained) classroom environments in academic and social developmental skills for young children with disabilities (Crockett & Kauffman, 1999; Dorn, Fuchs, & Fuchs, 1996; Jenkins, 1988; Kochanek & Buka, 1999; Vaughn, Elbaum, & Schumm, 1996).
More importantly, teachers’ concerns continue when they interact with children with severe disabilities even though an effective interaction and relationship exists between early general education teachers and early special education teachers (Burstein, Sears, Wilcoxen, Cabello, & Spagna, 2004; Eiserman, Shisler, & Healey, 1995; Pivik, McComas, & LaFlamme, 2002). Educators should consider the type of settings in which children with MSD are placed, in order to help them gain many developmental skills. Teachers in early childhood settings need to understand that children with higher functioning skills demonstrate better developmental gains in inclusive classes, while children with lower functioning skills showed more improvement in specialized classrooms (Blackmon & Dembo, 1984; Cole, Mills, Dale, & Jenkins, 1991).

Furthermore, there is a shortage of significant differences between self-contained and inclusive classrooms or settings in social/self-help, cognitive, gross and fine motor skills, comprehension, and language development which supports the results from other researchers who have indicated no significant effect of inclusion on children with disabilities’ developmental outcomes (Fewell & Oelwein, 1990; Guralnick & Groom, 1988; Hallahan & Kauffman, 1997; Harris et al., 1990; Jenkins et al., 1989). Likewise, two studies indicated that children with MSD displayed inconclusive developmental increases in the areas of pre-academic or communication skills in inclusive settings versus self-contained settings (Bricker, 1995; Hundert, Mahoney, Mundy, & Vernon, 1998).

Beyond the consideration of appropriate placements for children with MSD, it is necessary to note that well trained teachers and well-designed service programs for children with severe to profound disabilities and multiple disabilities are considered plentiful in the United States (Berres & Knoblock, 1987). Additionally, Fowler and Lewman (1998) conducted an important study that discussed the activities and outcomes of the SPARK (Skills Promoted
through Arts, Reading, and Knowledge) project. SPARK was designed to offer in-service training and preschool curricula in order to enable early childhood teachers to utilize literacy and the arts to improve the developmental skills of young children with disabilities. Moreover, this project was field tested with 600 young children by 57 teachers in self-contained preschool classrooms, inclusive preschools, and Head Start programs. The results from the project revealed that the in-service training factor increases teachers’ use of successful teaching practices; the curriculum activities were developmentally suitable; and parents, administrators, and teachers valued this model.

The preceding section explained the importance of professional development for teachers in different preschool educational settings such as Head Start, integrated, and self-contained settings. It also discussed how teachers can increase their knowledge, skills, and necessary abilities in order to teach young children with MSD developmental skills that they need during early stages within the preschool setting. Furthermore, many studies confirm the role of professional development in expanding EIPs’ knowledge, skill, and ability. In addition, several studies mentioned the important role of effective training programs for teachers in order to enhance teaching methods for young children with disabilities within early childhood settings. In general, having a child with a disability in various settings such as Head Start, integrated, or self-contained settings, requires providers to possess specialized skills, abilities, and knowledge in order to teach and work with them successfully. Finally, this section indicated that there is a need for ongoing professional development for EIPs in all early childhood settings. It also discussed the importance of offering effective training programs for these providers in order to enhance their skills, abilities, and knowledge to help them teach young children with disabilities most effectively.
Summary

The literature reviewed demonstrates history of both general and special education in Saudi Arabia. Special education began in Saudi Arabia in 1950 through efforts of individuals. The special education laws in Saudi Arabia were described, including the Law of Persons with Disabilities, the Provision Code for Persons with Disabilities, and the Convention on the Rights of Persons with Disabilities. Also, the literature reviewed indicated the effects of EI on young children with MSD, and mentioned that EI plays a critical role in the early stages of life for young children with disabilities because it helps them gain many needed developmental skills. EI services were supported by IDEA 2004 and Article 7 by providing the appropriate services in early educational settings. Additionally, the literature reviewed demonstrates the importance of professional development for teachers in different preschool educational settings such as Head Start, integrated, and self-contained settings. It also discussed how teachers can increase their knowledge, skills, and necessary abilities in order to teach young children with MSD developmental skills that they need during early stages within the preschool setting. Many studies confirm the role of professional development in expanding EIPs’ knowledge, skills, and abilities, and that the continuing professional development programs help EIPs acquire the important skills that they need to work with young children with MSD. Nevertheless, the field of EI requires the specialized skills, abilities, and knowledge to work with this population. In Saudi Arabia, the EI programs, like the DCA centers, need to be evaluated in order to see what the strengths and weaknesses are as well as the needs of EIPs' knowledge, abilities, and necessary skills to work with young children with MSD.

It is necessary to focus on the characteristics, objectives, and standards of professional development programs at the DCA in order to assess the professional development needs of EI
providers of preschoolers with MSD in Saudi Arabia. Also, it is important to have an awareness concerning the views of EIPs who work with young children about professional development programs that provide them with the knowledge, skills, and abilities needed to meet the needs of children with moderate or severe disabilities. Lastly, it is important to be aware of the degree of agreement between the criteria of the programs offered in the centers of the DCA and the perceptions of EIPs concerning their professional development needs. More importantly, as of this writing, there are no systematic studies of EI in Saudi Arabia concerning MSD; therefore, the researcher chose the DCA centers which provide EI services for young children with disabilities from birth to age 6. The DCA is one of the few organizations that meet EI needs for young children. Due to the lack of EI services in Saudi Arabia, the researcher will focus on this topic in order to provide important recommendations that will help teachers in enhancing services for preschoolers with MSD.
CHAPTER THREE

Method

This chapter briefly describes the procedures used in collecting data for assessing the professional development needs of early intervention providers (EIPs) of preschoolers with moderate and severe disabilities (MSD) in Saudi Arabia. The description includes the research design, participants in the study, instruments and materials, data collection, and data analysis. The validity and reliability of the instrument and the procedure of instrument translation to Arabic are discussed in this chapter.

Overview of Research Design

The research design for this study was composed of a descriptive survey. The main purpose of a descriptive survey is to survey a large group of people about a particular topic or issue, and then collect and evaluate their answers. The survey method aimed to describe the characteristics of a population; for example, the distribution of several variables, such as age, attitudes, opinions, and experiences. There are several advantages to using a questionnaire, especially a web-based survey. These include lower cost, faster turnaround, collation of data using a larger group of people, and greater convenience (Fraenkel, Wallen, & Hyun, 2012). As a result, the survey method was used in order to collect EIPs’ perspectives toward their teaching of young children with MSD.
Participants

The EIPs surveyed for this study were drawn from the centers of the DCA. The DCA is a non-profit organization which was first established in 1986 in Riyadh, Saudi Arabia and provides diagnostic, remedial, teaching, and social services in the field of special education, especially for children with MSD. Additionally, this center is the only educational institution in Saudi Arabia that provides EI services for young children with MSD. It includes six sub-branches across Saudi Arabia and educates approximately 3,373 special needs children from birth to age 12.

Participants included all EIPs in DCA centers, with the total target sample of 260 EIPs. The criteria for inclusion in this study were EIPs or teachers who were employed by DCA and who worked with children from birth to age 6. Providers or teachers who worked with children from 7 to 12 years of age were excluded from this study.

Variables

The independent variables included EIPs’ experiences and hours of professional development, while the dependent variables were teacher’s perceptions of their ability to teach the achievement skills (communication, behavior management, academic, social/emotional, and self-help skills) to young children with MSD, as well as the standards, needs, and objectives of the EI program.

Instruments and Materials

Provus’ Discrepancy Evaluation Model (DEM) (Provus, 1969) was designed to evaluate the quality and effectiveness of professional development offered to EIPs and teachers, allow the researcher to examine and assess the professional development program to determine if implementation is in keeping with the standards of the program, and examine the perceptions of
EIPs and teachers about the level of knowledge, skills, and abilities they possess in order to teach young children with MSD.

The ultimate goal of Provus’ DEM was to identify weaknesses in a professional development program to make essential modifications in the early stages of additional program planning. Provus (1971) stated:

Ultimately, programs will improve only if teachers, administrators, and students in most of America’s classrooms become involved in a comprehensive effort to review and improve their own work. Such an effort requires careful study by a school staff reviewing program operations, a detailed analysis of program inputs and processes, and the verification that programs are in fact operating as people believe them to be operating (p. 21-22).

Provus (1971) visualized a three-step process for evaluating programs: (a) specify the criteria for the program, (b) determine the differences between some aspects of program performance and the standards that governed this aspect of the program, and (c) use variance information either to change the performance, or to modify program criteria. The DEM has been widely used in a variety of educational fields and studies such as social studies, educational technology, special education, and education fields (Householder & Boser, 1991; Newton, 1975; Morgan, 1999; The Center for Evaluation and Research, 2001; Sampong, 2009).

Provus’ DEM (Provus, 1969) included five stages of evaluation, which include program design, program operation, program interim products, program terminal products, and program cost. Only the first three stages of Provus’ model were used, for the purpose of this study, while the fourth and fifth stages of his model were omitted because they were not related to the current study. The first stage of Provus’ model addressed question one, which concerned program
characteristics, specification and objectives. The second stage addressed question two, which covered EIPs’ or teachers’ perception of their knowledge, abilities, and skills that they need in order to teach preschoolers with MSD. The third stage addressed question three, which concerned the degree of agreement between the criteria of the programs offered in the centers of the DCA and the perceptions of EIPs about their own professional development needs. The descriptive survey included two parts. The first part of the survey was about teacher’s perceptions of the achievement skills for young children with MSD, while the second part of the survey was about program specification and objectives of the DCA’s centers. In addition, there was also a demographic section, which included EIPs’ experiences, hours of professional development, educational level, and the DCA centers.

In developing the survey questions, the researcher considered all pertinent information that addressed the study’s research questions, as well as obtained permission to use and modify a similar study conducted by Atwater (2011), which also assessed a special education preschool program. The instrument was modified slightly to be appropriate for use in Saudi Arabia’s culture. The researcher edited Atwater’s instrument for the first part of the survey, and then developed the second part of the survey, as well as demographic information. An interval level response format was used in the first part of the survey instrument, which commonly uses traditional 1 – 4 scales (Trochim, 2001). The items on the survey were rated using four levels, similar to bipolar Likert scales, such as: (1) little or no improvement, (2) slight improvement, (3) some improvement, (4) great improvement. This part of the survey also included the five teaching skills, which were communication, behavior management, academic, social/emotional, and self-help skills. This part of the survey in the Atwater’s study mentioned that “Cronbach’s Alpha was calculated for each scale to determine the reliability or internal constancy of each
scale in the survey” (Atwater, 2011, p. 73). The second part of the survey utilized multiple-choice responses. The researcher developed nine multiple-choice questions, which included four possible responses: (4) excellent, (3) good, (2) fair, and (1) poor. In addition, all nine questions considered the degree of quality of DCA programs. Six demographic questions were also included in this descriptive survey. These questions were about teachers’ experiences, teaching hours, education level, and the DCA centers.

**Pilot Study**

The researcher conducted a pilot study in order to test the survey instrument that was developed for this study. EIPs (N=22) in the DCA center participated in the pilot study. Because the native language of the participants was Arabic, the researcher sent the Arabic version of the survey instrument to participants using Qualtrics, a web-based, internet survey. It was requested that EIPs respond to survey items and give their recommendations for improving the survey questions. After reviewing the results of the pilot study, the Cronbach Alpha was 0.891 for all items, which meant the items had a high internal consistency. Due to the small sample size (N=22), the results were inconclusive. Thus, there was a need for more participants for the larger study, which would consist of at least 50 participants to answer the research questions. The most important benefit from the pilot study was the ability to determine the strengths and weaknesses of the instrument, which resulted in the second section of the survey changing from five scales (Extremely good, very good, moderately good, slightly good, and not all good) to four scales (Excellent, good, fair, and poor). This change was made because some participants might choose “moderately good” for all items. As a result, the four-scale instrument would result in clear and defined responses.
Translation

Since the survey instrument was written in the English language, and the population of this study was Saudi Arabian EIPs or teachers who spoke Arabic, the researcher translated this questionnaire into the Arabic language. Furthermore, the researcher sent the entire English survey to the Certified Office of Translation in Saudi Arabia in order to more accurately translate to Arabic, so that the participants in this study could participate and answer all survey questions. As a result, the researcher’s translated version of the survey was used in the pilot study and the final survey.

Data Collection Procedures

In February 2012, the researcher spoke with the director of the DCA center regarding conducting the study in the center. Oral permission was granted to complete the study with a requirement of sending a letter to the center that explained the purpose of the study. In addition, as the researcher possessed a scholarship from King Saud University (KSU) in Riyadh, Saudi Arabia, written permission was required from the department of special education at KSU to officially communicate with the DCA center. The researcher sent the letter to KSU, and the chair of the special education department sent the letter to the director of the DCA center. In August 2012, KSU received permission from the DCA center to permit the researcher to conduct the study, whereby the researcher received an official permission letter from the DCA showing support for the study.

The web-based internet survey (Qualtrics) was used in order to conduct the study and collect answers from the participants. Schonlau, Elliot, and Fricker (2002) supported the use of the web-based internet survey:
The Internet is profoundly changing the way we communicate with one another. One of the most recent new uses of the World Wide Web is as a survey platform. Internet-based surveys, although still in their infancy, are becoming increasingly popular because they are believed to be faster, better, cheaper, and easier to conduct than surveys that use more-traditional telephone or postal mail methods (P. xiii).

The survey included two pages, the first of which was an informed consent form, which allowed the participants in this study to decide whether or not they wanted to participate. If participants chose to participate, they completed all survey questions, whereas if the participants chose to not participate, they then stopped completing the survey. All participants could stop continuing the survey at any time because their participation was voluntary. The second page included all survey questions, which took approximately 10-15 minutes to complete. The timeline for the survey was three to four weeks, so participants could submit the survey to the researcher at least two weeks from the date of distribution. The researcher contacted Maha Derdeer who is the director of the early intervention (EI) and inclusion department (birth to 6 years) at the DCA center, and the researcher explained to her that the survey link was sent to her so that she could send the survey link to all EIPs’ or teachers’ emails. For one month, Maha Derdeer also reminded participants weekly to finish the survey. Participants were able to complete and submit the survey electronically so that the researcher could access their responses.

In order to conduct the pilot study, the researcher was required to meet all the requirements and forms of the Institutional Review Board (IRB) at Ball State University. Consequently, the researcher received an approval letter to conduct the study.
Data Analysis

In this current study, the researcher used quantitative data, on participants’ responses to the survey questions. The data were analyzed using the analysis of variance (ANOVA), which is a statistical process used in analyzing variations in the means of two or more groups. ANOVA identified the values that were tested and then determined whether significant differences existed among all independent and dependent variables (Fraenkel et al., 2012). Along with this type of analysis, the researcher also used descriptive statistics, particularly crosstab analysis (cross tabulate the data with Somers' D tests), to compare several proportions among the items (Fraenkel et al., 2012).

As mentioned by Fraenkel et al. (2012), “the quantitative data are obtained when the variable being studied is measured along a scale that indicates how much of the variable is present. Quantitative data are reported in terms of scores. Higher scores indicate that more of the variable is present than do lower scores” (p. 188). The study focused on three primary research questions.

1. What are the basic characteristics, objectives, and standards of professional development programs in Saudi Arabia that provide early intervention providers with the knowledge, skills and abilities necessary to meet the needs of children with moderate to severe disabilities?

2. To what extent does a professional development program at Disabled Children's Association (DCA) affect the perceived teaching abilities of early intervention providers in meeting the educational needs of preschoolers with moderate to severe disabilities?
3. What is the degree of agreement between the criteria of the programs offered in the centers of the DCA, and the perceptions of early intervention providers concerning their professional development needs?

For the first question, the data were analyzed with a Somers' D test and descriptive statistics, particularly crosstab analysis. This test compared several proportions among the items so that comparisons could be made between the experiences and hours of professional development for providers and the standards, needs, and objectives of the EI program at DCA. Additionally, the data for the second question were analyzed with an ANOVA in order to examine the differences between the experiences and hours of professional development for providers, and individual teacher’s perceptions of achievement skills for young children with MSD (communication, academic, behavior and management, social, and self-help skill items).

**Assumptions and Limitations**

One of the assumptions of this study was that participants (EIPs) would respond to the survey questionnaire accurately and honestly. Another assumption in this study was that the sample represented the population from which it was drawn. The major limitation of this study was the limited number of EIPs for preschoolers with MSD in Saudi Arabia. There were only a few centers that provided EI services for young children with MSD. Due to the small sample in this study, it may not have totally represented the population of EIPs in Saudi Arabia.

**Summary**

This chapter described the procedures that were used in collecting data which examined the professional development needs of EIPs of preschoolers with MSD in Saudi Arabia. Moreover, the research design and participants were discussed, as well as the type of data collection and analysis which was used. As previously mentioned, a pilot study was conducted in
order to find out more about the validity and reliability of the instrument that was implemented for this study. The translation procedure from English to Arabic language was also described in this chapter.
CHAPTER FOUR

Results

The purpose of this study was to assess the professional development needs of early intervention providers (EIPs) of preschoolers with moderate to severe disabilities (MSD) in Saudi Arabia. As mentioned earlier, the data collection survey was comprised of three sections. The first section was an interval level response format (using a traditional 1 – 4 scale). This part of the survey asked teachers to rate their teaching skills in the following areas: communication, behavior management, academic, social/emotional, and self-help skills. The second section collected demographic information on teachers’ experiences, teaching hours, education level, and which DCA center they were employed by. The final section of the survey included multiple-choice responses that addressed the quality of DCA programs. The researcher developed nine multiple-choice questions, which included four possible responses: (4) excellent, (3) good, (2) fair, and (1) poor. In addition, all nine questions considered the teachers’ perceptions of the quality of DCA programs.

The analysis of all three research questions was completed as follows:

1) Percentages of the demographic information were calculated.
2) Descriptive statistics were calculated for all questions. The researcher used descriptive statistics to analyze the demographic characteristics of the participants and to determine participants’ responses towards the basic characteristics, objectives, and standards of professional development programs at the DCA as well as their perceived teaching abilities.
3) Somers' D test results were reported for question one. The Somers' D tests were conducted to compare several proportions among the items.

4) The analysis of variance (ANOVA) results were reported for question two. ANOVA also was used to determine whether a significant difference existed among all independent and dependent variables.

The statistical procedures in this chapter were analyzed using the Statistical Package for Social Sciences (SPSS; 2012).

**Response Rate**

The web-based survey Qualtrics was used to collect answers from the participants. The researcher contacted Maha Derdeer who is the director of the EI and inclusion department (birth to 6 years) at the DCA centers, and the survey link was sent to her so that she could forward the link to all EIPs via email. The total sample targeted was around 260 EIPs, however only 92 participants completed the survey resulting in a response rate of 46%.

**Demographic Characteristics of the Sample**

The demographic data is compiled in Table 1 and Figures 1-6. Among the 92 participants who completed the survey, 19.6% indicated they had completed 1-4 hours of training during the past year, 31.5% had completed 5 hours, and 48.9% had completed 5-10 hours. On average, the number of hours in professional development programs at the DCA per year were distributed 62% one to four hours, 26.1% five hours, and 12% of the sample between five and ten hours. The distribution of years teaching at the DCA was 44.6% for less than 1 year, 26.1% between 1 and 3 years, 9.8% between 3 and 5 years, 8.7% between 5 and 10 years, and 10.9% between 10 and 15 years. In addition, the distribution of teaching preschoolers diagnosed with MSD was
25% for less than 1 year, 20.7% between 1 and 3 years, 25% between 3 and 5 years, 14.1% between 5 and 10 years, 13% between 10 and 15 years, and 2.2% between 15 and 20 years.

Among the survey participants, 66.3% had a bachelor of arts in special education, 2.2% had a bachelor of arts in elementary education, 3.3% had a master of arts in special education, 4.3% had a master of arts in an area other than special education, while 23.9% of the sample held a degree in social studies. These results revealed that the majority of participants (69.6%) had university training in special education. On the other hand, nearly a quarter of participants had no training in education.

The majority of participants (41.3%) were employed by the Riyadh DCA while 23.9% were at Jeddah, 10.9% were at Mecca’s center, 9.8% worked in Madinah’s center, 8.7% in Aljouf’s center, and 5.4% in Hail’s center. These results are not surprising given that the DCA in Riyadh is the largest, serving 1,500 children each year. Table 1 and the Figures 1-6 show the demographic information of the participants.
Table 1

Demographic characteristics of the sample

The DCA's system offered staff development in special education topics. In the past year, in how many classroom hours have you participated?

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One to four</td>
<td>18</td>
<td>19.6</td>
</tr>
<tr>
<td>Five hours</td>
<td>29</td>
<td>31.5</td>
</tr>
<tr>
<td>Between five and ten hours</td>
<td>45</td>
<td>48.9</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>100.0</td>
</tr>
</tbody>
</table>

On average, how many hours per year do you participate in the professional development programs?

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>One to four</td>
<td>57</td>
<td>62.0</td>
</tr>
<tr>
<td>Five hours</td>
<td>24</td>
<td>26.1</td>
</tr>
<tr>
<td>Between five and ten hours</td>
<td>11</td>
<td>12.0</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>100.0</td>
</tr>
</tbody>
</table>

How many years have you taught at the DCA?

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>41</td>
<td>44.6</td>
</tr>
<tr>
<td>Between 1 and 3 years</td>
<td>24</td>
<td>26.1</td>
</tr>
<tr>
<td>Between 3 and 5 years</td>
<td>9</td>
<td>9.8</td>
</tr>
<tr>
<td>Between 5 and 10 years</td>
<td>8</td>
<td>8.7</td>
</tr>
<tr>
<td>Between 10 and 15 years</td>
<td>10</td>
<td>10.9</td>
</tr>
<tr>
<td>Total</td>
<td>92</td>
<td>100.0</td>
</tr>
</tbody>
</table>
## How many total years have you been teaching preschoolers diagnosed with moderate and severe disabilities?

<table>
<thead>
<tr>
<th>Time Period</th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>23</td>
<td>25.0</td>
</tr>
<tr>
<td>Between 1 and 3 years</td>
<td>19</td>
<td>20.7</td>
</tr>
<tr>
<td>Between 3 and 5 years</td>
<td>23</td>
<td>25.0</td>
</tr>
<tr>
<td>Between 5 and 10 years</td>
<td>13</td>
<td>14.1</td>
</tr>
<tr>
<td>Between 10 and 15 years</td>
<td>12</td>
<td>13.0</td>
</tr>
<tr>
<td>Between 15 and 20 years</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>92</td>
<td>100.0</td>
</tr>
</tbody>
</table>

## Which of the following degrees and certification do you hold?

<table>
<thead>
<tr>
<th>Degree and Certification</th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor’s Degree in Special Education</td>
<td>61</td>
<td>66.3</td>
</tr>
<tr>
<td>Bachelor’s Degree in Elementary Education</td>
<td>2</td>
<td>2.2</td>
</tr>
<tr>
<td>Master’s Degree in Special Education</td>
<td>3</td>
<td>3.3</td>
</tr>
<tr>
<td>Master’s Degree in an area other than special education</td>
<td>4</td>
<td>4.3</td>
</tr>
<tr>
<td>Other, please specify</td>
<td>22</td>
<td>23.9</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>92</td>
<td>100.0</td>
</tr>
</tbody>
</table>

## Which of the DCA centers do you work for?

<table>
<thead>
<tr>
<th>Center</th>
<th>n</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Riyadh's center</td>
<td>38</td>
<td>41.3</td>
</tr>
<tr>
<td>Jeddah’s center</td>
<td>22</td>
<td>23.9</td>
</tr>
<tr>
<td>Mecca’s center</td>
<td>10</td>
<td>10.9</td>
</tr>
<tr>
<td>Madinah’s center</td>
<td>9</td>
<td>9.8</td>
</tr>
<tr>
<td>Aljouf’s center</td>
<td>8</td>
<td>8.7</td>
</tr>
<tr>
<td>Hail’s center</td>
<td>5</td>
<td>5.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>92</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Figure 1. The DCA's system offered staff development in special education topics. In the past year, in how many classroom hours have you participated?

Figure 2. On average, how many hours per year do you participate in the professional development programs?
Figure 3. How many years have you taught at the DCA?

Figure 4. How many total years have you been teaching preschoolers diagnosed with moderate and severe disabilities?
Figure 5. Which of the following degrees and certification do you hold?

Figure 6. Which of the DCA centers do you work for?
Quantitative Data Analysis

Research Question One

What are the basic characteristics, objectives, and standards of professional development programs at the Disabled Children's Association (DCA) in Saudi Arabia that provide early intervention providers with knowledge, skills, and abilities?

To answer this question, the means and standard deviations (SD) were calculated for each of the basic characteristics, objectives, and standards of professional development programs at the DCA in Saudi Arabia with the results compiled in Table 2. Participants responded 1-4 on each prompt to indicate their level of agreement with each prompt. The means ranged from 3.07 to 3.37 out of 4. The highest mean was for the prompt “The program expectations or standards for early intervention services,” (M=3.37; SD=0.641). The lowest mean was for “Early intervention service providers have received specific professional development commensurate with needs of young children with MSD,” (M= 3.07; SD=0.86). All the responses had means above 3.0. These results revealed that participants generally felt that the basic characteristics, objectives, and standards of professional development programs at the DCA in Saudi Arabia that provide EIPs with the knowledge, skills, and abilities were of high quality.
Table 2

*Descriptive statistics for characteristics of professional development programs at the DCA*

<table>
<thead>
<tr>
<th>Items with ratings of (4) excellent, (3) good, (2) fair, and (1) poor</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Rank</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>The program expectations or standards for early intervention services are.</td>
<td>3.37</td>
<td>.641</td>
<td>1</td>
<td>High</td>
</tr>
<tr>
<td>The standards, goals and objectives of the early intervention program at DCA are</td>
<td>3.32</td>
<td>.740</td>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>Children in the program pre-school education who were classified as moderate and severe disabilities receive the appropriate early intervention services.</td>
<td>3.32</td>
<td>.769</td>
<td>3</td>
<td>High</td>
</tr>
<tr>
<td>The program goals of the early intervention program at DCA are.</td>
<td>3.27</td>
<td>.665</td>
<td>4</td>
<td>High</td>
</tr>
<tr>
<td>Early intervention service providers have received specific professional development commensurate with needs of young children with moderate and severe disabilities.</td>
<td>3.07</td>
<td>.862</td>
<td>5</td>
<td>High</td>
</tr>
</tbody>
</table>

Somers’ D test “is an asymmetric measure of association between two variables, which plays a central role as a parameter behind rank or nonparametric statistical methods” (Newson, 2006, p. 309). The Somers' D tests were conducted to compare several proportions among the items. The Chi-square is robust to use, but its requirements were invalidated based on the data; due to the small sample size of this current study. Thus, the Somers’ D test was an appropriate alternative statistical procedure to use in this case. Somers' D tests analyzed for characteristics, objectives, and standards of professional development programs at the DCA in Saudi Arabia according to number of hours in the past year of training.
The Somers' D value for the association in the standards, goals and objectives of the early intervention program at the DCA due to number of hours spent in professional development training in the past year was 0.113 with $p=0.234$ (refer to Table 3). This means there was no significant association between the standards, goals and objectives of the early intervention program at the DCA and the number of hours participated in the professional development training. The Somers' D value for the association in the program goals of the early intervention program at the DCA due to number of hours spent in training during the past year was 0.022 with $p=0.818$. This means there was no significant relationship between the program goals of the early intervention program at the DCA and the number of hours participated in education/training (refer to Table 4).

The Somers' D value for the association in the program expectations or standards for early intervention services due to number of hours spent in training during the past year was 0.24 with $p=0.806$. This means there was no significant association in the program expectations or standards for early intervention services and the number of hours participated in training (refer to Table 5). The Somers' D value for the association in children who were classified with MSD receiving the appropriate early intervention services due to number of hours of professional development was 0.99 with $p=0.312$. This means there was no significant association in children who were classified with MSD receiving the appropriate early intervention services and the number of hours participated in professional development (refer to Table 6). The Somers' D value for the association in EIPs who have received specific professional development commensurate with the needs of young children with MSD due to number of hours of professional development was 0.40 with $p=0.664$. This means there was no significant relationship between the EIPs who had received specific professional development
commensurate with the needs of young children with MSD and the number of hours participated in training during the past year (refer to Table 7).

Somers' D tests were also used to analyze characteristics, objectives, and standards of professional development programs at the DCA in Saudi Arabia according to years of teaching. The Somers' D value for the association in the standards, goals, and objectives of the early intervention program at the DCA due to years of teaching was -0.191 \( p=0.027 \). This means there was a significant association between the standards, goals, and objectives of the early intervention program at the DCA and the number of years teaching (refer to Table 8). The Somers' D value for the association in the program goals of the early intervention program at DCA due to years of teaching was -0.48 with \( p=0.614 \). This means there was no significant relationship between the program goals of the early intervention program at the DCA and the number of years teaching (refer to Table 9).

The Somers' D value for the association in the program expectations or standards for early intervention services due to years of teaching was -0.64 with \( p=0.520 \). This means there was no significant association between the program expectations or standards for early intervention services at the DCA and the number of years spent teaching this population (refer to Table 10). The Somers' D value for the association in children who were classified with MSD receiving the appropriate early intervention services due to years of teaching was -1.24 with \( p=0.165 \). This means there was no significant relationship between children who were classified with MSD receiving the appropriate early intervention services and the number of years teaching (refer to Table 11). The Somers' D value for the association in EIPs who have received specific professional development commensurate with the needs of young children with MSD due to years of teaching was -1.31 with \( p=0.128 \). This means there was no significant association
between EIPs who had received specific professional development commensurate with the needs of young children with MSD and the number of years teaching (refer to Table 12).

Table 3

*Somer’s D test for the standards, goals, and objectives of the early intervention program at the DCA due to the number of hours participated in professional development training*

<table>
<thead>
<tr>
<th>Ordinal by Ordinal</th>
<th>Somers’ D</th>
<th>Symmetric</th>
<th>Asymp. Std. Error</th>
<th>Approx. T</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Ordinal</td>
<td>Somers’ D</td>
<td>Symmetric</td>
<td>.113 .094</td>
<td>1.191</td>
<td>.234</td>
</tr>
<tr>
<td>Ordinal by Ordinal</td>
<td>Somers’ D</td>
<td>Symmetric</td>
<td>.113 .095</td>
<td>1.191</td>
<td>.234</td>
</tr>
<tr>
<td>Ordinal by Ordinal</td>
<td>Somers’ D</td>
<td>Symmetric</td>
<td>.112 .094</td>
<td>1.191</td>
<td>.234</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

Table 4

*Somer’s D test for the program goals of the early intervention program at the DCA due to the number of hours participated in professional development training*

<table>
<thead>
<tr>
<th>Ordinal by Ordinal</th>
<th>Somers’ D</th>
<th>Symmetric</th>
<th>Asymp. Std. Error</th>
<th>Approx. T</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Ordinal</td>
<td>Somers’ D</td>
<td>Symmetric</td>
<td>.022 .096</td>
<td>.231</td>
<td>.818</td>
</tr>
<tr>
<td>Ordinal by Ordinal</td>
<td>Somers’ D</td>
<td>Symmetric</td>
<td>.023 .098</td>
<td>.231</td>
<td>.818</td>
</tr>
<tr>
<td>Ordinal by Ordinal</td>
<td>Somers’ D</td>
<td>Symmetric</td>
<td>.022 .094</td>
<td>.231</td>
<td>.818</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
Table 5

*Somer's D test for the program expectations or standards for early intervention services due to the number of hours participated in professional development training*

<table>
<thead>
<tr>
<th>Directional Measures</th>
<th>Value</th>
<th>Asymp. Std. Error(^a)</th>
<th>Approx. T(^b)</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Ordinal</td>
<td>Symmetric</td>
<td>.024</td>
<td>.096</td>
<td>.246</td>
</tr>
<tr>
<td></td>
<td>The DCA's system offered staff development in special education topics. In how many classroom hours have you participated? Dependent</td>
<td>.025</td>
<td>.102</td>
<td>.246</td>
</tr>
<tr>
<td>Somers' D</td>
<td>The program expectations or standards for early intervention services. Dependent</td>
<td>.022</td>
<td>.091</td>
<td>.246</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

Table 6

*Somer's D test for children in the program pre-school education who were classified with moderate and severe disabilities receive the appropriate early intervention services due to the number of hours participated in professional development training*

<table>
<thead>
<tr>
<th>Directional Measures</th>
<th>Value</th>
<th>Asymp. Std. Error(^a)</th>
<th>Approx. T(^b)</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Ordinal</td>
<td>Symmetric</td>
<td>.099</td>
<td>.098</td>
<td>1.011</td>
</tr>
<tr>
<td></td>
<td>The DCA's system offered staff development in special education topics. In how many classroom hours have you participated? Dependent</td>
<td>.099</td>
<td>.098</td>
<td>1.011</td>
</tr>
<tr>
<td>Somers' D</td>
<td>Children in the program pre-school education who were classified as moderate and severe disabilities receive the appropriate early intervention services. Dependent</td>
<td>.098</td>
<td>.097</td>
<td>1.011</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
Table 7

*Somer’s D test for early intervention service providers who have received specific professional development commensurate with needs of young children with moderate and severe disabilities due to the number of hours participated in professional development training*

<table>
<thead>
<tr>
<th>Directional Measures</th>
<th>Value</th>
<th>Asymp. Std. Error</th>
<th>Approx. T</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somers' D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symmetric</td>
<td>.040</td>
<td>.093</td>
<td>.434</td>
<td>.664</td>
</tr>
<tr>
<td>The DCA's system offered staff development in special education topics. In how many classroom hours have you participated? Dependent</td>
<td>.039</td>
<td>.091</td>
<td>.434</td>
<td>.664</td>
</tr>
<tr>
<td>Early intervention service providers have received specific professional development commensurate with needs of young children with moderate and severe disabilities. Dependent</td>
<td>.042</td>
<td>.096</td>
<td>.434</td>
<td>.664</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

Table 8

*Somer’s D test for the standards, goals, and objectives of the early intervention program at the DCA due to the number of years having taught at the DCA*

<table>
<thead>
<tr>
<th>Directional Measures</th>
<th>Value</th>
<th>Asymp. Std. Error</th>
<th>Approx. T</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somers' D</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symmetric</td>
<td>-.191</td>
<td>.087</td>
<td>-2.208</td>
<td>.027</td>
</tr>
<tr>
<td>How many years have you taught at the DCA? Dependent</td>
<td>-.205</td>
<td>.093</td>
<td>-2.208</td>
<td>.027</td>
</tr>
<tr>
<td>The standards, goals and objectives of the early intervention program at DCA are Dependent</td>
<td>-.179</td>
<td>.082</td>
<td>-2.208</td>
<td>.027</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
Table 9

*Somer’s D test for the program goals of the early intervention program at the DCA due to the number of years having taught at the DCA*

<table>
<thead>
<tr>
<th>Directional Measures</th>
<th>Value</th>
<th>Asymp. Std. Errorᵃ</th>
<th>Approx. Tᵇ</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Somers' D</td>
<td>Symmetric</td>
<td>-.048</td>
<td>.095</td>
<td>-.505</td>
</tr>
<tr>
<td></td>
<td>How many years have you taught at the DCA? Dependent</td>
<td>-.052</td>
<td>.104</td>
<td>-.505</td>
</tr>
<tr>
<td></td>
<td>The program goals of the early intervention program at DCA are. Dependent</td>
<td>-.044</td>
<td>.087</td>
<td>-.505</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

Table 10

*Somer’s D test for the program expectations or standards for early intervention services due to the number of years having taught at the DCA*

<table>
<thead>
<tr>
<th>Directional Measures</th>
<th>Value</th>
<th>Asymp. Std. Errorᵃ</th>
<th>Approx. Tᵇ</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Somers' D</td>
<td>Symmetric</td>
<td>-.064</td>
<td>.099</td>
<td>-.644</td>
</tr>
<tr>
<td></td>
<td>How many years have you taught at the DCA? Dependent</td>
<td>-.072</td>
<td>.113</td>
<td>-.644</td>
</tr>
<tr>
<td></td>
<td>The program expectations or standards for early intervention services are. Dependent</td>
<td>-.057</td>
<td>.089</td>
<td>-.644</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
Table 11

Somer’s D test for children in the program pre-school education who were classified with moderate and severe disabilities receive the appropriate early intervention services due to the number of years having taught at the DCA

<table>
<thead>
<tr>
<th>Directional Measures</th>
<th>Value</th>
<th>Asymp. Std. Error&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Approx. T&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Ordinal</td>
<td>Somers' D</td>
<td>Symmetric</td>
<td>-.124</td>
<td>-.089</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How many years have you taught at the DCA? Dependent</td>
<td>-.133</td>
<td>.096</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Children in the program pre-school education who were classified as moderate and severe disabilities receive the appropriate early intervention services. Dependent</td>
<td>-.116</td>
<td>.083</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.

Table 12

Somer’s D test for early intervention service providers who have received specific professional development commensurate with needs of young children with moderate and severe disabilities due to the number of years having taught at the DCA

<table>
<thead>
<tr>
<th>Directional Measures</th>
<th>Value</th>
<th>Asymp. Std. Error&lt;sup&gt;a&lt;/sup&gt;</th>
<th>Approx. T&lt;sup&gt;b&lt;/sup&gt;</th>
<th>Approx. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinal by Ordinal</td>
<td>Somers' D</td>
<td>Symmetric</td>
<td>-.131</td>
<td>.087</td>
</tr>
<tr>
<td></td>
<td></td>
<td>How many years have you taught at the DCA? Dependent</td>
<td>-.135</td>
<td>.089</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Early intervention service providers have received specific professional development commensurate with needs of young children with moderate and severe disabilities. Dependent</td>
<td>-.127</td>
<td>.085</td>
</tr>
</tbody>
</table>

a. Not assuming the null hypothesis.
b. Using the asymptotic standard error assuming the null hypothesis.
Research Question Two

To what extent does a professional development program at the Disabled Children's Association (DCA) affect the perceived teaching abilities of early intervention providers in meeting the educational needs of preschoolers with moderate to severe disabilities?

To answer this question, means and SD were calculated for each perceived teaching ability and Table 13 shows the results. The means ranged from M=2.96 - 3.38 out of 4. The highest mean was in the area of teaching communication skills (M=3.38: SD=.633). The lowest mean was in the area of teaching self-help skills (M=2.96: SD=.858). The means for four of five teaching areas were above 3.2 out of 4.0, indicating that participants had confidence in their abilities to teach in these skill areas. Based on the means of perceived teaching abilities of EIPs, it can be decided that the means from 0 - 0.99 are in the poor level; means from 1 - 1.99 are in the low level; means from 2 - 2.99 are in the moderate level; and means from 3 - 4 are in the high level.

Table 13

Descriptive statistics for perceived teaching abilities of early intervention providers

<table>
<thead>
<tr>
<th>Domain</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Rank</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>3.3872</td>
<td>.63388</td>
<td>1</td>
<td>High</td>
</tr>
<tr>
<td>Social/Emotional</td>
<td>3.3804</td>
<td>.69539</td>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>Behavior Management</td>
<td>3.2989</td>
<td>.63238</td>
<td>3</td>
<td>High</td>
</tr>
<tr>
<td>Academic</td>
<td>3.2808</td>
<td>.72624</td>
<td>4</td>
<td>High</td>
</tr>
<tr>
<td>Teaching Self Help Skills</td>
<td>2.9620</td>
<td>.85881</td>
<td>5</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

For the detailed analysis for each item in the perceived teaching abilities, means and SD were calculated for each perceived teaching ability item according to their domain. Table 14 shows the results. In the Communication skills domain, the means ranged from M=3.15- 3.62.
The highest mean was for “Play simple games” (M=3.62: SD=.810). The lowest mean was for “Understand common prepositions (in, on, under, over)” (M=3.15: SD=1.07). All of the responses were in the high level, which led to the conclusion that participants felt confident in their abilities to teach communication skills.

For the Behavior Management skills domain, the means ranged from M=3.04- 3.45. The highest mean was for “Comply with simple requests” (M=3.45: SD=.83). The lowest mean was for “Safety skills” (M=3.04: SD=1.08). All of the responses were in the high level, so this led to the conclusion that teaching behavior management skills were at a high level. Likewise, for the Academic skills domain, the means ranged from M=3.10- 3.50. The highest mean was for “Identify primary colors, shapes and common objects” (M=3.504: SD=.76). The lowest mean was for “Identify basic written warning words (stop, go)” (M=3.10: SD=1.09). All of the responses were in the high level, and this led to the conclusion that the teaching of academic skills were at a high level.

For the social/emotional skills domain, the means ranged from M=3.13- 3.73. The highest mean was for “Share and play appropriately with materials and/or toys” (M= 3.73: SD=.61). The lowest mean was for “Delay gratification for five minutes” (M= 3.13: SD=1.02). All of the responses were in the high level, which led to the conclusion that the teaching of social/emotional skills was at a high level. On the other hand, for the Self-Help skills domain, the means ranged from M=2.61- 3.28. The highest mean was for “Eating skills” (M= 3.28: SD 0.88). The lowest mean was for “Use appropriate toileting skills” (M= 2.61: SD=1.15). Participants had a high level of perceived confidence in teaching two areas of the Self-help domain and a moderate level of perceived confidence in the other two areas (refer to Table 14).
Table 14

Descriptive statistics for each perceived teaching ability of early intervention providers

**Means and SD for teaching communication skills**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Rank</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play simple games</td>
<td>3.62</td>
<td>.810</td>
<td>1</td>
<td>High</td>
</tr>
<tr>
<td>Answer simple questions</td>
<td>3.57</td>
<td>.829</td>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>Identify primary colors</td>
<td>3.53</td>
<td>.777</td>
<td>3</td>
<td>High</td>
</tr>
<tr>
<td>Request wants and needs</td>
<td>3.46</td>
<td>.776</td>
<td>4</td>
<td>High</td>
</tr>
<tr>
<td>Respond to simple requests</td>
<td>3.41</td>
<td>1.050</td>
<td>5</td>
<td>High</td>
</tr>
<tr>
<td>Initiate communication</td>
<td>3.18</td>
<td>.983</td>
<td>6</td>
<td>High</td>
</tr>
<tr>
<td>Retell a simple event or story</td>
<td>3.17</td>
<td>.933</td>
<td>7</td>
<td>High</td>
</tr>
<tr>
<td>Understand common prepositions (in, on, under, over)</td>
<td>3.15</td>
<td>1.079</td>
<td>8</td>
<td>High</td>
</tr>
</tbody>
</table>

**Means and SD for teaching behavior management skills**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Rank</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comply with simple requests</td>
<td>3.45</td>
<td>.830</td>
<td>1</td>
<td>High</td>
</tr>
<tr>
<td>Participate in group activities</td>
<td>3.42</td>
<td>.790</td>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>Play appropriately with peers</td>
<td>3.40</td>
<td>.826</td>
<td>3</td>
<td>High</td>
</tr>
<tr>
<td>Share</td>
<td>3.40</td>
<td>.799</td>
<td>4</td>
<td>High</td>
</tr>
<tr>
<td>Respond to social greetings</td>
<td>3.38</td>
<td>.875</td>
<td>5</td>
<td>High</td>
</tr>
<tr>
<td>Make choices</td>
<td>3.35</td>
<td>.857</td>
<td>6</td>
<td>High</td>
</tr>
<tr>
<td>Make social greetings</td>
<td>3.34</td>
<td>.952</td>
<td>7</td>
<td>High</td>
</tr>
<tr>
<td>Ask for help</td>
<td>3.26</td>
<td>.982</td>
<td>8</td>
<td>High</td>
</tr>
<tr>
<td>Take turns</td>
<td>3.24</td>
<td>.803</td>
<td>9</td>
<td>High</td>
</tr>
<tr>
<td>Maintain appropriate eye contact</td>
<td>3.23</td>
<td>.915</td>
<td>10</td>
<td>High</td>
</tr>
<tr>
<td>Paying attention</td>
<td>3.12</td>
<td>1.015</td>
<td>11</td>
<td>High</td>
</tr>
<tr>
<td>Safety skills</td>
<td>3.04</td>
<td>1.089</td>
<td>12</td>
<td>High</td>
</tr>
</tbody>
</table>
Table 14 (Con.)

**Means and SD for teaching academic skills**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Rank</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify primary colors, shapes and common objects</td>
<td>3.50</td>
<td>.763</td>
<td>1</td>
<td>High</td>
</tr>
<tr>
<td>Display one-to-one correspondence</td>
<td>3.42</td>
<td>.975</td>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>Identify numbers 1 to 10</td>
<td>3.26</td>
<td>.971</td>
<td>3</td>
<td>High</td>
</tr>
<tr>
<td>Count to ten</td>
<td>3.24</td>
<td>.987</td>
<td>4</td>
<td>High</td>
</tr>
<tr>
<td>Identify his/her own name and names of peers with both (written and spoke)</td>
<td>3.16</td>
<td>1.072</td>
<td>5</td>
<td>High</td>
</tr>
<tr>
<td>Identify basic written warning words (stop, go)</td>
<td>3.10</td>
<td>1.090</td>
<td>6</td>
<td>High</td>
</tr>
</tbody>
</table>

**Means and SD for teaching social/emotional skills**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Rank</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share and play appropriately with materials and or toys</td>
<td>3.73</td>
<td>.616</td>
<td>1</td>
<td>High</td>
</tr>
<tr>
<td>Show empathy to others</td>
<td>3.42</td>
<td>.855</td>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>Refrain from inappropriate outbursts</td>
<td>3.35</td>
<td>.988</td>
<td>3</td>
<td>High</td>
</tr>
<tr>
<td>Take turns</td>
<td>3.32</td>
<td>.960</td>
<td>4</td>
<td>High</td>
</tr>
<tr>
<td>Delay gratification for five minutes</td>
<td>3.13</td>
<td>1.029</td>
<td>5</td>
<td>High</td>
</tr>
</tbody>
</table>

**Means and SD for teaching self-help skills**

<table>
<thead>
<tr>
<th>Items</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Rank</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating skills</td>
<td>3.28</td>
<td>0.881</td>
<td>1</td>
<td>High</td>
</tr>
<tr>
<td>Request assistance</td>
<td>3.23</td>
<td>1.007</td>
<td>2</td>
<td>High</td>
</tr>
<tr>
<td>Dress self independently or more interdependently</td>
<td>2.81</td>
<td>1.021</td>
<td>3</td>
<td>Moderate</td>
</tr>
<tr>
<td>Use appropriate toileting skills</td>
<td>2.61</td>
<td>1.158</td>
<td>4</td>
<td>Moderate</td>
</tr>
</tbody>
</table>
ANOVA was used to analyze the differences in the perceived teaching abilities of EIPs due to the number of hours spent in a professional development course. There was a significant difference in the perceived teaching abilities and the number of hours spent in a professional development course at $p<.05$. The F values were 10.035 for communication skills, 8.198 for behavior management skills, 5.45 for academic skills, 6.795 for social/emotional skills, and 7.153 for self-help skills (refer to Table 15). To find the difference between the number of hours spent in a professional development course and the dependent variables, multiple comparisons were conducted and the results are shown in Table 16. The differences were between the one to four hours of training category, the five hours of training category, and the five to ten hours of training category. The latter two had higher means compared to the one to four hour category. Thus, participants who had five to ten hours of professional development training had higher means, thus higher levels of confidence in their teaching abilities across the five skill areas (refer to Table 16).

ANOVA was also used to analyze the differences in the perceived teaching abilities of EIPs due to years having taught at the DCA. The results showed that there were no significant differences in the perceived teaching abilities of communication, behavior management, academic, social/emotional, and self-help skills in relationship to number of years teaching at the DCA at $p<.05$. The F values were 1.04, 1.85, 1.46, 1.64 and 1.66, respectively. Thus, there were no significant differences in perceived teaching abilities of EIPs due to years having taught at the DCA (refer to Table 17).
Table 15

Analysis of variance (ANOVA) of the number of hours of professional development courses

<table>
<thead>
<tr>
<th>Domain</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>6.728</td>
<td>2</td>
<td>3.364</td>
<td>10.035</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>29.836</td>
<td>89</td>
<td>.335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36.564</td>
<td>91</td>
<td>.335</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>5.661</td>
<td>2</td>
<td>2.831</td>
<td>8.198</td>
<td>.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>30.730</td>
<td>89</td>
<td>.345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36.391</td>
<td>91</td>
<td>.345</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>5.215</td>
<td>2</td>
<td>2.608</td>
<td>5.425</td>
<td>.006</td>
</tr>
<tr>
<td>Within Groups</td>
<td>42.781</td>
<td>89</td>
<td>.481</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>47.996</td>
<td>91</td>
<td>.481</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social/emotional</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>5.829</td>
<td>2</td>
<td>2.915</td>
<td>6.795</td>
<td>.002</td>
</tr>
<tr>
<td>Within Groups</td>
<td>38.176</td>
<td>89</td>
<td>.429</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>44.005</td>
<td>91</td>
<td>.429</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching Self Help Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>9.295</td>
<td>2</td>
<td>4.647</td>
<td>7.153</td>
<td>.001</td>
</tr>
<tr>
<td>Within Groups</td>
<td>57.822</td>
<td>89</td>
<td>.650</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>67.117</td>
<td>91</td>
<td>.650</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Table 16

*Multiple comparisons in the perceived teaching abilities of early intervention providers due to the number of hours participated in professional development training*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>(I) In how many classroom hours have you participated?</th>
<th>Mean Difference (I-J)</th>
<th>(J) In how many classroom hours have you participated?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>One to four</td>
</tr>
<tr>
<td>Communication</td>
<td>One to four</td>
<td>-.28472</td>
<td>Five hours</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-.67917</td>
<td>Between five and ten hours</td>
</tr>
<tr>
<td></td>
<td>Five hours</td>
<td>-.39444</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between five and ten hours</td>
<td></td>
<td></td>
</tr>
<tr>
<td>behavior Management</td>
<td>One to four</td>
<td>-.21424</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Five hours</td>
<td>-.60556</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between five and ten hours</td>
<td>-.39132</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic</td>
<td>One to four</td>
<td>-.14623</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Five hours</td>
<td>-.55556</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between five and ten hours</td>
<td>-.40932</td>
<td></td>
</tr>
<tr>
<td>Social/Emotional</td>
<td>One to four</td>
<td>-.47931</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Five hours</td>
<td>-.67333</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between five and ten hours</td>
<td>-.19402</td>
<td></td>
</tr>
<tr>
<td>Teaching Self Help Skills</td>
<td>One to four</td>
<td>-.54741</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Five hours</td>
<td>-.84722</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Between five and ten hours</td>
<td>-.29981</td>
<td></td>
</tr>
</tbody>
</table>

* The mean difference is significant at the 0.05 level.
Table 17

*Analysis of variance (ANOVA) of the number of years having taught at the DCA*

<table>
<thead>
<tr>
<th>Domain</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
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<tr>
<td>Communication</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Between Groups</td>
<td>1.677</td>
<td>4</td>
<td>.419</td>
<td>1.046</td>
<td>.388</td>
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<tr>
<td>Within Groups</td>
<td>34.887</td>
<td>87</td>
<td>.401</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>36.564</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavior Management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>2.855</td>
<td>4</td>
<td>.714</td>
<td>1.851</td>
<td>.126</td>
</tr>
<tr>
<td>Within Groups</td>
<td>33.536</td>
<td>87</td>
<td>.385</td>
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<td></td>
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<tr>
<td>Total</td>
<td>36.391</td>
<td>91</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Academic</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3.036</td>
<td>4</td>
<td>.759</td>
<td>1.469</td>
<td>.219</td>
</tr>
<tr>
<td>Within Groups</td>
<td>44.960</td>
<td>87</td>
<td>.517</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>47.996</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Social/emotional</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>3.085</td>
<td>4</td>
<td>.771</td>
<td>1.640</td>
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<tr>
<td>Within Groups</td>
<td>40.920</td>
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<td>.470</td>
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<td></td>
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<tr>
<td>Total</td>
<td>44.005</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Teaching Self Help Skills</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>4.767</td>
<td>4</td>
<td>1.192</td>
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<tr>
<td>Within Groups</td>
<td>62.350</td>
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<td>.717</td>
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<td></td>
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<tr>
<td>Total</td>
<td>67.117</td>
<td>91</td>
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</table>
Research Question Three

What is the degree of agreement between the criteria of programs offered in the centers of the Disabled Children's Association (DCA) and the perceptions of early intervention providers about their professional development needs?

To answer this question, the results from question one and question two, as well as the descriptive statistics, were reported. The results showed that there was an agreement between the criteria of the programs offered in the centers of the DCA and the perceptions of the EIPs about their professional development needs. The results also showed that with high quality professional development, there were improvements in teaching skills to young children with MSD, except self-help skills, and higher quality early intervention programs at the DCA centers. Thus, the agreement was the correlation between the quality of professional development and the quality of the programs offered at the DCA. Even though the agreement existed, there was still a need to provide more professional development in some skills, such as self-help skills, and training for providers or teachers in order to help them teach young children with MSD effectively and to enhance the early intervention programs at the DCA centers.

Summary

In this chapter, the descriptive and inferential statistics were reported. Also, the quantitative data were revealed to assess the professional development needs of EIPs of preschoolers with MSD in Saudi Arabia. The results showed that the basic characteristics, objectives, and standards of professional development programs at the DCA in Saudi Arabia that provide EIPs with the knowledge, skills, and abilities were all at the high level. However, there were no significant associations between EIPs’ experiences and hours of professional development and the standards, needs, and objectives of the EI program. In addition, the results showed that the perceived teaching abilities for EIPs were at a high level, except teaching self-
help skills. Also, there was a significant difference between EIPs who participated in one to four hours of professional development, five hours of professional development, and five to ten hours of professional development. The differences were between the one to four hour category, the five hour category, and the five to ten hour category. The latter two had higher means compared to the one to four hour category. On the other hand, there was not a significant difference in perceived teaching abilities between EIPs and years of experiences at the DCA. Overall, there was agreement between the criteria of the programs offered in the centers of the DCA and the perceptions of the EIPs about their professional development needs, which were both in the high level.
CHAPTER FIVE

Discussion

The purpose of this study was to assess the professional development needs of early intervention providers (EIPs) for preschoolers with moderate to severe disabilities (MSD) in Saudi Arabia. The researcher evaluated the academic and professional levels of EIPs, as well as the knowledge and basic skills necessary for these providers to be able to offer high-quality services to young children with MSD. The hypothesis of this study was that professional development makes a difference in enhancing the knowledge, abilities, and necessary skills for EIPs of preschoolers with MSD in Saudi Arabia.

The results of the current study showed that the basic characteristics, objectives, and standards of professional development programs at the Disabled Children’s Association (DCA) in Saudi Arabia that provide EIPs with the knowledge, skills, and abilities have a high level of quality. Also, the perceived teaching ability of EIPs in several skill areas was at a high level, except for the area of teaching self-help skills. Thus, when high quality professional development programs are offered at the DCA, teaching skills of EIPs are generally improved. This means that the discrepancy between EIP’s perception of their abilities to teach preschoolers with MSD and the quality of early intervention programs was minimal.

Regarding the years of experience for EIPs, the survey showed unexpected results, which was that there were no significant associations between EIPs’ experiences and the standards, needs, and objectives of the Early Intervention (EI) program at the DCA. Also, there were no
significant differences between EIPs’ experiences and the perceived teaching abilities for EIPs. However, these results were supported by other studies (e.g., Abdel-Aziz, Abdel Moneim, Ibrahim, & Samir, 1990; Abu Mouloud, 2007; Gad, 1987; Goe 2007; Khatib, 2005; Rockoff, 2004; Tarawneh & Alshlool, 2000). The unexpected results may have been due to the small sample size. Even though the number of years of teaching experience may not have had a great influence on the EIPs in teaching young children with MSD, years of teaching experience does have a positive impact on the ability of EIPs to teach the skills needed in the early childhood field. In addition, the participation of EIPs in the professional development programs offered by the DCA led to a high confidence level in teaching students academic, behavioral, communication and social skills, excluding self-help skills. The number of years of experience in the educational profession has been found to be important by many other researchers (Albatayneh, 2004; Andersson, 2000; Thomas 1992; Sattler, 2001; Soliman, 1995; Wislting, Koorland, & Rose, 1981).

Results of the current study showed that quality standards and early intervention programs in the DCA are effective for special education and comprehensive support services in early childhood for children with MSD. Moreover, the quality of these programs, for example, the modern teaching methods that fit those children’s needs, is evident in the results of this study. Previous studies (e.g., Bierman et al., 2008; Pianta, 2003; Vandell & Wolfe, 2000) support this conclusion regarding the quality of pre-school programs and the role of educators to provide educational practices needed that allow EIPs to effectively teach children with MSD. This is consistent with what one participant reported: “The DCA provides early intervention services in a sophisticated and modern way, but it does not provide financial motivation for EIPs who work
with children with MSD.” This indicated the need for an increase in the salaries of these providers at the DCA centers in order to maintain their motivation.

Additionally, the results of this study demonstrated that the goals of early intervention programs and the expectations of providers of these services were very high. This reflects the role that the DCA played in providing the best professional development programs for children with MSD, focusing on the aspects of growth in all skills (academic, behavior, communication, social, and self-help skills). As also shown in other studies, (e.g., Graham & Bryant, 1993; Guralnick, 2005; Odom & Diamond, 1998; Shonkoff & Hauser-Cram, 1987; Thomaidis, Kaderoglou, Stefou, Damianou, & Bakoula, 2000) it is important in early childhood to provide early intervention programs which use effective teaching strategies. However, this result is inconsistent with what one participant stated on the survey: “We urgently need specialists in the field of early intervention, motivation to work with MSD children, and intensive courses about how to effectively teach this population based on their needs.”

The survey results showed that children with MSD benefited from early intervention programs in the DCA. This result showed that the quality of professional development programs has helped providers give children with MSD the support they need from special education services and other related services in early childhood. Previous studies (e.g., Barlow & Cates, 2006; Bloom & Sheerer, 1992; Borko & Putman, 1995; Campbell & Milbourne, 2005; Li, 2004; Palsha & Wesley, 1998) support this conclusion that when there were ongoing professional development programs for EIPs and easy access to those services, teachers were better able to teach skills to children with MSD.

It is very important to provide ongoing professional development programs among EIPs because it will aid their acquisition of knowledge and skills needed to work with children with
MSD. They will also learn about the latest teaching methodologies used to deliver knowledge and skills to students. The survey results showed teachers perceived that children with MSD received high quality early intervention services even though there was no evidence to actually measure the skill levels of students. Measurement of the students’ skills might require direct observation or another research design.

Although the professional development programs in the DCA were considered to be high quality based on the findings of this study, service providers need to develop ongoing professional skills to work with children with MSD. This result is consistent with what some EIPs pointed out in the survey. One participant commented, “The DCA needs to provide intensive workshops and modern courses in early intervention.” Another participant said, “The DCA needs to provide intensive courses and workshops about the various categories of special education because of their importance for the early intervention specialists.” Thus, continuing professional development should provide training and educational programs and modern techniques, which will keep pace with the needs of the local and global developments in field of rehabilitation of young children with disabilities. Such training will increase the effectiveness of the EIPs and enable them to achieve the objectives of the DCA, as well as the localization and dissemination of knowledge and skills. This study also indicated the continued need for intensive courses for providers of early intervention services. Courses such as theses would help EIPs gain the skills and knowledge necessary to teach children with MSD. These results were supported by the National Association for the Education of Young Children (NAEYC 1991; 1997).

The results of the current study also showed that perceived teaching abilities of EIPs were at a high level, while “Teaching Self-Help Skills” was at a moderate level. These results showed a significant difference between perceived teaching abilities and the number of hours spent in
professional development courses. EIPs who reported participating in five or more hours of professional development during the previous year felt that training had a positive influence on their abilities in the teaching of five important skills compared with those who participated in less than five hours of training. This confirmed the hypothesis that professional development makes a positive difference in enhancing the knowledge, abilities, and necessary skills of EIPs who teach preschoolers with MSD in Saudi Arabia.

Previous studies (e.g., Lowden, 2005; Gwynne-Atwater, 2011; O’Connor, Harty, & Fulmer, 2005) support this result. For instance, O’Connor (1999) indicated that EIPs who participated in many hours of intensive professional development had higher levels of implementing activities during classroom instruction. Of course, attending and participating in professional development programs has an achievement impact on teachers regarding their acquisition of knowledge and skills necessary to teach children with MSD. Nevertheless, these programs must be effective and continuous.

More importantly, the survey indicated that the perceived teaching abilities of EIPs were at a high level even though the majority of their level of education was a bachelor’s degree in special education (66%) or social studies (23%). This result is not consistent with previous studies (e.g., Helburn, 1995; Whitebook, Howes, & Phillips, 1989; Whitebook et al., 2004) that demonstrated the importance of the level of education in enhancing children’s outcomes. In addition, an increased education level such as a master's degree or a graduate degree in a particular specialty is important to teachers to increase educational attainment in the educational process. This is consistent with one participant’s suggestion: “My top suggestion is for the improvement of the work system at the DCA. All workers in the field of special education must hold at least a bachelor of special education degree or take intensive professional development
course.” Therefore, it is also necessary to focus on intense professional development programs that supply providers with experiences and information in teaching skills fitting the needs of children with MSD.

When looking at the teaching communication skills domain, it is clear that EIPs rated their perceived teaching abilities at a high level. The highest total scale score was $M=3.38$, which indicated that EIPs believed that their professional development programs resulted in an improvement in their perceived ability to teach communication skills. Specifically, teachers’ perception of their ability to teach children with MSD to play simple games had a mean of 3.62, which was the highest score reached. The lowest score was in their perceived ability to teach children with MSD to understand common prepositions (in, on, under, over), with a mean of 3.15. These results showed that when teachers take professional development courses, their perception of their abilities to teach communication skills to children with MSD increases and is positively reflected in their teaching.

Communication skills are very important both in and out of preschool because they help children develop their social and language skills. Because communication skills are so important, it is valuable to use differentiated instruction in the classrooms for all students with disabilities, including individuals with MSD. Multiple approaches should also be used at DCA in order to help children with MSD master content, process information, and demonstrate learning. However, it is important to focus more on the nonverbal children who need intensive instructions in order to gain the greatest communication skills possible based on their abilities. In addition, the DCA should provide ongoing professional development for these skills in order to help EIPs acquire the knowledge and necessary skills needed in teaching children with MSD.
This study’s results correspond with previous studies, which indicated the importance of professional development in the communication domain for EIPs. Teachers who participated in ongoing professional development programs, compared with teachers who did not participate, had a more positive attitude towards explicit, structured language instruction (Bos, Mather, Narr, & Babur, 1999). It is logical that teachers reported a high level in teaching communication skills at the DCA because the self-contained settings provide the students with severe disabilities more intensity for teaching all skills, such as communication and academic skills. This claim was also supported in the literature review by Bricker (1995) and Hundert et al. (1998). Now, it is obvious that early intervention programs at the DCA had a significant impact on EIPs perceptions of their abilities to teach children’s language development and to improve their communication skills.

When looking at the teaching behavior management skills domain, EIPs rated their perceived teaching abilities at a high level. The highest total scale score was M=3.29, which indicated that EIPs believed that their professional development programs resulted in an improvement in their perceived abilities in teaching behavior management skills. Specifically, teachers’ perceived abilities of teaching children with MSD to comply with simple requests had a mean of 3.45, which was the highest score reached. The lowest score was in teaching children with MSD safety skills, with a mean of 3.04. These results revealed that when teachers take professional development courses, their perception of their abilities to teach behavioral management skills to children with MSD increases and is positively reflected in their teaching.

Behavior management skills for children with MSD are necessary in preschool environments in order to help them gain many developmental skills. By gaining behavior management skills, children can also develop other important developmental areas such as social and academic skills. Thus, EIPs must know classroom management skills and how to teach this
population effectively. Even though participants in this study felt confident in teaching these skills at the DCA, teachers should focus more on professional development areas such as effective learning strategies and classroom management skills for children who have behavior problems. For example, safety skills rated the lowest score in this domain, so ongoing professional development for teachers is needed in order to assist these children in avoiding inappropriate behaviors. When these behaviors are avoided, children will be able to learn other academic and social skills (Guetzloe, 1999). The survey results in this study supported previous studies, which indicated that early intervention programs help decrease self-injurious behaviors and helped these children acquire new adaptive and academic skills by preventing inappropriate behaviors. Further, providing effective early intervention programs for children assists them to obtain new skills and avoid negative behaviors (Richman, 2008; Sexton et al., 1991).

When looking at the teaching academic skills domain, EIPs rated their perceived teaching abilities at a high level. The highest total scale score was M=3.28, which indicated that EIPs believed that their professional development programs resulted in an improvement in their perceived abilities in teaching academic skills. Specifically, teaching children with MSD to identify primary colors, shapes, and common objects had a mean of 3.50, which was the highest score reached in this domain. The lowest score was in teaching children with MSD to identify basic written warning words (stop, go), with a mean of 3.10. These results showed that when teachers take professional development courses, their perception of their abilities to teach academic skills to children with MSD increases and is positively impacted in their teaching.

Academic skills are very important in preschool settings. These skills are the most developmentally significant areas that young children must acquire in early stages. As a result, preschoolers with disabilities could generalize theses skills in other situations such as at the
grocery, home, and in society in general. For instance, reading and math skills might help those children learn different developmental skills, including communication and social skills such as in shopping settings. Moreover, it is necessary for EIPs of young children with MSD to include important information about the children’s strengths, weaknesses, preferences, and set high expectations for the children to help provide appropriate services and support in their future academic lives.

As can be seen from the results of this study, the perceived level of teaching academic skills for children with MSD by providers of early intervention services was high in the DCA. In addition, these results indicated that the high quality of professional development programs helped EIPs gain experience and do as much as they can to serve these children best. However, the DCA centers must also provide ongoing professional development programs in teaching certain skills such as warning words for young children with MSD. As mentioned in the literature review, early intervention programs are very important in helping this population obtains all services they need and prepare them in the academic life (Wall et al., 2005; Peterson et al., 2010). Although the level of teaching academic skills was high at the DCA, it is important to focus on providing continuing professional development programs in the area for teaching these skills. These programs should include courses about the use of teaching methods and choosing appropriate and effective techniques to help children with MSD gain the necessary academic skills in pre-school settings.

For example, these programs may provide professional development courses on how to use various types of technology to teach young children in order to help the EIPs perform their jobs better and engage children in learning. Nowadays, many young children use Apple iPads to learn various developmental skills, such as academic skills. Additionally, the electronic board
could be used in the classroom to teach young children several important skills. This is a new kind of teaching method for teachers to teach young children important skills using technology. Also, these programs at the DCA may provide training for EIPs on how they could choose the appropriate curriculum for young children with MSD in teaching academic skills in creative ways. Of course, each child with MSD has different characteristics that differ from other young children with MSD, so the EIPs must consider these characteristics in choosing the appropriate strategies to teach them important developmental skills.

When looking at the domain of teaching social and emotional skills, it is clear that EIPs rated their perceived teaching abilities at a high level. The highest total scale score was $M=3.38$, which indicated that EIPs believed that their professional development programs resulted in an improvement in their perceived abilities to teach social and emotional skills. Particularly, teaching children with MSD to share and play appropriately with materials and or toys had a mean of 3.73, which was the highest score reached. The lowest score was in delaying gratification for five minutes, with a mean of 3.13. These results demonstrated that when teachers take professional development courses, their perception of their abilities to teach social and emotional skills to children with MSD increases and has a positive impact on their teaching.

Social and emotional skills are very important in early childhood for children with MSD because they help the children communicate and interact effectively with others as well as develop appropriate social relationships with their peers. This leads children to gain other important skills, including communication and suitable behaviors. Consistent with the results of this study, the literature review mentioned that effective early intervention programs have an important role in improving children’s socialization, communication, and development. Even though teaching social and emotional skills were rated at a high level, EIPs need ongoing
professional development courses to help them teach children with MSD certain skills like taking turns, which can then be generalized for other similar situations in society (Sandberg & Liliedahl, 2008).

Lastly, when looking at the teaching self-help skills domain, the EIPs rated their perceived teaching abilities at the moderate level. The highest total scale score was M=2.96, which indicated that EIPs believed that their professional development programs resulted in an improvement in their perceived abilities to teach self-help skills. Particularly, teaching children with MSD eating skills had a mean of 3.28, which was the highest score reached. The lowest score was in teaching children with MSD to use appropriate toileting skills, with a mean of 2.61. The results show that when teachers take professional development courses, their perception of their abilities to teach self-help skills to children with MSD moderately increases and has some impact on their teaching.

Self-help skills are one of the necessary skills that young children must gain in early stages. EIPs should focus on teaching these skills, particularly to children with MSD, and to help children acquire these skills to move from a level of dependence on others to fully or partially rely on themselves. Though the quality of professional development programs in early childhood is excellent at the DCA, the educators in the DCA centers should focus on giving intensive courses to EIPs to teach self-help skill such as independent living skills. At the DCA, these children need assistance to connect academic learning to real-life experiences and to adjust how they approach learning activities. Thus, it is important in the professional development programs to include effective teaching strategies that lead EIPs to improve their teaching of self-help and other skills such as thinking, reading, school adaptive behavior, leisure, work, and daily living skills.
Furthermore, EIPs must use intervention approaches with children with MSD in order to teach self-help skills effectively. It is also important for each teacher in preschool, special and general education settings, to consider the appropriate teaching strategy for these children to help them gain skills, such as reading, math, language arts, and science (Henley, Ramsey, & Algozzine, 2006, p. 115). It is common that children with MSD have a lack of self-help skills like toileting, feeding, dressing or asking for help. EIPs must teach children these skills to increase their independence and thus decrease behaviors that prevent their independence from improving (Meyers & Johnson, 2007).

In general, there was an agreement between the criteria of the programs offered in the centers of the DCA and the perceptions of the EIPs about their professional development needs. High quality professional development at the DCA increases improvements in teaching skills to young children with MSD even though ongoing professional development programs at the DCA centers still need to be developed for certain skills such as self-help skills. Development of these skills would help EIPs obtain the knowledge, necessary abilities, and skills in teaching children with MSD.

The results of the current study should encourage stakeholders in Saudi Arabia and the Gulf countries to develop appropriate and effective early intervention programs like the ones offered in the DCA. Such development would contribute to enhancing the quality of education for providers and their students with disabilities, including preschoolers with MSD. Moreover, these results will contribute to providing a great deal of information about the importance of professional development programs for EIPs. This leads to urging the Ministry of Education and decision-makers to develop programs of early intervention that are similar to the programs at the
DCA centers to meet all the needs of children with disabilities in early childhood, especially in the moderate and severe category.

These results also show the importance of applying modern early intervention programs, which contribute to the success and development of skills in children with MSD. Thus, the Ministry of Education should raise the awareness of the importance of early intervention programs in early childhood as they have the potential to support acquisition of the necessary basic skills and to prevent the impact of disabilities of children in the future. Furthermore, the Ministry of Education should create and implement professional development courses and workshops to enhance the performance of teachers of children with MSD.

These results also recommend special education stakeholders in Saudi Arabia to encourage more communication and coordination between the Department of Special Education and the Ministry of Education and close the gap between what is offered in theory at universities and what is applied in special needs classes. One participant suggested in the survey: “Focus on curriculum development in undergraduate programs for pre-service teachers and coordination with the early childhood stages and centers like the DCA will lead to an improvement in the skills of special education service providers in teaching of children with disabilities.” These providers must have adequate knowledge to work with children at preschools. The Ministry of Education should prepare them to work effectively with young children with severe disabilities. More attention is needed in developing the policies and standards that EIPs can follow. Moreover, stakeholders should develop courses that will assist EIPs to gain knowledge and work with young children with severe disabilities.

Because there is not much focus in Saudi Arabia on the early stages of early childhood special education, these results recommend that it is necessary to put more attention on the field
by focusing on developing and offering effective curriculum that is appropriate for the needs of children with MSD. Also, it might be better to develop specific curriculum about how to teach these young children in their early stages. This will lead to enhancing the knowledge and skills of EIPs, which positively influences their teaching in the classrooms. As a result, it is necessary to have early childhood special education courses that prepare pre-service teachers, enhance their knowledge, and give them a great deal of information about the stages of early intervention so that they can effectively teach young children with special needs during the preschool age by implementing appropriate approaches. In Saudi Arabia, there is also a general need to establish specific policies in the field of early childhood special education to support young children with disabilities in preschool settings. These policies will significantly benefit all young children with disabilities, including children with MSD, and help provide as many important services as possible in order to improve the quality of life for these children.

**Study Limitations**

The most serious limitation of this study was regarding the honesty of the participants; however, the researcher calculated results with the assumption that the results were honest and accurate. Another major limitation of this study was the restricted number of EIPs for preschoolers with MSD in Saudi Arabia. There were only a few centers that provided early intervention services for young children with MSD. The final response rate was 46% (n=92) of EIPs, which indicated a small sample size. The small sample in this study may not truly represent the population of EIPs in Saudi Arabia. Because the DCA is one of the few centers that provide early intervention services for children with MSD in Saudi Arabia, the results may not be able to be generalized to all EIPs in Saudi Arabia.
Implications and Future Directions

Because the area of self-help skills received the lowest total score, there might be a need to review the existing professional development programs at the DCA. It is crucial that preschoolers diagnosed with MSD must acquire the appropriate self-help skills that promote their self-reliance and independent behaviors. By undergoing quality professional development programs to help teachers teach self-help skills to these children, they will be better prepared to teach these skills. As the DCA center programs continue to develop in Saudi Arabia, it may be beneficial for the educators to consider this study’s data when assessing self-help related professional development opportunities for its teachers.

The results of this study are useful for stakeholders in establishing effective early intervention programs for children with MSD and providing the ongoing professional development programs that improve the EIPs’ knowledge, skills, and necessary abilities in teaching this population. In addition, the findings from this study highlight the need for future research. First, data should be collected from a larger sample, meaning from more than one organization in Saudi Arabia. This will demonstrate stronger results regarding the experience and professional development hours earned by providers of early intervention services.

Second, research is needed to investigate the relationship between achievement of children with MSD and the effect of the professional development programs at DCA centers. This type of research could demonstrate the potential effectiveness of professional development programs at improving EIPs’ teaching abilities. Third, research is needed to conduct evidence-based practices at the DCA and to find out which evidence-based practices were recently utilized for teaching children with MSD important developmental skills (i.e., communication, behavior management, academic, social/emotional, and self-help skills).
In addition, future research is needed to conduct a mixed-method research design, which includes quantitative and qualitative methods. This would help give in-depth details and information about the professional development programs in the DCA centers by observing or interviewing the EIPs. Survey data could be validated by classroom observations of teaching ability and collections of student data. Further, research is also needed to investigate the relationship between the salary and financial support that EIPs earned at the DCA and improving their teaching abilities and motivating EIPs to work with children with MSD. Finally, researchers may need to conduct a study comparing the EIPs’ teaching abilities to teach necessary skills in relationship to their education level or gender. The current study’s survey did not ask participants to specify their gender to see if there were differences among the levels of education among male and female providers.

Conclusions

Overall, it is important that EIPs receive professional development that is continuous, systematic, and intentional. This conclusion is supported by the literature and results of this study. Because the DCA provided ongoing professional development services and the quality of these EI programs was high, the EIPs felt an increased confidence in their teaching abilities to teach young children with MSD. As stated by Guskey (2000), “education is not a static occupation.” It is important that EIPs participate in professional development programs that include a range of methods including “observations, in-services, curriculum reviews, interviews, and professional readings” (Guskey, 2000, as cited in Gwynne-Atwater, 2011, p. 111).

In this study, the professional development programs in preschool settings at DCA centers in Saudi Arabia were evaluated through a survey. EIPs’ responses indicated that the professional development programs were, for the most part, effective in preparing teachers to
work with young children with MSD. Through a literature review and an in-depth analysis of the survey results, the researcher identified the most effective characteristics of these professional development programs at DCA. It is the goal of the researcher that the findings of this study lead to thought-provoking conversations among accreditation agencies, teacher trainers, policy makers, stakeholders, families, and EIPs about the crucial training teachers of children with MSD must undergo to effectively teach their students.
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Appendices
Appendix A

Map of the location of Saudi Arabia.
Appendix B

The early intervention providers survey- English version.
I appreciate your participation in the study: Professional Development Needs of Early Intervention Providers of Preschoolers with Moderate and Severe Disabilities in Saudi Arabia.

Principal Investigators: Nabil Almaliki & Dr. Lisa Pulpaff (Ball State University).

The main purpose and rationale of this study is to assess the professional development needs of early intervention providers of preschoolers with moderate and severe disabilities in early childhood settings. The goal of the study is to identify the needs of early intervention providers who work with this population. This study will evaluate the academic and professional level of the early intervention providers' information as well as their knowledge and basic skills necessary for early intervention providers to be good at serving young children with moderate to severe disabilities.

To participant in this study, 1- Early intervention providers or teachers must work with young children from (birth to 6 years old). 2- Providers or teachers that work with children (7 to 12 years old) will be excluded from this study.

For this project, you will be asked to complete the on-line survey about Professional Development Needs of Early Intervention Providers of Preschoolers with Moderate and Severe Disabilities in Saudi Arabia. The survey will take around 10-15 minutes to complete. This data will be used to better understand teachers' knowledge, skills, and abilities necessary to meet the needs of children with moderate to severe disabilities. Please, complete the on-line survey within three (3) weeks. When all of the data are analyzed, I will share the results of my research with the department of Special Education at the Ball State University along with Disabled Children's Association, and researchers in the field of special education.

Data will be confidential when the identities of the respondents are or can be known by someone but the research team protects participants' identities from being associated with the data. All information in this study will be confidential and anonymous. I will keep the data by using password protected computer or flash drive for two years, and then I will delete them.

There are no anticipated risks for participating in this study.

The results of this study will help to develop recommendations about the professional development for early intervention providers who work with young children with moderate and severe disabilities in Saudi Arabia.

Your participation in this study is completely voluntary and you are free to withdraw your permission at anytime for any reason without penalty or prejudice from the investigator. Please feel free to ask any questions of the investigator before signing this form and at any time during the study.

For questions about your rights as a research subject, please contact Director, Office of Research Integrity, Ball State University, Muncie, IN 47306, (765) 285-5070, irb@bsu.edu.
**Consent To Participate**

I agree to participate in this research project entitled, "Professional Development Needs of Early Intervention Providers of Preschoolers with Moderate and Severe Disabilities in Saudi Arabia." I have had the study explained to me and my questions have been answered to my satisfaction. I have read the description of this project and give my consent to participate. I understand that I will receive a copy of this informed consent form to keep for future reference.

To the best of my knowledge, I meet the inclusion/exclusion criteria for participation (described on the previous page) in this study.

*Please click on the "Continue" button below to indicate your consent to participate in this study.*

- Continue (I consent to participate in this study)

**Directions:** For each of the student skills listed below, please indicate the degree of improvement in your ability to teach that skill as a result of participating in professional development offered by the Special Education Preschool program in Disabled Children Association (DCA). Select little or no improvement, slight improvement, some improvement, or great improvement, by marking the appropriate bubble.

**Section 1 Teaching Communication Skills**

1. Please rate your amount of improvement in teaching the following communication skills to the targeted population:

<table>
<thead>
<tr>
<th>Skill</th>
<th>Little or none</th>
<th>Slight</th>
<th>Some</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play simple games</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Answer simple questions</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Identify primary colors</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Respond to simple requests</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Understand common prepositions (in, on, under, over)</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Retell a simple event or story</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Initiate communication</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Request wants and needs</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>

**Section 2: Teaching Behavior Management Skills**

2. Your level of improvement in teaching behavior management skills to the targeted student population:

<table>
<thead>
<tr>
<th>Skill</th>
<th>Little or none</th>
<th>Slight</th>
<th>Some</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comply with simple requests</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Play appropriately with peers</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Participate in group activities</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
<tr>
<td>Make choices</td>
<td>○</td>
<td>○</td>
<td>○</td>
<td>○</td>
</tr>
</tbody>
</table>
Section 3: Teaching Academic Skills

3. The level of improvement in your ability to teach academic skills to the targeted student population:

<table>
<thead>
<tr>
<th></th>
<th>Little or none</th>
<th>Slight</th>
<th>Some</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>Count to ten</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Display one-to-one correspondence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify numbers 1 to 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify his/her own name and names of peers with both (written and spoken)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify primary colors, shapes and common objects</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identify basic written warning words (stop, go)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 4: Teaching Social/Emotional Skills

4. The amount of improvement in your ability to teach social/emotional skills to the targeted student population:

<table>
<thead>
<tr>
<th></th>
<th>Little or none</th>
<th>Slight</th>
<th>Some</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>Delay gratification for five minutes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retain from inappropriate outbursts</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Share and play appropriately with materials and or toys</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take turns</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Show empathy to others</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 5: Teaching Self Help Skills

5. The amount of improvement in your ability to teach self-help skills to the targeted student population:

<table>
<thead>
<tr>
<th></th>
<th>Little or none</th>
<th>Slight</th>
<th>Some</th>
<th>Great</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dress self independently or more independently</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use appropriate toileting skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Eating skills

Request assistance

DEMOGRAPHICS: Answers to the following questions will be held in strict confidence and will not be shared with anyone except in summary form.

6. The DCA's system offered staff development in special education topics. In the past year, how many classroom hours have you participated?
   - One to four
   - Five hours
   - Between five and ten hours
   - More than ten hours

7. On average, how many hours per year do you participate in professional development programs?
   - One to four
   - Five hours
   - Between five and ten hours
   - More than ten hours

8. How many years have you taught at the DCA?
   - Less than 1 year
   - Between 1 and 3 years
   - Between 3 and 5 years
   - Between 5 and 10 years
   - Between 10 and 15 years
   - Between 15 and 20 years
   - More than 20 years

9. How many total years have you been teaching preschoolers diagnosed with moderate and severe disabilities?
   - Less than 1 year
   - Between 1 and 3 years
   - Between 3 and 5 years
   - Between 5 and 10 years
   - Between 10 and 15 years
   - Between 15 and 20 years
   - More than 20 years
10. Which of the following degrees and certification do you hold?
   - Bachelor's Degree in Special Education
   - Bachelor's Degree in Elementary Education
   - Master's Degree in Special Education
   - Master's Degree in an area other than special education
   - Other, please specify

11. Which of the DCA center you work for?
   - Riyadh's center
   - Jeddah's center
   - Mecca's center
   - Madinah's center
   - Ajouf's center
   - Hail's center

Directions: For each of the choices listed below, please indicate the degree of quality of the Disabled Children Association (DCA) programs. Select excellent, good, fair, or poor, by marking the appropriate bubble.

12. The standards, goals and objectives of the early intervention program at DCA are
   - Excellent
   - Good
   - Fair
   - Poor

13. Financial support by DCA has critical effect in the development of professional competencies for early intervention services providers.
   - Excellent
   - Good
   - Fair
   - Poor

14. Financial support lead to preparation of training programs for early intervention services providers.
   - Excellent
   - Good
   - Fair
   - Poor

15. Policies that are mandated by DCA that affect the professional development and career are frequently presented to providers of early intervention services.
   - Excellent
   - Good
   - Fair
   - Poor
16. The program goals of the early intervention program at DCA are.
- excellent
- good
- fair
- poor

17. The program expectations or standards for early intervention services are.
- excellent
- good
- fair
- poor

18. Children in the program pre-school education who were classified as moderate and severe disabilities receive the appropriate early intervention services.
- excellent
- good
- fair
- poor

19. Early intervention service providers have received specific professional development commensurate with needs of young children with moderate and severe disabilities.
- excellent
- good
- fair
- poor

20. Early Intervention providers are able to work effectively with other relevant staff for early childhood from other educational members.
- excellent
- good
- fair
- poor

21. Please provide any suggestions or comments that would improve the quality of special education staff development in this DCA's system.
Appendix C

The early intervention providers survey- Arabic version.
نموذج المواقيع على المشاركة في دراسة علمية

طوابع الرسالة: تقييم الكفاءات المهنية لمصممي خدمات التدخل المبكر لدى تعدد العوائق في المملكة العربية السعودية.

الهدف الرئيسي: و السبيب الجوهر لهذه الدراسة هو تقييم احتياجات التطوير المهني لمصممي خدمات التدخل المبكر لدى تعدد العوائق فيjuvenات.

الطريقة: الهدف من الدراسة هو التعرف على احتياجات مصممي خدمات التدخل المبكر الذين يعملون في هذه الفترة. هذه الدراسة تقييم المبكر الأولي والثاني للتعليمات التي ينقلها مصممي خدمات التدخل المبكر ومعرفتهم ومثابرتهم الأساسية للذرة تتكون مكونات جيدة في خدمة الأطفال المصابين لدى تعدد العوائق.

للمشاركة في هذه الدراسة، لابد من مصممي خدمات التدخل المبكر أن يتعاملوا فقط مع الأطفال من عمر 6 إلى 13 سنة، وكذلك سيتم استبعاد مصممي خدمات التدخل المبكر أو المعلمين الذين يعملون مع الأطفال من عمر 13 سنة إلى 18 سنة.

في هذا المشروع ستسري مدةACHEDASTICAT على تقييم الكفاءات المهنية لمصممي خدمات التدخل المبكر لدى تعدد العوائق في السعودية. هذه الدراسة سوف تستغرق ما بين 1000-1500 دقيقة لإعدادها. سوف تستغرق هذه الدراسة بعض التدريبات لتحقيق أهدافه. ومع ذلك، ندعم الالتزام بالإفصاح والإعلام، حيث أن تم تطوير جميع البيانات ساهمت في المشاركة بطريقة تناسبية مع قسم التربية الخاصة بجامعة Abilene (Ball State) بالإضافة إلى جمعية الأطفال المعوقين والباحثين في مجال التربية الخاصة.

جميع المعلومات سكون سرية وبودون تكرار أسماء ساهم في هذه البيانات. ينصح جميع المشاركين بالتعاون مع المعلومات المطلوبة باستخدام كيبورد مصغى وكلمة مرور أو حمل أراقص مصممة لمدة.

سنتين ثم ساقوم بإخراجها.

لا يوجد خطط مفصلة للمشاركة في هذه الدراسة.

بالمشاركة في هذه الدراسة وتلقيك تعريض لجودة سيكون ذلك تأثير على الانتهاء المستقبلي للبرامج التربية الخاصة لمرحلة ما قبل المدرسة. تطور هذه الدراسة سوأت سبعة طرق في تطوير توصيات عن التطوير المهني لمصممي خدمات التدخل المبكر الذين يعملون مع الأطفال المصابين لدى تعدد العوائق في السعودية.

المشاركة في هذا المشروع هي شرط للاطلاع على البيانات. للذين يرغبون في المشاركة، ينبغي متابعة بعض المراحل من هذا المشروع في أي وقت ومن دون إهداء أي أسئلة. إنهم تتكون عرضة للتكاثر أو عرضة للتكاثر. لاحتواء نهجاً مبكرًا في مبكرًا من هذه الدراسة. يمكن أن تكون أدوات الاستمالة أو استمالة مبكرًا من هذا المشروع. إذا كنت ترغب في المشاركة في هذا المشروع، يمكنك الاستمالة عن مديرين مكتبة الأسئلة البدنية لجامعة بول ستانت في مبنى – إحدى الأسئلة المحترفorum الالكتروني: irb@bsu.edu

رق المحمصة: 60701 765-268-266
الباحث الرئيسي
نييل شرف المالي طالب تدريروه
قسم التربية الخاصة
جامعة بول سينت
الهاتف: 617-726-5266
البريد الإلكتروني: lapufpaf@bsu.edu

الشريف الدراوي
ابراهيم سويرليز يوفافق
قسم التربية الخاصة
جامعة بول سينت
الهاتف: 309-627
البريد الإلكتروني: nalmalki@bsu.edu

يرجى الضغط على زر "تمثيل" أثناء الانتظار إلى موافقة على المشاركة في هذه الدراسة.

"تمثيل" أوقف على المشاركة في هذا الدراسة.

تعليمات الاستخدام: لكل من مهارات الطلاب المدرجة أدناه يرجى توضيح درجة التحسن في فترات يتدريس تلك المهارة نتيجة لمشاركة في التدفق الأساسي المقدم من برنامج التربية الخاصة لمراحل ما قبل المدرسة في جمعية الأطفال المعوقين. اختار من بين قليل أو لا يوجد تحسن، تحسن طفيف، بعض التحسن، تحسن كافٍ وذلك يوضح علاجية في المربع المناسب.

القسم 1- مهارات التواصل

1- يرجى تقييم تحسن في مهارات التواصل التالية لنفس الطالب المستهدف:

<table>
<thead>
<tr>
<th></th>
<th>قبل</th>
<th>بعد</th>
</tr>
</thead>
<tbody>
<tr>
<td>لعب البار Boutique</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>إيجابيات سلبية</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>التعرف على الألف الألفية</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>الورد على الطلبات ل الموجودة في محرر الجر شهادة في نظام عينية</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>إعادة مساعدة أو راحة</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>ملاحة الرياح والاختيارات</td>
<td>◯</td>
<td>◯</td>
</tr>
</tbody>
</table>

القسم 2- مهارات إدارة السلوك

2- مستوى تحسن في تدريس مهارات إدارة السلوك لنفس الطالب المستهدف:

<table>
<thead>
<tr>
<th></th>
<th>قبل</th>
<th>بعد</th>
</tr>
</thead>
<tbody>
<tr>
<td>ظرفية السلوك السببية</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>السببية بطرق مثبتة مع الأفراد</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>المشاركة في الإشادة المتبادلة</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>ال الاخلاق</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>الاتصال الإجتماعي الموجه إلى التعلم على حسب نسبي</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>الاطفال</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>المشاركة العلاجية</td>
<td>◯</td>
<td>◯</td>
</tr>
<tr>
<td>تشارك</td>
<td>◯</td>
<td>◯</td>
</tr>
</tbody>
</table>
القسم 3: تدريس المهارات الأكاديمية

3- مستوى التحصين في قدرتك على تدريس المهارات الأكاديمية للفئة الطلاب المستهدفة:

<table>
<thead>
<tr>
<th>كلاً</th>
<th>بعض</th>
<th>لا يوجد</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- تعرف على الأرقام من 1 إلى 10
- تعرف على الألوان الأساسية والأكاديمية
- واقعة
- تعرف على كلمات التطور الأساسية للكتابة (قلم، قلم، قلم)

القسم 4: كرير المهارات الاجتماعية/العاطفية

4- مساحة التحصين في قدرتك على تدريس المهارات الاجتماعية/العاطفية للفئة الطلاب المستهدفة:

<table>
<thead>
<tr>
<th>كلاً</th>
<th>بعض</th>
<th>لا يوجد</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- تظهر الإثارة من قبل لمسة حساسة ملحوظة
- الإسهام عن التصوير دقيق
- الشكر، وإجابة بطريقة مباشرة بالكلم.

القسم 5: كرير مهارات مساعدات ذات

5- مساحة التحصين في قدرتك على تدريس مهارات مساعدات ذات للفئة الطلاب المستهدفة:

<table>
<thead>
<tr>
<th>كلاً</th>
<th>بعض</th>
<th>لا يوجد</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- إعطاء استناد بشكل ملحوظ أو مساعدات الآخرين

التركيبة السكانية: الإجابة على الأسئلة التالية سيتم حفظها بسرية تامة ولن يتم مشاركتها مع أي أحاد إلا بصورة مختصرة.

6- نظام جميع الأطفال المعوقين ساعده في تطوير العاملين في مجالات التربية الخاصة. في السنة الماضية، كم ساعة قصيرة شاركت بها؟
7. كم متوسط عدد الساعات التي تشارك بها في برامج التدبير المهني في كل سنة؟
   - ساعة إلى أربع ساعات
   - خمس ساعات
   - بين خمس إلى عشر ساعات
   - أكثر من عشر ساعات

8. كم عدد السنوات التي أمضت فيها التدريب في جمعية الأطفال المعوقين؟
   - أقل من سنة
   - بين 1 و 3 سنوات
   - بين 3 و 5 سنوات
   - بين 5 و 10 سنوات
   - بين 10 و 15 سنة
   - بين 15 و 20 سنة
   - أكثر من 20 سنة

9. كم سنة درست طلاب مرحلة ما قبل المدرسة الذين تم تشخيص حالاتهم بأن لديهم عوق أو إعاقات متوسطة إلى شديدة؟
   - أقل من سنة
   - بين 1 و 3 سنوات
   - بين 3 و 5 سنوات
   - بين 5 و 10 سنوات
   - بين 10 و 15 سنة
   - بين 15 و 20 سنة
   - أكثر من 20 سنة

10. أي من الدراجات والشهادات التالية حصلت عليها؟
    - دورة بيكاريوس في التربية الخاصة
    - دورة بيكاريوس في التعلم الإنشائي
    - دورة لتعليم التعلم في التربية الخاصة
    - دورة لتحسين التخصص غير الرؤية الخاصة
    - غير ذلك (يرجى ذكر السؤال)
11. في أي مركز من المراكز التالية في المملكة العربية السعودية تعمل?
- مركز الرياض
- مركز جدة
- مركز مكة
- مركز المدينة
- مركز الرياض
- مركز حائل

التعليمات: لكل من الإختيارات التالية ترجم توضيح درجة جودة برامج جمعية الأطفال المعوقين. اختيار ممتاز أو جيد جداً أو مقبول أو ضعيف، يوضح علامة على الدائرة المناسبة.

12. مقاييس وأهداف برامج التدخل المبكر في جمعية الأطفال المعوقين يشكل:
- ممتاز
- مقبول
- ضعيف
- جيد جداً

13. الدعم المالي لجمعية الأطفال المعوقين له تأثير كبير على تطوير الكفاءات المهنية لمقدمي خدمات التدخل المبكر يشكل:
- ممتاز
- مقبول
- ضعيف
- جيد جداً

14. الدعم المادي يؤدي إلى إعادة تدريب المهني لمقدمي خدمات التدخل المبكر يشكل:
- ممتاز
- مقبول
- ضعيف
- جيد جداً

15. السياسات التي تفرضها جمعية الأطفال المعوقين والتي تؤثر على التدريب والمسار المهني يتم تقديمها غالباً إلى مقدمي خدمات التدخل المبكر يشكل:
- ممتاز
- مقبول
- ضعيف
- جيد جداً

16. تحقيق الأهداف واضح في برامج التدخل المبكر بجمعية الأطفال المعوقين يشكل:
- ممتاز
- مقبول
- ضعيف
- جيد جداً

17. محاولات أو معايير مقدمي خدمات التدخل المبكر.
18. الأطفال في برنامج التعليم لمراحل ما قبل المدرسة والذين لم يتم تصنيفهم إلى إعاقات متوسطة وشديدة أو بعد عوائق يتمكنون من الخدمات المبكرة الاجتماعية بشكل:

- ضعيف
- متوسط
- جيد جداً

19. مقدمي خدمات التدخل المبكر قد حصلوا على تطوير مهني خاص مكافي لاحتياجات الأطفال الصغار ذوي الإعاقات المتوسطة والشديدة أو عوائق يشمل:

- ضعيف
- متوسط
- جيد جداً

20. مقدمي خدمات التدخل المبكر قادرين على العمل بشكل فعال مع العاملين في مجال التربية الخاصة لمرحلة الطفولة المبكرة من الأعضاء التربويين الآخرين بشكل:

- ضعيف
- متوسط
- جيد جداً

21. يرجى تقديم أي ملاحظات أو تعليقات قد تحسن من جودة تطوير العاملين في مجال التربية الخاصة في نظام جمعية الأطفال المعوقين ها.
Appendix D

Letter of approval from Disabled Children’s Association center (DCA) - English version.
Disabled Children’s Association

No.: 1315
Date: 12/07/1433H
Corr.: 02/06/2012G

Your Excellency \ Dr. Ibrahim Abdullah ALOthman
Head of Special Education Department, King Saud university

Greetings,
Referring to your letter No. 229114/8/3 dated 02/07/1433H (23/05/2012G) as to facilitating the mission of Mr. Nabil Sharaf Almalki in applying his (Ed.D) Thesis in the centers of the association about (professional development needs of early intervention providers of preschoolers with moderate and severe disabilities in Saudi Arabia), we hereby notify you of our approval. Wishing you all the best.

With Best Regards,

Secretary-General
Awadh Abdullah ALGhamdi
(signed)

(Official Seal Affixed)
Appendix E

Letter of approval from Disabled Children’s Association center (DCA) - Arabic version.
الموقر
سعادة الدكتور إبراهيم بن عبدالله العثمان
رئيس قسم التربية الخاصة بجامعة الملك سعود

السلام عليكم ورحمة الله وبركاته...

إشارة إلى خطاب سعادتهم رقم 1422/226/8 وتاريخ 7/7/1433هـ بشأن تجهيز مهمة الأستاذ نبيل بن شرف الملاكلي بتطبيق رسالة الدكتوراه بالمراقبة التابعة للجمعية عن تقييم الكفاءات المهنية لخدمة المبدعين في المغرب ...

الفوق نفيد سعادتهم بالموجودة، متنين للجميع دوماً التوفيق.

ولسعادتهم تحية وتقديري

الأمن العام

عوض عبدالله العامري
Appendix F

Permission to replicate previous study.
April 12, 2012

Dear Mr. Almalki,

Per our conversation, you have my permission to replicate the survey I developed for my dissertation study entitled "An Evaluation of a Special Education Preschool Program Serving Children with Autism or Autistic-Like Behaviors." Best of luck with your research!

Dr. Angela Gwynne-Atwater,
Principal
Appendix G

Items statistics within Cronbach's Alpha Analysis (Pilot study).
Reliability

Case Processing Summary

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cases</td>
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<td>Excluded</td>
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<td>.0</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Reliability Statistics

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>N of Items</th>
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</thead>
<tbody>
<tr>
<td>.891</td>
<td>44</td>
</tr>
</tbody>
</table>

Item-Total Statistics

<table>
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<tr>
<th>Item Description</th>
<th>Scale Mean if Item Deleted</th>
<th>Scale Variance if Item Deleted</th>
<th>Corrected Item-Total Correlation</th>
<th>Cronbach's Alpha if Item Deleted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play simple games</td>
<td>98.18</td>
<td>277.299</td>
<td>.499</td>
<td>.887</td>
</tr>
<tr>
<td>Answer simple questions</td>
<td>98.23</td>
<td>282.851</td>
<td>.300</td>
<td>.890</td>
</tr>
<tr>
<td>Identify primary colors</td>
<td>97.82</td>
<td>272.537</td>
<td>.425</td>
<td>.888</td>
</tr>
<tr>
<td>Respond to simple requests</td>
<td>97.77</td>
<td>271.898</td>
<td>.520</td>
<td>.886</td>
</tr>
<tr>
<td>Understand common prepositions (in, on, under, over)</td>
<td>98.05</td>
<td>292.617</td>
<td>-.080</td>
<td>.895</td>
</tr>
<tr>
<td>Retell a simple event or story</td>
<td>98.27</td>
<td>283.922</td>
<td>.209</td>
<td>.891</td>
</tr>
<tr>
<td>Initiate communication</td>
<td>98.32</td>
<td>289.465</td>
<td>.022</td>
<td>.894</td>
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<tr>
<td>Request wants and needs</td>
<td>97.86</td>
<td>287.457</td>
<td>.146</td>
<td>.891</td>
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<tr>
<td>Comply with simple requests</td>
<td>97.91</td>
<td>272.087</td>
<td>.559</td>
<td>.886</td>
</tr>
<tr>
<td>Play appropriately with peers</td>
<td>98.00</td>
<td>277.333</td>
<td>.556</td>
<td>.887</td>
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<tr>
<td>Participate in group activities</td>
<td>98.18</td>
<td>272.442</td>
<td>.562</td>
<td>.886</td>
</tr>
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<td>Make choices</td>
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<td>283.429</td>
<td>.210</td>
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<tr>
<td>Respond to social greetings</td>
<td>97.95</td>
<td>277.665</td>
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<td>.888</td>
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<tr>
<td>Maintain appropriate eye contact</td>
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<td>.891</td>
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<tr>
<td>Take turns</td>
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<td>284.727</td>
<td>.195</td>
<td>.891</td>
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<tr>
<td>Share</td>
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<td>281.775</td>
<td>.280</td>
<td>.890</td>
</tr>
<tr>
<td>Ask for help</td>
<td>98.23</td>
<td>278.184</td>
<td>.416</td>
<td>.888</td>
</tr>
<tr>
<td>Paying attention</td>
<td>97.91</td>
<td>274.087</td>
<td>.408</td>
<td>.888</td>
</tr>
<tr>
<td>Make social greetings</td>
<td>98.18</td>
<td>281.203</td>
<td>.427</td>
<td>.888</td>
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<tr>
<td>Safety skills</td>
<td>98.18</td>
<td>286.061</td>
<td>.162</td>
<td>.891</td>
</tr>
<tr>
<td>Count to ten</td>
<td>97.73</td>
<td>271.351</td>
<td>.592</td>
<td>.885</td>
</tr>
</tbody>
</table>
Display one-to-one correspondence | 97.68 | 275.370 | .488 | .887
Identify numbers 1 to 10 | 98.05 | 270.998 | .631 | .885
Identify his/her own name and names of peers with both (written and spoke) | 98.27 | 289.922 | .009 | .894
Identify primary colors, shapes and common objects | 97.82 | 273.584 | .528 | .886
Identify basic written warning words (stop, go) | 98.18 | 279.584 | .352 | .889
Delay gratification for five minutes | 98.32 | 274.799 | .644 | .886
Refrain from inappropriate out-bursts | 97.95 | 259.855 | .846 | .880
Share and play appropriately with materials and or toys | 98.14 | 290.504 | -.004 | .893
Take turns | 98.23 | 278.374 | .360 | .889
Show empathy to others | 98.14 | 277.361 | .518 | .887
Dress self independently or more interdependently | 98.32 | 289.275 | .085 | .891
Use appropriate toileting skills | 98.14 | 280.600 | .355 | .889
Eating skills | 97.86 | 278.028 | .387 | .888
Request assistance | 98.00 | 275.048 | .482 | .887
The standards, goals and objectives of the early intervention program at DCA are | 97.32 | 261.942 | .723 | .882
Financial support by DCA has critical effect in the development of professional competencies for early intervention services providers. | 96.86 | 287.552 | .045 | .895
Financial support lead to preparation of training programs for early intervention services providers. | 96.91 | 280.753 | .220 | .892
Policies that are mandated by DCA that affect the professional development and career are frequently presented to providers of early intervention services. | 97.14 | 269.933 | .542 | .886
The achievement of goals is clear in the early intervention program at DCA. | 97.05 | 272.807 | .484 | .887
The expectations or standards of early intervention service providers are. | 97.36 | 275.290 | .518 | .887
Children in the program pre-school education who were classified as moderate and severe disabilities receive the appropriate early intervention services. Early intervention service providers have received specific professional development commensurate with needs of young children with moderate and severe disabilities. Early Intervention providers are able to work effectively with staff of special education for early childhood from other educational members.
Appendix H

Approval letter from the Institutional Review Board (IRB).
Institutional Review Board

DATE: February 4, 2013
TO: Nabil Almaliki
FROM: Ball State University IRB
RE: IRR protocol # 425655-1
TITLE: Professional development needs of early intervention providers of preschoolers with moderate and severe disabilities in Saudi Arabia (Pilot Study).
SUBMISSION TYPE: New Project
ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: February 4, 2013

The Institutional Review Board reviewed your protocol on February 4, 2013 and has determined the procedures you have proposed are appropriate for exemption under the federal regulations. As such, there will be no further review of your protocol, and you are cleared to proceed with the procedures outlined in your protocol. As an exempt study, there is no requirement for continuing review. Your protocol will remain on file with the IRB as a matter of record.

Editorial notes:

1. Approved- Exempt

While your project does not require continuing review, it is the responsibility of the P.I. (and, if applicable, faculty supervisor) to inform the IRB if the procedures presented in this protocol are to be modified or if problems related to human research participants arise in connection with this project. Any procedural modifications must be evaluated by the IRB before being implemented, as some modifications may change the review status of this project. Please contact please contact John Mulcahy at (765) 285-5106 or jmulcahy@bsu.edu if you are unsure whether your proposed modification requires review or have any questions. Proposed modifications should be addressed in writing and submitted electronically to the IRB (http://www.bsu.edu/irb) for review. Please reference the above IRB protocol number in any communication to the IRB regarding this project.

Reminder: Even though your study is exempt from the relevant federal regulations of the Common Rule (45 CFR 46, subpart A), you and your research team are not exempt from ethical research practices and should therefore employ all protections for your participants and their data which are appropriate to your project.