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SULIMAN SALEH ALOTHAIM
University of New Mexico

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Suliman Saleh Alothaim

Candidate

Department of Special Education

Department

This dissertation is approved, and it is acceptable in quality and form for publication:

Approved by the Dissertation Committee:

Julia Scherba de Valenzuela, Chairperson

Susan Copeland

Megan Griffin

Jan Armstrong

Autism Spectrum Disorders (ASD): Knowledge, Teaching Skills, Preparation, and Needed Knowledge of Saudi Arabian Special Educators to Meet the Needs of their Students with ASD

BY

SULIMAN SALEH ALOTHAIM

B.A., Special Education, Qassim University, Saudi Arabia, 2010

M.A., Special Education, University of Akron, United States, 2014

DISSERTATION

Submitted in Partial Fulfillment of the

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Dedication

I dedicate my dissertation to my parents Saleh and Sheka. To my sibling and supporters Ibrahim, Dr. Abdulrahman, Dr. Abdulaziz, Abdusalam, Hanan, Wafa, and Thakory. To all students with ASD, their teachers and their families in Saudi Arabia. May Allah bless you all.

Suliman

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Abstract

The Saudi government pays much attention to improving the quality of teachers who teach students with disabilities, including those identified with ASD. The purpose of this study was to explore the beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and preparation to teach students with ASD. This study addressed two questions. The first question was what teachers in Al Qassim believe they know about ASD and how to teach students with ASD. The second was what teachers of students with ASD believe they need to be successful teachers of students with ASD. The study was qualitative in nature. I addressed these two questions by interviewing seven practicing special educators in Al Qassim, Saudi Arabia. Three themes emerged from the analysis: (a) Participants' Perceptions of their Teacher Preparation Programs, (b) post-BA learning, and (c) the Reality of Teaching in Schools. Conclusions, implications, and suggestions were made based on the findings of the study.

Keywords: Autism Spectrum Disorder (ASD), teacher preparation programs, professional development courses, in-service special education teachers, and pre-service teachers.

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Chapter One

Introduction

Autism spectrum disorder (ASD) is a condition in which the learner does not fully develop social communication and social interaction (both verbal and non-verbal) and also exhibits repetitive behavior, interests, and activities (American Psychiatric Association, 2013). The Center for Disease Control and Prevention (CDC) reported that *2*% of the United States population had been identified as having ASD, with the number of new cases growing (Dallas, Ramisch, & McGowan, 2015). At present, no conclusive testing is available for determining whether an individual has ASD, such as genetic testing, blood work, brain-imaging. Because there is no way to confirm that a person has ASD biologically, there is also nothing yet confirmed on which to build when developing medically-based treatments (Sing, Illes, Lazzeroni & Hallmayer, 2009). What left for both diagnosis and treatment is based on behavioral observations (Newschaffer & Curran, 2003). There are diagnostic manuals, speech and language assessments, and adaptive behavior scales to identify if a person has ASD. However, understanding what ASD is and research on how to address it are still in the early stages of research. Pritchard et al., (2009) suggested that the sooner students are identified with disabilities like ASD, the sooner strategies for modifications can be developed and utilized to best help those students. For this reason, Jabrink and Knapp (2001) estimated that the cost of lifelong care for individuals with ASD could be reduced by two-thirds with early diagnosis and early intervention. Epstein (2005) noted that the more teachers understand, the better they can accommodate students in an inclusive environment. Therefore, teachers must have comprehensive knowledge and training to successfully address student needs, especially

in a diversified group that includes children with disabilities. It is important for all educators who work with students who have ASD to have an in-depth knowledge and understanding of what ASD is, what kind of challenges students who have ASD face, as well as their potential. It is also important for these teachers to develop teaching methods that address the needs of students with ASD so that students can be successfully included in mainstream education and can experience positive learner outcomes (Hendricks, 2011; McBride, & Boulware, 2004; Scheuermann, Webber, Boutat, & Goodwin, 2003; Schwartz, Sandall, Whetstone, Abell, Collins, & Kleinhart, 2012). Kavale (2005) suggested that it is important that teachers be trained how to identify and teach students who may have learning differences or later develop learning difficulties due to developmental delays in speech, social skills, cognitive abilities, and so forth.

Background of the Problem

I understand that excellent teacher preparation programs can help classroom teachers learn to identify and address issues that children with ASD may experience, such as by eliminating or reducing undesirable behavior. This type of training can also help teachers to understand the best practices of teaching children with ASD and help children with ASD develop their skills and to transition successfully from one activity or setting to another (Johnson, Porter, & McPherson, 2012; Park, Chitiyo, & Choi, 2010). To understand in depth the problem that this study focused on, I will provide a brief overview of the education system in Saudi Arabia, special education and ASD in Saudi Arabia, and what has done to prepare teachers to enter the classroom as professionals to teach students with ASD. I will also describe one of Saudi Arabia's regions, Al Qassim,

because this study focused on special education teachers who teach students with ASD in this region.

An education system in Saudi Arabia. The Saudi Arabian Ministry of Education was founded in December, 1953 (Al-Salloom, 1995). As a result, significant developments occurred in the Saudi Arabian educational system, including the Ministry's decision to create school districts within various cities (Al-Salloom, 1995). The individual school district oversees the daily operations and is responsible for adhering to policies and guidelines provided by Ministry of Education (Al-Salloom, 1995). The Saudi Arabian school system is divided into kindergarten for ages 4-5, a primary school for ages 6-12, intermediate school for ages 13-15, and high school for ages 16-18. The Saudi Arabian school system retains its original custom of educating males and females separately from each other, except for preschool and kindergarten, as well as on the college level. Males and female students are also educated in separate facilities (Al-Salloom, 1995). Although the curriculum is basically the same for both males and females in higher education, they remain segregated, with female students sometimes receiving lectures from male instructors via closed-circuit television. The equivalent of the weekend in Saudi Arabia consists of Friday and Saturday, as Friday is the cultural parallel to the "church day" of traditional American society.

Over the years, the Saudi Arabia education system has become increasingly responsive to the needs of students. Unlike in the past, there are deliberate attempts to provide education to all people. Previously, Saudi Arabia had two ministries of education. One, the Higher Education Ministry, oversees universities, and colleges. The other, the Ministry of Education, oversees all primary, intermediate, and secondary

schools and institutions, as well as the special education system. This system was changed after the death of the previous king of Saudi Arabia, King Abdullah. In 2015, King Salman, the current king of Saudi Arabia, combined the two ministries into one, which oversees both higher education and education. The role of the Higher Education has increased significantly in recent decades, due to the Saudi Arabian government's support. As a result, many new universities have been recently founded, with a total of 27 established by 2017, in contrast to just eight instituted by or before 1999 (Saudi Arabia. Ministry of Education, 2017).

In Saudi schools, the class periods are 45 minutes long, and as with many American schools, there are typically six periods in a given school day; meal and recess breaks appear between certain periods just as they do in Western schools. The Ministry of Education is responsible for creating and planning the curriculum, as it employs a group of experts in each subject whose only job is curriculum development. So, K-12 teachers in Saudi Arabia are asked to teach according to what the ministry assigns. In other words, teachers cannot deviate from the ministry-provided the curriculum. This is the case in both general and special education.

Special education and ASD in Saudi Arabia. The Saudi Arabian school system began to provide special education services in 1958. Before that, finding ways to provide necessary education services was left to the child's family. For example, Sheikh Al-Ganem, who is blind, learned to use Braille for reading and then shared this method with other individuals who are blind with whom he was acquainted. They formed a private support group that led to governmental support two years later. The first school for the

blind was established in 1960; this was the first school for people with disabilities in Saudi Arabia (Al-Mousa, 1999).

Saudi Arabia created the Administration of Special Education in 1962. The primary goal of this organization was to develop and oversee special education programs. According to Al Salloom (1995), in 1972, the administration became known as the General Directorate, consisting of three main branches: Educational Administration for the Blind, Educational Administration for the Deaf, and Educational Administration for Intellectual Disability. Al Mosa (1999) reported that the special education for all policy, passed in 1996, stipulates that special education services are to be extended to students who experience a variety of disabilities, including poor vision, hearing problems, learning difficulties, emotional or behavioral issues, autism, communication problems, as well as other kinds of disabilities.

Generally speaking, the Ministry of Education in Saudi Arabia provides free education for all school age students, including students with disabilities. The ministry designs the curriculum and the schools' role centers around teaching the curriculum. According to Alquraini (2011), students who are identified as having a mild learning disability are mainstreamed into the general education classroom so that they can benefit from the regular curriculum. They fully participate with their peers by using same curriculum, with some modifications. This satisfies the policy that students should be provided with the least restrictive learning environment to the greatest extent possible while addressing their educational needs. Additional support is provided for these students through pull-out programs where they leave the general education classroom at scheduled times to receive extra support in resource classes. In addition, teaching aides

are often present in the general education classroom to lend these students additional support. Students with more moderate learning disabilities receive their educational instruction in resource classrooms and there is a special curriculum for them. However, they are mainstreamed in non-curricular activities during the school day, such as during lunch time and recess. According to Alquraini (2011), students identified as having severe learning disabilities are often educated in special schools as opposed to being mainstreamed into the general education classroom or provided a separate education in a resource room within a regular school. These students are also provided with an individual education plan (IEP), the format of which was designed by the Ministry of Education, to address their individualized learning needs as they pertain to the general education curriculum. Even so, IEPs are not customized specifically to the unique needs of the individual student in a learning situation or environment.

Saudi Arabia has also sought to develop special education and encourage employees to work with children with disabilities. For instance, Saudi special education teachers receive a *30%* higher salary than general education teachers. In addition, special educators teach fewer students than general education teachers, which some may perceive as a benefit not only for students but for teachers as well. However, there was insufficient information about what teachers in Al Qassim know about ASD and how to teach students with ASD. In addition, it was unknown how well educators in Al Qassim deliver the specified curriculum and use instructional methods designed for students with ASD. Finally, it was also unknown how well students respond to the curriculum and materials that are created and planned by a group of experts, the majority of whom have received their formal advanced training outside of Saudi Arabia. This study helped to identify the

beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and preparation to teach students with ASD.

Because there is still much to be known about the context surrounding the education of students with ASD in Saudi Arabia, I believe that one place to start is understanding teacher's beliefs and perceptions about their knowledge about ASD and teaching students with ASD and their perceptions about the teacher preparation programs they attended that specialized in ASD. Understanding these aspects might provide useful information to teacher educators in their ongoing process of improving their teacher preparation programs. I believe that it is important to understand teacher beliefs to tailor teacher educator programs to match their real and perceived learning needs better and therefore, improve the quality of pre-service teachers who will teach students with ASD in the future. The point leads me to explain how pre-service teachers are currently prepared in Saudi Arabia to teach students with ASD.

Preparing teachers to teach students with ASD in Saudi Arabia. Presently in Saudi Arabia, there are 27 public universities. These universities offer degree plans in various areas of studies, with a completion of degree programs taking between four to seven years (Saudi Arabia. Ministry of Education, 2017). Among the degree programs offered is a bachelor's degree in special education. The first special education department in Saudi universities was established at King Saud University in 1984-1985. Currently, most Saudi universities have special education departments to prepare pre-service teachers how to teach students with disabilities. In Saudi Arabia, pre-service teachers who study special education must complete a four-year undergraduate program. In the first two years of their program, pre-service teachers take courses about special education

in general, such as introduction to special education, principles and methods of teaching students with disabilities, and principles of assessing students who have disabilities. In the last two years of their program, students choose one of the several tracks to complete their degree. For example, students can choose a track focusing on students with intellectual disability, ASD, visual impairments, or those who are Deaf. When they graduate with a degree in special education, they will teach students who have disabilities that match their specialized training. Because most of the teacher preparation programs in Saudi Arabia are relatively new, their efficacy is unknown.

Recognizing that educators needed the training to address the learning needs of students with disabilities, public Saudi universities have sent professor candidates to other countries, such as England and the United States, with the intention that they would come back to their home country to share what they have learned about special education so that best practices can be implemented within the Saudi educational system and general public. The findings of this dissertation will help leaders in the area of special education in Saudi Arabia understand more about the experiences of in-service special educators working with students with ASD, as well as their perceptions of their teacher preparation programs. This information will help Saudi leaders in this field improve courses, professional development programs, and teacher preparation programs in the area of ASD, with the end goal of improving the quality of in-service and pre-service teachers who teach students with ASD.

Al Qassim region. Saudi Arabia has thirteen regions, of which Al Qassim is one. It is located at the center of Saudi Arabia. Al Qassim is a relatively large region, with an area of 58,046 km² and a population of 1,387,996 who 991032 Saudis and 396964 Non-

Saudis (Saudi Arabia. General Authority of Statistics, 2016). Buraidah is the capital of Al Qassim and Unayzah, Ar-Rass, Al-Midhnab, Al-Bukayriyah, Al-Badai, Al-Asyah, An-Nabhaniyah, Uyun Al-Jiwa, Riyad Al-Khabra, and Ash-Shimasiyah are other governorates in this region (Saudi Arabia, General Authority of Statistics, 2016). Al Qassim is very hot during the summer, with the average temperature of 45 degrees Celsius, and relatively cold during winter, with an average temperature of one degree Celsius. Al Qassim is famous for its agricultural products, such as dates, wheat, and vegetables.

Al Qassim has more than 600 K-12 teachers who teach students with disabilities. The most recent information from General Administration of Education in Al Qassim Region (2016), indicated there are 456 teachers of students with intellectual disability and 65 teachers of students with hearing impairment or who are Deaf, yet only 18 teachers of students with ASD. Teachers who teach students with ASD either studied at Qassim University or moved to Al Qassim after studying in a different area of Saudi Arabia. Therefore, the preparation of special educators to meet the needs of students with ASD is critical for universities in Saudi Arabia. As new programs develop and existing programs expand, I argue that it is important to take into account the beliefs and perception of practicing special educators. The information that in service teachers provided should help contextualize and complement the international academic perspectives and knowledge brought back to Saudi Arabia by returning Saudi scholars.

Statement of the Problem

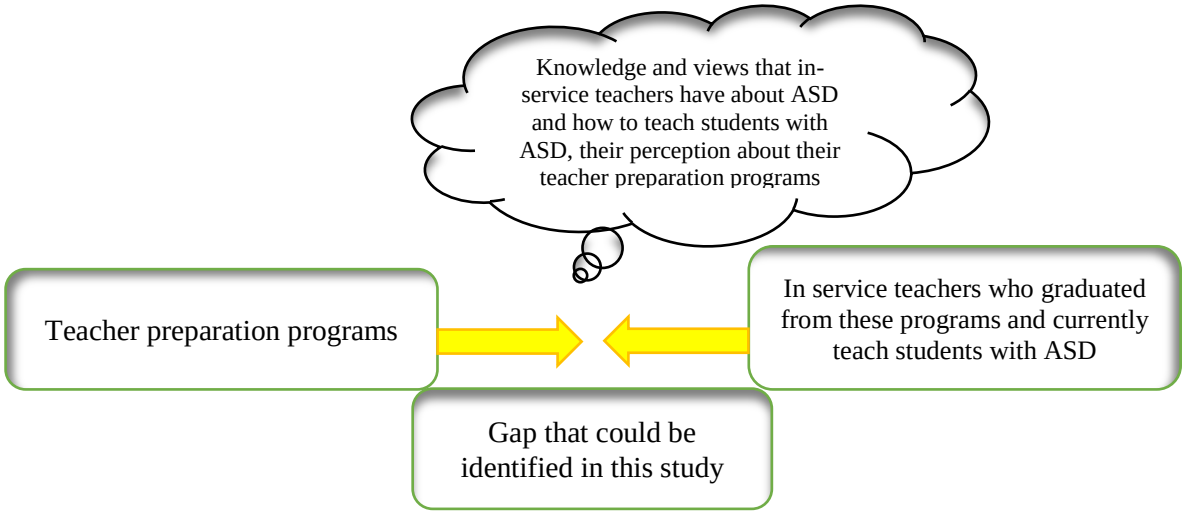
I firmly believe that the developmental and learning needs of these teachers working with students with ASD are important not only in their personal lives but also in

their endeavors to become a part of their community and of Saudi Arabian society. Therefore, I argue that a major emphasis in special education teacher preparation programs should be on helping teacher candidates develop an understanding of various kinds of disabilities, including ASD, and how to use teaching strategies and resources to establish and attain goals and objectives that best address the needs of their students. Special education teachers need to be prepared to teach students with ASD because without such preparation, teachers unable to adequately and appropriately teach students with ASD to become good students in the classroom and have rich and full lives in their community. I have worked with children with ASD in Saudi Arabia. I found that teachers need to make many decisions each day, including curricular choices, classroom management, assessment strategies, and choices of presentation and pacing that address different learners. However, there is much that is unknown about working with students with ASD in Al Qassim, including teachers' knowledge about ASD, teaching students with ASD, and how to diagnosis students with ASD; the impact of parenting a child with a disability on parents who have children with ASD and the type and amount of support they receive from teachers and/or schools; and the outcomes of students with ASD in Saudi schools. Therefore, there are many gaps that need to be researched to improve teachers' knowledge. However, the Saudi government does pay a lot of attention to improving the quality of teachers who teach students with disabilities, including those identified with ASD. For example, currently, most Saudi universities offer a Bachelor and Master of Arts in Special Education. Moreover, Saudi Arabia's Higher Education Ministry recognizes the need to evaluate the outcomes of programs for the purpose of improvement (Al-Babtain, 1998). Therefore, the purpose of this study was to identify the

beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and preparation to teach students with ASD. Ideally, the results of this study will be used to address and improve the current teacher preparation programs and developing new programs that specialize in ASD for pre-service teachers and providing current teachers with professional development so that they have the necessary skills to work with the students with ASD. These initiatives would in turn hopefully satisfy stakeholders and assist administrations and departments in determining ongoing training reforms.

Purpose of the Study

The purpose of this study was to explore the beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and preparation to teach students with ASD. It is important to understand the view of current special educators about ASD, what they know about teaching students with ASD to meet the needs of students with ASD, and what they need to continue to improve their skills in working with students with ASD. The diagram below demonstrates the gap that was examined in this study



Questions that were Addressed:

1. What do teachers of students with ASD in Al Qassim believe they know about ASD and how to teach students with ASD?

2. What do teachers of students with ASD in Al Qassim believe they need to be successful teachers of students with ASD?

Operational Definitions

For the purposes of this dissertation, I utilized the following operational definitions.

Autism Spectrum Disorder (ASD). ASD is a condition in which the learner does not fully develop social communication and social interaction (both verbal and non-verbal) and also exhibits repetitive behavior, interests, and activities (American Psychiatric Association, 2013).

Teacher preparation programs. These programs provide pre-service teachers with entry-level preparation in their field and the formal coursework recognized by licensing (e.g., state) agencies that allow them to work in that field (Sandall, Hemmeter, Smith, & McLean, 2005). These programs are typically undergraduate, four-year college or university programs in Saudi Arabia.

Professional development programs. Short programs that help in-service teachers master specific skills or interventions to make them more effective and better able to work with students than they might otherwise (Smalley, Certo, & Goetz, 1997).

In-service teachers. For the purposes of this dissertation, I defined in-service teachers as those who are fully employed at a school. This study focuses specifically on those who teach students with ASD.

Pre-service teachers. For the purposes of this dissertation, I defined pre-service teachers as college students who are enrolled in a teacher preparation program to become a teacher after graduation.

Theoretical Framework

Expertise can be thought of as having the skills or abilities needed to solve certain kinds of problems. To help an individual develop expertise, one must determine what is meant by being an expert (Boyer, 2008). Boyer (2008) defined an expert "as an actor who has developed skills in, semiotic-epistemic competence for, and attentional concern with, some sphere of practical activity" (p. 39). Murphy (2005) defined expertise as consisting of "technical knowledge, institutional knowledge, and procedures and heuristics for bringing that knowledge to bear on the problem at hand and organizational issues" (p. 313). These definitions are similar in that they both involve developing an extensive knowledge base that has practical application to a specific area or domain. In other words, an expert can accomplish a needed task accurately, efficiently, and smoothly. Ericsson, Krampe, and Tesch-Römer (1993) stated that "expert performance reflects the mastery of the available knowledge or current performance standards and relates to skills that master teachers and coaches know how to train" (p. 392). Ericsson and Lehmann (1996) defined expert performance as "consistently superior performance on a specified set of representative tasks for a domain" (p. 277).

According to Ericsson and Lehmann (1996), expertise theory has to do with developing specific skills over a period of time. In addition, it involves being conscious of one's thinking process in determining how to accomplish or learn something, as well as quality instruction and considerable practice. Ericsson and Smith (1991) asserted that

expert approach involves first defining the tasks that are characteristic of the domain and help identify the necessary aspects of what constitutes an expert performance. Next, they posited, the steps to achieving expert level in the designated domain are analyzed and a hypothesis is formed as to what cognitive skills or abilities are needed. After that, a theoretical framework is developed to the specific knowledge and skills to be developed to achieve expertise status (Ericsson & Smith). To acquire the level of expertise in any given domain involves some common elements; however, each domain also includes a number of domain-specific skills and abilities that must be cultivated (Ericsson & Lehmann, 1996). These authors also contended that not all functions or components that contribute to a level of expertise can be identified in a controlled environment for the purpose of the objective. Some information comes from reflective thinking and requires the recording of thoughts and actions. The kinds of thoughts that help one to achieve the status of expertise include "planning, reasoning, and anticipation" (Ericsson & Lehmann, 1996, p. 291).

One of the characteristics that distinguishes an expert from others in a particular field is how much time the individual has spent in acquiring knowledge or understanding in a particular field of study (Murphy, 2005). In addition, developing expertise is a progressive process (Beck, 2015). No one is born an expert, even if the individual is genetically advantaged in some way (Beck, 2015). It takes time to develop skills through deliberate practice, meaning that the individual must follow a guided regiment for cognitive processing as well as repetitive, physical movements associated with a specific activity (Beck, 2015). The cognitive process involves constantly reflecting on one's process of thinking and doing, that is, understanding what one does, how, and why

(Darabi, Nelson, & Paas, 2007; Ericsson & Ward, 2007; Murphy, 2005). Because developing expertise is a long process involving years of practice and cognitive activity, expertise is often developed on the job (Beck, 2015). Individuals who attain a level of expertise also utilize structured learning strategies as well as experience (Darabi et al. 2007; Ericsson & Ward, 2007; Murphy, 2005). Moreover, they learn to identify problems and to determine if those problems are initial problems or symptoms of more serious problems (Beck, 2015). They do so through structured questioning and listening to others who are directly involved with the issues at hand (Beck, 2015). In addition, they learn how to approach the problem so that it can be efficiently addressed or resolved (Beck, 2015).

According to Chase and Simon (1973), a major component in the theory of expertise is the ability of an individual to access memories that are pattern-based, such as those used by chess players in determining what moves to make. In effect, part of developing a level of expertise in a specific domain includes years of experience, acquiring considerable knowledge, and the ability to perform pattern-based memories. This is in keeping with the findings of Patel, Arocha, and Kaufmann (1994), which suggested that working memory consisting of facts and summarizations related to a problem at hand allows an individual to draw inferences or to reason about possible solutions to a problem. In other words, the person who achieves a level of expertise in a specific domain does not remember all general information about that domain. Instead, the expert remembers selectively as is relevant "to expand the functional capacity of the experts' working memory" (Ericsson & Lehmann, 1996, p. 294). Ericsson and Lehman (1996) also suggested that experts can extend their working memory to draw upon in

decision-making. This comes into play in various scenarios. For example, a chess player might remember not only where each chess piece is located on the board but how the locations will change several moves in, dependent on what piece is in action and at what point in time (Chase & Simon, 1973).

Ericsson and Lehman (1996) also suggested another commonality among experts is that an expert performer must be able to replicate a superior performance in a controlled environment and upon demand. Doing so means that the expert performer is expected to master all relevant factors involved in the performance, including motivation to perform well. Even so, not all aspects of an expert performance can be captured in a clinical study since there are so many variables at play that are domain specific, and the number of domains is extensive (Ericsson & Lehmann, 1996).

A common element among those who achieve the level of expertise has to do with length and quality of preparation (Ericsson & Lehmann, 1996). These authors suggested that it takes at least ten years of preparation for an individual to achieve the highest level of performance in a specified domain. In addition, Ericsson and Lehmann (1996) stated that deliberate practice is needed. Deliberate practice refers to repetitive training practices designed and guided by an expert coach or instructor who, in turn, relies on expert knowledge on the most effective ways to train in that specific domain. The training expert provides constant feedback to the individual for purposes of refinement (Ericsson & Lehmann). In turn, the individual must fully concentrate on that feedback and personal effort to perfect his or her performance for each performance indicator (Ericsson et al., 1993). These authors also argued that it has been determined that there is a limit in how many hours per day an individual can maintain the sustained concentration needed for

deliberate practice, with four hours being the maximum. Otherwise, the individual may suffer from exhaustion and burn-out.

Ericsson and Lehman (1996) contended that there is a direct correlation between how much deliberate practice an individual engages in and the level of expertise the individual is able to attain. They further suggested that individuals who are considered to be exceptionally high performers began deliberate training at a younger age than those who are judged to be less accomplished. This is another indication of the importance of training over many years. Moreover, early training can modify the body cognitively and physically, and perceptual skills can be refined (Ericsson & Lehmann, 1996). Examples are those commonly found in sports, such as reaction time or the ability to predict where a ball will land. This contributes to the idea that innate talent has little to do with developing expertise. In addition, Ericsson and Lehmann (1996) suggested that young children can develop into experts over time due to motivation influenced by their parents.

The expertise of teachers is critical in helping individuals to become experts in their fields. Pedagogy can be thought of as the art of teaching. Berliner (1988) suggested that the pedagogical development of expertise involves five stages, including novice, advanced beginner, competent, proficient, and expert. The novice teacher is someone new to teaching. Behaviors at this level are considered inflexible, and novices tend to follow the rules and procedures without much information if they relate to what is to be taught or learned. Advanced beginning teachers slowly begin to understand bits of knowledge and how they relate to learning outcomes. The advanced beginning teacher continues to build on knowledge gained from experience and case studies. The competent stage has to do with the competent teacher's understanding of the rationality of goals,

developing a vision of what teaching involves, as well as what teaching roles are. The competent teacher utilizes experience and reflection in developing theories on how and what to teach. The proficient teacher is able to evaluate learning situations holistically, facilitating the ability to understand events more clearly and to make predictions more accurately. The proficient teacher's skills and knowledge base allows the teacher to become intuitive in dealing with students and situations that arise during teaching. Expert teachers are so knowledgeable and in tune with actions and events within the domain that they are able to automatically respond to situations without having to pause in thought or deliberation. Action and reaction are instantaneous and seamlessly delivered (Berliner, 1988).

It is important to compare expert with non-expert performance to identify the differences between the two in completing tasks that demonstrate ability. Because all of the participants in this study were novices, this hypothesized difference was a useful framework for understanding their reported experiences and dilemmas of practice. Novices and experts clearly differ from each other in several areas. These areas include problem-solving abilities, the complexity of schemata, automaticity of action, and adaptability and metacognitive capabilities.

According to Berliner (1986), novices and experts approach problem-solving differently from each other. He argued that this is because experts have more depth and breadth of experiences on which to draw than less experienced individuals do. Novices, for example, tend to think on a more literal, surface level. Berliner therefore posited that they generate solutions to address surface problems rather than taking the time to determine what caused those surface problems to begin with. He suggested that experts,

on the other hand, look deeper for underlying causes, realizing that the surface problems may just be indicators of a more serious situation. This difference is due to the skills and knowledge that experts have developed with years of training and experience (Berliner). Problem-solving is related to the work of teachers in that expert teachers can assist their students who are frustrated or who are facing some obstacles inside or outside the school because they look deeply at the problem of their students. For example, if one of their students has a problem, they can look for the causes of this problem. They try to solve this problem and stop the causes of this problem to prevent other students from having the same problem. In contrast, this theory predicts that novice teacher just focuses on solving the immediate problem of their student (Berliner).

according to Berliner (1987), automaticity of action has to do with a skill so practiced that executing it is done automatically, without thought or hesitancy. Experts are believed to practice certain movements with such consistent precision that each component becomes ingrained in their very being. In contrast, novices tend to be inconsistent with their movements due to lack of routine as well as the lack of practice, he found. Moreover, novices tend not to differentiate between important details and unimportant details. Furthermore, according to Berliner (1986), novices appear not to pick up on patterns or to utilize feedback on their performances for the purpose of improvement. This notion implies that expert teachers have a good experience to make a plan to teach their students, and they can change or add in their plan according to what their students need. However, novice teachers think in a more literal and simplistic way, which may require them to take more time in adjusting their plan.

One of the traits of an expert teacher is the ability to adapt to a changing situation

when a lesson plan does not go as expected. Often, they may have some contingency plans, just in case (Berliner, 1986). However, novice teachers do not usually have a Plan B in case something goes awry with the original plan, nor are they able to adapt on the spur of the moment because they lack a repertoire on which to draw since they have not had the time and experience to build one (Berliner).

Challenges in application of expertise theory. Challenges in applying expertise theory in practice include how to understand, create, assess, and use expertise, as well as how to recognize it on a social level (Beck, 2015). For example, according to Beck (2015), a major component of becoming an expert relates to acquiring experience, but the question is how one best acquires experience that leads to the level of expertise. Another challenge is how one takes knowledge from one experience or set of experiences and transfers that knowledge in a general or broader sense to other situations or in a different context (Beck, 2015). Also, one needs to determine how expertise is to be used. Beck (2015) provided the example of patient groups, which can be composed of patients who share with each other and their doctors information about how they respond to treatments, including side-effects, and their experiences with diseases as they progress. In Beck's discussion of these groups, they can accumulate valuable information, especially on rare diseases, that clinical medicine may not have the means to develop with other more limited sources. Furthermore, these patient groups are composed of patients who are not typically experts in the field of medicine; however, they have knowledge developed from experience and through accumulation from others with personal experience. Beck asked the question of whether patient groups should be considered groups with expertise since they work collaboratively in developing knowledge or expertise. However, as Beck

recognized, the members of these patient groups do not hold certifications that declare them as experts, nor do they go through any form of assessment to determine their level of knowledge. Their level of expertise is due to the authenticity of their real-life experiences and in learning from each other as a community of learners (Beck, 2015).

Rationale of this Study

To provide a quality education for this segment of society means providing a quality teacher preparation program that educates teacher candidates about how to address the needs of students with disabilities, including those identified with ASD. I hope to find ways to help teachers utilize and improve their content knowledge. Because 90% of students identified as ASD currently need modifications in their program (Witmer & Ferreri, 2014), the Saudi Arabian educational system has an ongoing need for qualified teachers, especially those knowledgeable about addressing the needs of students identified as having ASD. According to Carter and Scruggs (2001), a quality teacher can be thought of as one who knows the content to be taught and has developed effective teaching methods and classroom management skills. Moreover, special education teachers, in particular, must possess excellent interpersonal skills since they are expected to communicate on a continuous basis with parents, co-workers, and specialized personnel such as counselors and diagnosticians. This perspective is grounded in my understanding of the professional literature, from which I provide a few examples here. For example, Darling-Hammond, Chung, and Frelow (2002) found that teachers who received special education training in their preparatory programs reported feeling more able to teach students with disabilities than teachers who did not receive such training in their programs. They argued that teachers feel more confident about working with

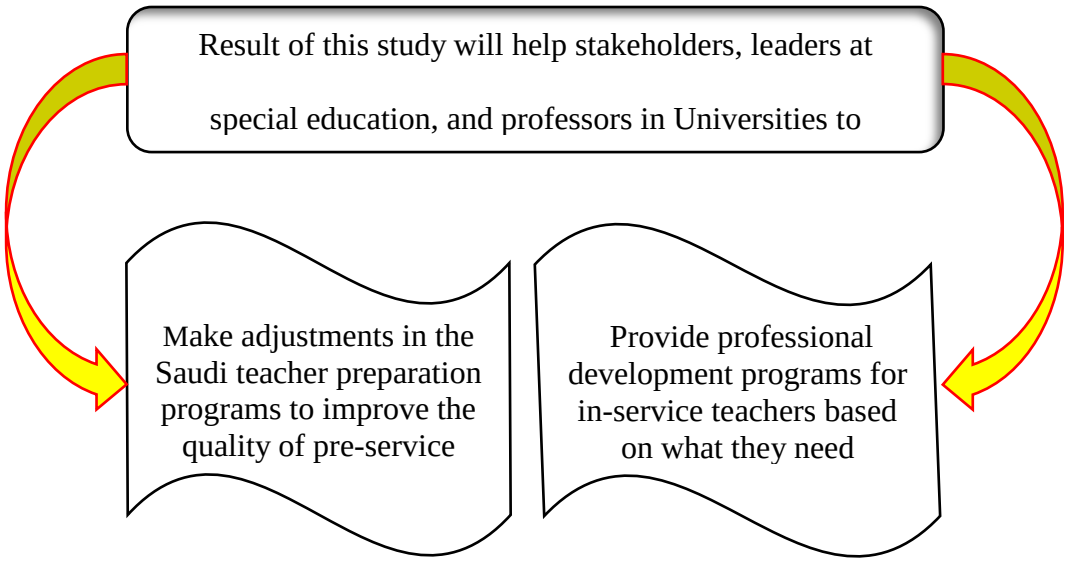
students with disabilities when they understand what the disability is and strategies for accommodating student needs. DeSimone and Parmar (2006) suggested that feeling confident and knowledgeable increases the teacher's sense of self-efficacy in selecting and using strategies and educational resources to facilitate student learning even more. Teachers who earn four-year college degrees are more equipped to work with children identified with ASD than non-degreed teachers (Dillenberger, Keenan, Gallagher, & McElhinney, 2004).

These studies, as well as others I review in greater detail in chapter two, suggest that it is important to examine Saudi teachers' beliefs and perceptions about their knowledge about ASD. Despite the pervasive nature of education research and subsequent reform in America, such attempts at using research to improve education in Saudi Arabia are extremely rare or, at least, not available in published form. Therefore, there is little practical means of gauging teachers' training in or knowledge of ASD. This study helped to identify the beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and preparation to teach students with ASD.

Importance of the Study and Why I Intend to Conduct This Study in Al Qassim Region

Exploring the beliefs and perceptions of teachers of students with ASD in Al Qassim with regards to their knowledge, teaching skills, and preparation to teach students with ASD are important because, as I argued above, this might make a positive contribution to ongoing program development efforts. Improving the teacher preparation programs to teach students with ASD will help developing the knowledge and skills in

how to work with children with ASD which might have a positive impact on teacher perceptions and attitudes, leading to more success for children with ASD (Johnson et al., 2012; Park et al., 2010). Numerous studies outside Saudi Arabia indicate that special education training provided through teacher preparation programs can positively impact teachers' abilities to employ strategies that help students to develop socially and to address undesirable behavioral issues successfully. Moreover, an in-service teacher will also be better prepared to provide support for the student's family through sharing of sources and ideas (Scheuermann, Webber, Boutot, & Goodwin, 2003). The graphic below illustrates the importance and benefits of this study.



As I stated before, Al Qassim has more than 600 teachers who teach students with disabilities. Conducting this study in Al Qassim may begin to help identify whether the teachers of students with ASD in Al Qassim have the necessary knowledge and teaching skills to effectively teach their students. Another reason to conduct this study in Al

Qassim was that I am a resident of Al Qassim and I will teach at Qassim University. As a future teacher educator, the results of this study should help me provide suggestions to my academic department to improve the quality of in-service and pre-service teacher education in Al Qassim once I come back to my country. If so, this could make Al Qassim an example for professionals in other regions in Saudi Arabia. The last reason for conducting this study in Al Qassim was the lack of research that has been conducted in this region, as compared with other regions in Saudi Arabia, such as Riyadh. Addressing this important gap in the literature will help me to compare and contrast the results of this dissertation to other research studies in the same area once I come back to Saudi Arabia.

Scope and Delimitations of the Study

This dissertation explored the beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and preparation to teach students with ASD. This study focused on teachers' perceptions and beliefs about their experience and knowledge. I did not attempt to make a determination about actual teacher knowledge or evaluate the quality of their teaching practice. This study focused only on educators who teach students with ASD; it did not include teachers who work with students identified with other disabilities. This study only included teachers who are working in public schools in Al Qassim, Saudi Arabia; teachers working in private schools in Al Qassim or private or public schools in other regions were not included.

I did not explore general education teachers’ attitudes toward children with ASD or the inclusion of children with ASD in general classrooms. I excluded teachers who teach students with other disabilities or students who are not identified with disabilities. This dissertation focused only on teachers who teach students with ASD in Al Qassim.

Chapter Two

Literature Review

In this chapter, I discuss the professional literature relevant to the purpose of this dissertation. The purpose of this research was to explore the beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and preparation to teach students with ASD. I have organized this chapter into four major sections. In the first section, I will discuss teachers' knowledge about ASD and teaching students with ASD, and the benefits of teacher preparation programs for these teachers. In the second section, I will discuss professional development programs that help in-service teachers improving their knowledge about ASD and their teaching skills to apply interventions with children who have ASD. Then in the third section, I will discuss the interventions that teachers can use with Saudi children who have ASD. This latter section is important to identify which interventions that Saudi teachers can use with their students who have ASD. In the last section, I will discuss teacher preparation programs that help pre-service teachers to teach students with ASD.

Teachers' Knowledge about ASD

In this section, I will discuss how teachers' knowledge about ASD affects their work and the ways they teach their students with ASD. It is important to know that many of the studies I reviewed, such as Hendricks (2011) and Whetstone, Abell, Collins, and Kleinhart (2012), reported that because the number of students identified as having ASD has increased in recent decades, there is a growing need for teachers to develop an understanding of ASD, what emotional, behavioral, and learning needs these students have, and how to address the needs of these students in the classroom. These two studies

suggested that pre-service teachers and in-service teachers need preparation and training on how to teach and modify the negative behaviors of students with ASD as well as how to address issues of health, learning needs, and social needs.

First, I will discuss why it is important that teachers are knowledgeable about ASD. Leblanc, Richardson, and Burns (2009) and Lepper and Probst (2008) argued that teachers must understand what ASD is and what the various problems that individuals with ASD encounter socially, emotionally, behaviorally, and cognitively. Otherwise, they stated, teachers might use teaching methods that are inappropriate, and therefore ineffective in trying to address the learning needs of students with ASD, wasting both resources and valuable instructional time. To determine best practices in special education teacher development Grey, Honan, Mclean, and Daly (2005) conducted a study in which 11 teachers completed 90 hours of training that included classroom instruction and ABA supervision. Their findings strongly indicated that preparing teachers to develop individualized behavioral support plans is a good strategy to provide students with ASD the support needed in the classroom. Another study that supported the idea of improving teachers' knowledge about ASD is Ellis and Porter's (2005) survey of 47 classroom teachers at a designated school. The results of this study showed that teachers who increased their knowledge of ASD and how to address their students' needs had more positive attitudes towards working with students who have ASD in an inclusive learning environment. Leblanc et al. (2009) and Lepper and Probst (2008) each investigated the effects of ASD training for novice teachers. In both cases, the findings showed that strategic training, even in small amounts, can significantly increase a teacher's understanding of ASD. Furthermore, they found that the more knowledge

teachers have about ASD, the more confident they feel teaching students with ASD. Therefore, the more effective they will be in teaching because the newly acquired knowledge can help educators to understand the needs of the student with ASD in mainstreaming, which will reduce the teachers' stress and anxiety in the mainstreaming process. In a study with similar findings, Lerman, Vorndran, Addison, and Kuhn (2004) focused on didactic as well as performance-based instruction with a pre-service teacher and four in-service special education teachers. Their results indicated that teachers who increase their knowledge of ASD experienced more job satisfaction. Indicators include improved teaching methods, an increase in academic achievement for students with ASD, and improved social interactions for students with ASD. Other studies also investigated the benefits of improving special education teachers' knowledge about ASD. Helps, Davis, and Callias (1999) examined the needs of teachers in developing an understanding of ASD and how they viewed their students with ASD as result of that understanding. Results showed that general education teachers receive even less instruction or professional development on ASD than do the special education teachers, and so both pre-service and in-service teachers need training.

Several studies evaluated how university teacher preparation programs and master’s programs improve teachers' knowledge about ASD. For example, Busby et al., (2012) examined the curricular needs for training kindergarten through 5th-grade pre-service teachers to address the learning needs of all students, including those identified with ASD. Results showed that teachers who did not have knowledge of ASD and strategies for addressing the learning and behavioral needs of students with ASD lacked a sense of self-efficacy in doing so. The findings showed that this lack of self-efficacy in

teaching students with ASD resulted in low motivation for helping these students and in low teacher performance. The researchers suggested that education courses must be developed to address certain kinds of disabilities, such as ASD specifically, and included effective methods for facilitating the inclusion of these students in regular classrooms. Mavropoulou and Padeliadu (2000) conducted a survey with 64 in-service teachers in professional development courses to determine what the participants understood about ASD and specific needs of students identified with the condition. Their results showed that the participants, who were completing the third term in a two-year program, were able to develop a better understanding of ASD and the needs of students with ASD because of the training they were receiving in the program.

The findings of these studies suggest the importance of preparing teachers to improve their knowledge about ASD and to address the needs of students with ASD through teacher preparation programs and professional development in the following sections. As I specified in the previous chapter, Sandall et al. (2005) defined teacher preparation programs as those which provide pre-service teachers with entry-level preparation in their field and the formal coursework recognized by licensing (e.g., state) agencies that allow them to work in that field. In contrast, Smalley et al. (1997) reported that professional development includes short programs that help in-service teachers master specific skills or interventions to make them more effective and better able to work with students. I will discuss this study and others that examined professional development in the following section. I will then review the literature pertinent to each type of education separately below.

Professional Development

In this section, I will discuss studies that discussed professional development for in-service teachers. Guskey (2002) asserted that the major goal in providing professional development is “to make a difference in teaching, to help educators reach high standards, and ultimately to have a positive impact on students" (p. 12). In this section, I will discuss three areas that related to professional development: (a) the benefits and importance of professional development for in-service teachers, (b) characteristics that professional development courses should have in order to be effective for in-service teachers, and (c) criticisms of professional development courses.

First, I will review studies that showed the importance and benefits of professional development for in-service teachers. I start with Smalley et al. (1997), who focused on the needs of entry level staff in order to support community integration of students with ASD. The activity level of students with ASD was assessed following teacher professional development. Findings indicated that professional development helps teachers to work with students and fellow teachers more efficiently because teachers were able to develop a better understanding and needed skills in addressing the learning needs of students with ASD. In addition, participants experienced fewer behavioral issues with their students as a result of the newly gained insight and acquired skills. In addition to this study examining the benefits of professional development others have, too (e.g., Hill, Flores, & Kearley, 2014; Koegel, Russo, & Rincover, 1977; Lerman et al., 2008; Machalicek et al., 2010; Shepis, Reid, Ownbey, & Clary, 2003). These studies found that teachers who participated in professional development for ASD developed a new understanding of the capabilities of students with ASD and became

more open-minded about trying new strategies for teaching and intervention. Moreover, the participants in these research projects expressed more willingness to develop positive relationships with students with ASD to improve their knowledge and skills. Browder et al. (2012) carried out a study involving 37 teachers who were receiving extensive professional development on the learning needs of students with ASD. By the third day of training, 21 teachers showed significant improvement in understanding the educational needs of students with ASD. These results indicated that professional development increased the quality of teaching and classroom practices that, in turn, had a positive impact on student learning outcomes and even in educational reform. The finding of this study are supported by Shepis, Reid, Ownbey, and Clardy (2003), who found that teachers who received such training appeared to interact with their students in a positive manner, which helped facilitate an increase in student learning both in scope and depth. Koegel et al. (1977) investigated the ability of 11 teachers to use behavioral modification procedures correctly when addressing the needs of 12 students with ASD following targeted professional development. The results showed that the training the teachers received was effectively implemented in that procedures were used correctly by the teachers in that program. In addition, the skills and knowledge the teachers acquired during the training transferred to their ability to target additional behaviors with both the students in the study and new students. Another important study on teacher training and performance was conducted by Simonson et al. (2010). Skills targeted in the study included classroom management strategies to address social behavior, use of praise for desired behavior, and learning opportunities. They found that professional development supported teachers in developing and utilizing classroom procedures that can help

decrease undesirable student behavior. Additionally, Browder et al. (2012) and Grey, Honan, McClean, and Daly (2005) reported that professional development helped teachers implement general education standards as well as help teachers to reduce or eliminate undesirable behavior of the student with ASD. The findings of these two studies also revealed that teachers with general skills and understanding in ASD increased their abilities to address targeted behavior of students with ASD successfully, thus making their teaching more effective. Desimone (2009) investigated the issues on evaluating the effectiveness of professional development programs and policies to improve future training and how they can impact student achievement. The author maintained the importance of continued professional development, stating that, “professional development is a key to reforms in teaching and learning, making it essential that we use best practices to measure its effects” (p. 192). Desimone reported that well-developed professional training contributed to teacher knowledge and skills of ASD and positively impacted teachers' attitudes and beliefs about students with ASD. Lee, Patterson, and Vega (2011) surveyed 154 special education teachers on their perceived ability to teach students with special needs including students with ASD. Findings indicated that most teachers enter the field with little hands-on experiences in teaching or interacting with special needs students. The researchers reported that ongoing professional development is very important in helping teachers to develop needed skills and knowledge. Moreover, they found that professional development increased teachers' ability to teach effectively in addressing the needs of special education students because the more training a teacher has, the more equipped the teacher feels in being able to address student learning needs, especially for students with special needs. This assertion

is supported by Zumwalt (1986), who reported that teachers needed continuing professional development opportunities to develop new skills and understanding about ASD. Zumwalt contented that is important that teachers practice new skills so that they become comfortable in using them, thus feeling more empowered in helping students who have ASD.

After reviewing studies that showed the importance and benefits of professional development courses, in the following paragraphs, I will discuss studies that discussed characteristics professional development should have in order to be effective for in-service teachers. Similarity to Lee et al. (2011), Leko and Brownell (2009) found that special education teachers enter the field lacking both the content and pedagogical knowledge necessary to adequately address the needs or modify negative behaviors of students with disabilities. This gap in knowledge emphasizes the importance of ongoing professional development for special education teachers. Leko and Brownell suggested that high quality professional development takes into consideration teachers' goals and needs, as well as alignment with curriculum and standards on local, state, and national levels. Zumwalt (1986) reported on the importance of teacher and administrator contributions to the development of the curriculum of professional development. Zumwalt argued their contributions are important because they offer insight based on actual experience in teaching and in managing a school environment. She argued those who offer professional development should draw on the experiences and observations of those who experience the day-to-day activities on a school campus, both in and out of the classroom. This idea supported by number of studies that indicated that teachers who received professional development on aligning the curriculum and standards felt more

confident in their teaching abilities and reported that their students performed better academically (e.g., Garland, Vasquez, & Pearl, 2012; Koegel et al., 1977; Robinson, 2011). The results of these studies suggested that teachers who received training on how to align the curriculum for grade-level content were more successful in meeting the standards as well as in working well with teacher aides and resource teachers. some studies identified that teachers need to experience quality teaching in their professional development sessions. For example, Barnes, Dunning, and Rehfeldt (2011), Coogle, Rahn, and Ottley (2015), and Garland et al. (2012) examined the benefit of professional development courses for in-service teachers. These researchers found that professional development on best practices for teaching students with ASD should include instructional videos, as well as traditional note-taking during lectures. Also of importance is discussion about what is observed in the instructional videos. The researchers found that multisensory learning can be provided through technological presentations such as PowerPoint or short video clips to demonstrate concepts and will help teachers to improve their knowledge and teaching skills. Coogle et al. (2015), Parsons and Reid (1995), and Simonson, Myers, and DeLuca (2010) reported that teachers need immediate feedback when trying new teaching strategies with students who have ASD, indicating that part of the professional development should provide opportunities for teacher practice in implementing behavioral interventions for their students and immediate feedback from supervisors or teacher coaches. The result of these studies showed that timely practice and feedback has been shown to improve teacher effectiveness due to skills developed and the ability of the teacher to implement interventions to decrease undesirable student behavior. Denton and Hasbrouck (2009) defined coaching in their

study as a strategy for professional development involving observations by immediate teaching supervisors and other teachers that can be effectively embedded within the classroom or school routine over a sustained period of time. These researchers reported that helping teachers to improve the quality of education for students with disabilities is the primary purpose of coaching. The main responsibilities of coaches are to guide the acquisition and development of content and pedagogical knowledge and the transfer of this knowledge into practice. Kretlow and Bartholomew (2010) did a thorough review of research on the positive impact of coaching on pre-service and in-service teachers' abilities to implement best practices based on empirical evidence. They reported on 13 studies conducted over a 20-year period. They found that coaching is a useful strategy in helping teachers to successfully implement changes in their teaching. Sarokoff and Sturmey (2004) investigated the effectiveness of behavioral skills training in using discrete-trial teaching with three teachers and a three-year old child identified as having ASD. Their results showed a strong correlation between time spent on modeling and coaching teacher behavior and success in teacher implementation of effective teaching strategies. For example, teachers who received coaching that involved various scenarios for utilizing intervention strategies were more successful in implementing those strategies to decrease or eliminate undesirable student behavior. Numerous studies (e.g., Bethune & Wood, 2013; Browder, Trela, & Jimenez, 2007; Surheinrich, 2012; Robinson, 2011) indicated that coaching and modeling as forms of professional development are highly effective in helping teachers to successfully implement various treatments for individual students with ASD. This research suggests that through additional training, teachers are able to develop strategies that transfer to new situations and students. Some of the most

effective components of coaching sessions, as suggested by this research, are that the coach is able to deliver timely feedback regarding observations reported by the teacher and provide a detailed analysis of the lesson implementation, including notations on what went well and suggestions for improvement.

The discussion thus far has been about the need and overall benefits of professional development, including the characteristics of effectively delivered professional development. However, some studies discussed the criticisms of professional development that should be noted in this study, as well. One of the concerns with professional development that Joyce and Showers (2002) reported is that teachers do not implement the strategies which they provided. Unfortunately, they contended, most often there is not a follow-up session to encourage teachers to use what they have learned or to help them plan implementation that can result in long-term changes. Benefiting from professional development means that teachers must be provided with long-term support (Joyce & Showers). These authors suggested that for professional development to be most effective, it should address the need to redesign the school setting as a workplace. For example, schools should work to provide the needed time for teachers to collaborate so that they can address student needs more comprehensively as a team. Klinger (2004) designed a study to identify major considerations that help to ensure sound professional training. One of the findings was that training should provide long-term support as teachers work to implement best practices into the classroom. According to Klingner, this long-term support includes the partnership between coaches and teachers as they work to develop content and pedagogical knowledge and strategies. She argued that the goal is to help teachers develop a level of expertise to where they can implement

their new practices independently, including how to evaluate student progress in how it relates to the use of those practices.

This review of the literature related to professional development and students with ASD suggests the need to improve the teacher preparation programs to graduate pre-service teachers who can effectively work with students with ASD. For this reason, the following section will discuss teacher preparation programs.

Teacher Preparation Programs

In this section, I will discuss four aspects that relate to teacher preparation programs identified in the professional literature. The first area in this section highlights the importance and benefits of teacher preparation programs that prepare pre-service teachers to teach students with ASD. Addison, Lerman, Kuhn, and Vorndra (2004) conducted a study with four teachers who taught students identified as having ASD and other developmental disabilities. These investigators reported that one reason for the increased focus on methods for teaching students with ASD is the increase in the number of students who are now recognized as having ASD due to a revision of the diagnostic criteria for ASD and refined methods for diagnosis. They suggested that teacher preparation programs that focus specifically on ASD are needed if teachers are expected to enter the classroom prepared to address the learning needs of students with ASD, thereby having a positive effect on their student's outcomes. Johnson et al. (2012) examined K-5 grade-level pre-service teachers' knowledge about ASD and from where or how they acquired that knowledge (both perceived and actual, in three public and one private university using surveys). The results of this study showed a direct correlation between pre-service teachers' knowledge on ASD and the number of courses completed

in a teacher preparation programs about ASD. In addition, the results showed that the more courses pre-service teachers took during their programs, the more likely the teacher is to develop a positive attitude towards students with disabilities and a strong belief that they can and are willing to learn. McCabe (2008) drew similar implications from a surveys of 78 educational institutions that examined the satisfaction of 619 pre-service teachers toward their teacher preparation programs. The results of this study suggested that student teachers developed positive relationships with the in-service teachers whom they observed. They additionally found that pre-service teachers who observed students with ASD in mainstreamed classes were able to develop a positive vision of how students with ASD can learn and can also be part of a positive, inclusive learning environment. Park, Chitivo, and Choi (2010) sent surveys to 131 pre-service teachers who participated in a teacher education program to examine their attitudes towards children ASD. Their results suggested that pre-service teachers majoring in special education were more likely to view students with ASD as normal individuals, in that they had specific likes, dislikes, and aims that they wanted to achieve, whereas pre-service teachers in general education were more likely to see students with ASD as a group of individuals with challenges and limitations in abilities. Carroll, Petroff, and Blumbery (2009) evaluated a teacher preparation program which included inclusive courses. In those courses, pre-service teachers studied along with pre-service teachers who had severe disabilities. The results of interviews with 12 pre-service teachers indicated that courses that offered the opportunity to work with students with severe disabilities encouraged them to reflect on every student's right to a liberal education that challenges students to not only learn, but to become life-long learners by becoming actively engaged in the learning process.

Carroll, Petroff, and Blumbery also found that this vision helps to support the idea that all students have a right to a quality education, one that is the least restrictive as possible while addressing the student's needs in a positive, inclusive learning atmosphere. Boe, Shin, and Cook (2007) surveyed general and special educators to investigate the relationship between the amount of educational preparation a teacher received, with the level of certification that teacher completed. Their results indicated that teachers with extensive teaching preparation are more likely to earn a higher level of teaching certifications in addressing the needs of students with ASD than those with much less preparation. These researchers reported that a major mission in teacher preparation programs is to provide excellent training to future special education teachers with the intent that the high quality will carry over into the classroom. Anderson and Graeball (1990) contended that field experiences should fulfill several purposes. One purpose is to allow pre-service teachers to examine their beliefs regarding the role of the teacher. In addition, they argued this allows pre-service teachers to have the opportunity to experience being in the classroom in a limited capacity, which helps them to determine if teaching is the right profession for them before they devote considerable time in teacher preparation. Moreover, they posited that these field experiences help pre-service teachers to develop self-efficacy in teaching, meaning that they are able to develop a sense of confidence that they can master the art of teaching. In addition, field experiences provide pre-service teachers the chance to bridge the gap between theory learned in their teacher education classes and application of that theory in the classroom. and the opportunity to develop their teaching pedagogy (Anderson & Graeball, 1990).

The research discussed above indicates that teacher preparation programs help

pre-service teachers to improve their overall knowledge and teaching pedagogy as it pertains to addressing the needs of students with ASD. Additionally, their attitudes towards students identified as having ASD improved, making them more accepting of the idea of inclusion in the regular classroom. However, some studies suggest that not enough pre-service teachers receive training to prepare them to teach students who have ASD (e.g., Cooley-Nichols, 2004; Donaldson, 2015; Morrier, et al., 2011; Simpson, 1995). These studies indicate that the need for well-trained special education teachers has become especially critical in recent decades, due to the increased number of students identified as needing special education services in school. For this reason, in the following section, I will review the criticisms of teacher preparation programs provided in the professional literature. To start, Cooley-Nichols (2004) interviewed thirty-three pre-service teachers who enrolled in teacher preparation programs to explain how they would use many strategies in their future classrooms to address their future students' emotional or behavioral issues. The results showed that teacher preparation programs do not provide adequate training in pedagogy or strategies aimed specifically to address the needs of students who have ASD. Ludlow, Keramidas, and Landers (2007) evaluated a program designed to train special education teachers as specialists in the area of ASD. These investigators found that there are not enough in-service teachers and others in the field of education who have received specific teacher training about ASD, such as how to meet the learning needs of those students. They reported that such programs are needed because of the serious shortage of experts in this area. In addition, Donaldson (2015) and Morrier et al. (2011) found that some teacher preparation programs do not provide field experiences that allow the pre-service teacher to observe how students who have ASD are

mainstreamed into a general education classroom. Busby et al., (2012) evaluated teacher preparation programs at Troy University and reported that pre-service teachers need to observe students with ASD in a special educational setting in order to develop a better understanding of student needs and how to work effectively with special education teachers to help mainstream the students in a general education classroom setting. The participants in the study also expressed a need and desire to reflect on their own teaching practices and to research best practices for teaching students with special needs, in particular, students identified as ASD. Simpson (1995) reviewed the literature regarding current issues in addressing educating students identified as students with ASD. This author reported that a concern with teacher preparation programs is that some teacher preparation programs do not provide enough instruction or hands-on experiences for developing teaching pedagogy, that is, strategies for managing the learning environment and using effective teaching methods. Based on this review of the literature, Simpson noted that part of the teacher preparation programs should include seeing the strategies modeled, observing the strategies used within the special education class, and practicing the strategies with the students. Donnellan (1987) asserted that the reason there is not enough training on ASD in teacher preparation programs is because historically, ASD was not widely identified and so cases were often misdiagnosed. Donnellan argued that with such little training on ASD in teacher preparation programs, the future outlook for students with ASD does not look hopeful for a number of years to come. Barnhill, Polloway, and Sumutka's (2011) surveyed one hundred and eighty-four institutions of higher education were mailed surveys in 43 states to investigate how many teacher education programs include course materials on ASD. They received responses from 87

of the schools in 34 states. They found that 41% of the universities surveyed stated that they offer courses that specifically addressed ASD. In fact, stand-alone classes were not reported by participating universities. Instead, content on ASD was included in other course materials. Barnhill et al. suggested that since no stand-alone ASD courses were offered, pre-service teachers receive a narrow, generalized treatment of the subject rather than the focused training needed to help address the needs of ASD students in the classroom, including their social, behavioral, health, and academic needs. Morrier et al. (2011) compared the characteristics of 243 teachers who chose to use evidence-based teaching practices with teachers who do not use evidence-based teaching practices in addressing the learning needs of students identified as having ASD. In addition, this study sought to examine how teachers who implement reported strategies were trained or taught to do so. These researchers found that less than 20% of the teachers they surveyed who teach students with ASD reported having been provided with adequate training on ASD in their teacher preparation programs. The majority of the respondents indicated that they learned to use specific strategies with students identified as having ASD through participation in full- or part-day workshops. Campbell et al. (2003) investigated the effectiveness of combining formal educational training with structured fieldwork experiences in effecting positive attitudes of 274 pre-service teachers enrolled in a semester course towards students with disabilities who are mainstreamed into the general education classroom. These researchers found that not only are pre-service teachers unprepared at the beginning of the semester, but they also feel unprepared, resulting in a lack of confidence or motivation in teaching students with disabilities such as ASD. By the end of the semester, they found participants had developed a more positive attitude

towards individuals with disabilities and felt more comfortable than they did previously in their interactions with individuals with disabilities. In addition, Campbell et al. reported they viewed the inclusion of students with disabilities in a more positive light. Simpson (2003) reported that preparing pre-service teachers to appropriately address the learning needs of students with ASD is the "most significant challenge facing the autism field" (p. 194). This investigator noted that the importance of special education specialists is developing a sound foundation of both general educational skills along with skills that pertain specifically to the teaching of students with ASD. Otherwise, they are inadequately prepared to address the needs of special population students such as those identified with ASD. As I described early, Lee et al. (2011) reported that many special education teachers go to the field of teaching with inadequate training, as well as minimal experience working with students who have disabilities. They pointed out that this is worrisome because schools are strongly dependent on teacher education programs to help teacher candidates to prepare for the classroom, including developing teaching skills to address the learning needs of a diverse group of learners with a wide range of needs.

Some research suggests a need to improve teacher preparation programs to graduate pre-service teachers who will be qualified to teach students with ASD. For example, Williams and Alawiye (2001), surveyed 33 pre-service teachers to figure out the efficacy of teacher preparation program that they were enrolled in. The researchers reported that it is essential to establish expectations for student teachers, so that they may be adequately prepared to accomplish the goals that are set before them. They argued it may be possible to help pre-service teachers to achieve more, if they had access to a system that includes input from students, when creating the curriculum that will help

them to be more successful in their career. The results of Berry (2010) are consistent with the previous study; Berry contended that pre-service teachers need to enter the classroom better prepared and by emphasized the importance for teacher preparation programs to identify and utilize best practices in teaching methodologies. Pufpaff and Yssl (2010) conducted a study with 41 pre-service teachers who participated a six-week long session. The results suggested that pre-service teachers were able to determine the student progress necessary for competent literacy instruction. Pufpaff and Yssl reported that it is within the programs' responsibility to stress the value of literacy instruction that meets and exceeds expectations. Beecher and Darragh (2011) proposed a strategy to help pre-service teachers view students in a positive light by introducing literature into the course that features a positive aspect of students with ASD. Results showed that pre-service teachers were able to read enlightening depictions of ASD, to gain knowledge of the attributes of ASD. Pre-service teachers discovered that they might be able to facilitate a learning environment that encouraged acceptance of those with disabilities, if they utilize learning materials that include positive representations of disabilities.

Some studies I reviewed indicated that most course work that specifically addresses the teaching of children with ASD was limited to graduate studies. Ryndak, Clark, Conroy, and Stuart (2001) attempted to determine the reason for this phenomenon. They argued that the main reason is because the subject area is quite complex and requires some teaching experience to understand it. However, Masterson, Dimitriou, Turko, and McPartland (2014) examined coursework provided for undergraduates that was designed to teach students about ASD, based on standards and best practices indicated in the programs. The researchers found a variety of methods and modules can

be developed for enhancing ASD coursework in teacher preparation programs. They reported that methods can include presentations that highlight the key elements of the class assignments or evaluate a variety of different controversial issues in ASD or inclusion. Other methods they found common in developing coursework in difficult areas on complex topics were discussion boards and interview assignments such as those that allow students to talk openly with teachers experienced in working with students with ASD or even parents. Lastly, Masterson et al. reported that technology can enable the classroom to exist outside of walls and allow one to be a student at all times. They particularly notes this in the case of YouTube or social media. They suggested students can increase understanding by researching available information from teachers in ASD inclusion classrooms and understanding those points of view. Feiman-Nemser (2001) supported these suggestions by reporting that besides assigning meaningful course work, teachers should be provided with opportunities to experience field work so that they can see what happens in the classroom and how theory relates to practice. In addition, Hart and Malian's (2013) study that divided 79 pre-service teachers into two randomized groups to explore the effects of an interactive podcast, with the purpose of focusing on the limitations that visual synchronous podcast face when preparing pre-service teachers, supported these findings. In this investigations, one group of participants was given the task of interacting with a PowerPoint that included text and enhancements (e.g., text synchronized with audio, visual aids and narration), while the other group interacted with a PowerPoint t without enhancements. The results revealed that the group with the enhanced PowerPoint had significantly higher scores than the group with the non-

enhanced format. These studies suggest that the method in which material is presented is important to improving teachers' skills.

Sari, Celikoz, and Secer (2009) conducted surveys with pre-services teachers to discover the relationship that occurred between pre-service teachers' self-efficacy and their attitudes towards inclusive education in the classroom. The findings showed that the attitude of pre-service teachers toward students with disabilities including children who have ASD was affected by courses that they took during their teacher preparation programs. Sari et al. suggested that part of the training that both pre-service special education teachers and general education teachers need is on strategies for inclusion in the regular classroom for students identified as having ASD. In addition, Bernard, Knapp, and Neuharth-Pritchett (2011) surveyed and interviewed 15 pre-service teachers to explore their perception and attitude toward children with ASD. They suggested that lack of coursework about ASD in teacher preparation programs made the participants in this study have misconceptions and missing information about ASD. These investigators proposed that, in addition to classroom course work, pre-service teachers should be required to participate in field experiences by entering inclusive classrooms to observe and to practice strategies. Simpson (1995) suggested that one way to provide field experiences for pre-service teachers is for universities and colleges to collaborate with local school districts in arranging for pre-service teachers to enter classrooms for observation purposes, as well as to gain hands-on experiences that center on addressing learning needs for students with ASD.

In summary, the literature that I described above clearly suggests that teacher preparation programs should prepare pre-service teachers to enter the classroom with

developed skills and the ability to teach and to manage a classroom appropriately. Pugach, Blanton, and Correa (2011) explained how collaborative teacher education consists of relationships, communication, and practices that have been developed over time to achieve the goals of education identified by both general and special educators. They indicated that “the climate for integrating special education directly into the pre-service curriculum is more open than at any time in the past" (p. 195). Zhou (2003) argued that the ideal teacher preparation program includes both learning theories and their practical application in the classroom. It also involves helping the pre-service teacher to develop content and pedagogical knowledge, with an understanding of how to use that knowledge to address student needs in a variety of learning contexts. Zhou suggested that an increase in the number of number of teachers certified indicates an increase in expertise because teacher candidates should acquire the needed knowledge and skills to help students with ASD achieve targeted learning outcomes from their preparation programs.

Interventions

Some studies have examined the effects of interventions designed to address the challenges that children with ASD face. Since there are many interventions that can be used with children who have ASD, I have chosen to focus on the interventions that are appropriate and acceptable in the Saudi culture and can be used by teachers with Saudi students who have ASD. This restriction is because in Saudi Arabia, educational policy is aligned with the general principles of Islamic religion and therefore, not all strategies can be used in Saudi Arabia. I reviewed the literature related to interventions for communication, social, behavioral, and academic skills.

Communication interventions. Some individuals with ASD have difficulty communicating basic needs and wants. Therefore, in order to begin to determine which interventions would be appropriate for students with ASD, I looked at several resources in order to define what communication skills are. The first definition comes from National Joint Committee (NJC) (1992), which defined communication as “any act by which one person gives or receives from another person information about that person's needs, desires, perception, knowledge or active states" (p. 2). Bloom and Lahey (1978) defined communication as the act of exchanging information involving two or more people. There are many interventions that Saudi teachers can use with their students who have ASD to improve their communication skills, such as milieu teaching and enhanced milieu teaching (EMT). To understand the efficacy of this intervention, Hancock and Kaiser's (2002) conducted a study to investigate the use of EMT to enhance preschool children with ASD the social communication skills. The interventionist and the participant played together with age-appropriate toys. Each time the participant made a verbal or non-verbal request, the interventionist responded with a sequence of prompts. Results of the intervention showed that participants demonstrated an increase in social communication skills, which were generalized to the participants' interactions with their parents in the home environment. In addition to this study, Ogletree, Davis, Hambrecht, and Phillips (2012) and Olive et al. (2007) also showed that using milieu teaching and EMT helped children with ASD improve their communication skills. In these studies, they used naturalistic conversation that employs a child’s interests and initiations as opportunities to shape and prompt language in day-to-day situations. The results of these

studies showed that the milieu teaching was effective in improving the participants' requests and their communication skills.

Augmentative and alternative communication (AAC) is another intervention that can be used in Saudi schools that has been showed to be effective with students with ASD. For example, Xin and Leonard (2015) explored the benefits of using iPads with a speech-generating application called SonoFlex with children with ASD. The participants showed an increase in communication skills with their teacher and fellow classmates, including making requests, answering questions, and communicating socially both in the classroom and during recess. I found many studies that used AAC with children who have ASD, such as Waddington et al. (2014) who evaluated the use of speech-generated devices in teaching children with ASD to request toys and then to respond with a thank-you upon receiving the toy. Gevarter et al. (2014) study compared the acquisition of mands by children with ASD across various displays, including a widgit symbol button, a photographical hotspot, and a widgit button combined with a photograph. These studies showed that using AAC interventions to express opinions, needs, and thoughts of students with ASD helped them to improve their skills to communicate with others.

Picture Exchange Communication System is another intervention that can be used in Saudi Arabia. Many studies, such as Ganz and Simpson (2004), Kravits, Kamps, Kemmerer, and Potucek (2002), Lund and Troha (2008), and Murdock and Hobbs (2011), have shown that using cards with symbols, images, photographs, or words to represent tasks or objects help children with ASD increase the number of spoken words and communicate requests.

Functional communication training (FCT) also could be used in Saudi schools. For example, Gerhardt, Weiss, and Delmolino (2004) explored the use of noncontingent reinforcement (NCR) and FCT to help decrease the aggression in adolescents with ASD. FCT was used to cue staff members to when the participant was threatening aggression, beginning with a raised hand or arm. The moment the staff member saw the hand or arm raise up, the member would respond with, “you want me to leave the room; that was great telling me.” Immediately afterwards, the staff member would leave but then come back to initiate NCR. Results showed the problem behaviors were reduced and the communication of the children with ASD was improved. Additionally, Martin, Drasgow, Halle, and Brucker (2005) and Rispoli, Camargo, Machalicek, Lang, and Sigafoos (2014) assessed the use of FCT in addressing behavioral problems in a child with ASD and improving the communication skills. The results of both of these studies suggested that using FCT helped children with ASD replace a more challenging behavior with a more appropriate communication that serves a similar purpose.

Pivotal Response Treatment (PRT) can be used to improve the communication skills of Saudi children with ASD. Many studies, including Koegel, Bradshaw, Ashbaugh, and Koegel (2014), Pierce and Schreibman (1995), and Voos et al. (2013) used PRT with children who have ASD. In these studies, the investigators used motivation to gain the targeted child's attention before introducing a prompt or modeling the desired behavior. Results showed that the targeted children were able to prolong their interactions with peers. In addition, they could initiate play and conversations as well as maintain engagement for longer periods of time. Results showed that questioning

increased for the participants as well the initiation of untargeted questions. In addition, participants improved their communication skills and adaptive behavior.

Lastly, total communication intervention is another type of intervention that can be used in Saudi schools. This intervention used formal signs, natural gestures, finger spelling, body language, listening, lip-reading and speech. For example, Sisson and Barrett's (1984) compared the effects of oral speech with total communication for children with autism. Intervention sessions involved putting together short, simple sentences containing a noun and adjective. The trainer showed a corresponding picture and modeled the desired response. The child then received a cue to respond by pointing out the corresponding picture for the repeated sentence. The total communication method proved to be significantly more effective than instruction relying only on oral communication.

Social skill interventions. One of the major challenges in serving individuals with ASD is educating them about how to interact appropriately with others. I looked at several resources to define what social skills are. Luiselli, McCarty, Coniglio, Zorilla-Ramirez, and Putnam (2005) defined social skills as skills and competencies that not only help people to initiate social relationships and keep these relationships, but also help people to be accepted by people and the society which they live in. Gresham, Sugai, and Horner (2001) defined social skills as "specific behaviors that an individual uses to perform competently or successfully on particular social tasks" (p. 333). There are many interventions that would be acceptable in Saudi culture and used to improve students' social skills, such as video modeling. M Nikopoulos and Keenan (2003, 2004, and 2007) and Tetreault and Lerman (2010) examined the use of video modeling to help children

with ASD to develop new social skills or change negative behavior. In these studies, the participating children with ASD watched a short video of someone modeling a targeted behavior or social skill. The findings of these studies suggests that video modeling can help children with ASD to build a sequence of social behaviors and increase their social skills.

Another intervention which we can use with Saudi students who have ASD to improve their social skills is peer-mediated intervention. Goldstein, Kaczmarek, Pennington, and Shafer (1992) investigated the effects of a peer-mediated intervention children ASD. Each targeted child was paired with peers who did not have the disability for play sessions lasting five minutes each. The training of peers to focus on the behavior of children with ASD, as well as to comment on and acknowledge their behavior, increased the social interaction of peers and the children with ASD. Not only this study, but also many studies such Blew, Schwartz, and Luce (1985), Dugan, Kamps, and Leonard (1995), and Laushey and Heflin (2000) used peer-mediated intervention in which one or more peers assisted their peers. The result of these studies showed that the interactions helped children with ASD to understand things in similar ways to their peers, which helped them increase their social engagement with typical peers, and provided a productive and socially acceptable activity for increasing their social skills.

Social stories can be used to introduce a specific setting or situation, along with key words, phrases, or actions that the targeted individual can discuss in checking for comprehension which makes the person with ASD can then practice for those situations. For example, Norris and Dattilo (1999) evaluated the effectiveness of social stories on the desirable and undesirable behavior of a child with ASD during school lunch time. The

participant was read a social story approximately 10 minutes prior to lunch. To further aid the participant in understanding the story, the reader paused occasionally to explain or to offer an example and to answer the participant's questions as they pertained to the social story. In addition, picture symbols were used to engage the participant and increase comprehension. Three social stories were developed and a different one used each day for 13 school days. The use of the social stories had a positive effect on the participant's social interactions with peers during lunch. Delano and Snell (2006), Samuels and Stansfield (2011), and Scattone, Tingstrom, and Wilczynski (2006) also evaluated the effectiveness of social stories on children with ASD. The results of these studies suggest that social stories can help children with ASD to improve their social skills and increase initiations and interaction with their peers.

Moreover, research also supports that students with ASD can be taught to be aware of their own actions and to distinguish between what is and what is not acceptable. Self-management intervention is aimed at helping learners with ASD to learn skills independently, regulate their behavior, and act appropriately in diverse situations such as home, school, and other community situations (Koegel, Park, & Koegel, 2014; Liu, Moore, & Anderson, 2015). Koegel, Koegel, Hurley, and Frea (1992) also explored self-management as a technique for improving social responses of children with ASD. In this study, children were taught to distinguish between a correct and incorrect response to a typical question that might be asked by a community member or an individual at school or at home. Questions were a mix of simple yes and no responses and responses needing simple information. Results indicated that the children improved in self-management conditions with the use of reinforcers with just a few sessions. The baseline correct

responses prior to treatment for the four participants were 59%, 61%, 49% and 35%. In contrast, the children responded 90% to 100% correctly to between 30 and 40 questions after treatment. Therefore, self-management intervention would likely also be an appropriate intervention to use with students with ASD in Saudi Arabia.

Behavioral interventions. People with ASD may also have difficulty with behavior, which also contributes to issues with social skills, as discussed earlier. Challenging behavior, as Doss and Reichle (1991) reported, can cause the learner to injure him/herself or others. Since the diagnosis of ASD is behaviorally-based, interventions involve applied behavioral analysis (ABA). Steege et al. (2007) reported that ABA can be used to help children with ASD by (a) teaching functional skills, communicative skills, and social skills. Strategies rely heavily on a systematic way of providing instruction and the use of positive reinforcement of desired behaviors; (b) reinforcing and maintaining previously developed skills; (c) helping them to transfer social skills and desired behavior from one natural situation to another; (d) controlling or changing the environment so that undesirable behaviors occur less frequently; and (e) not reinforcing undesirable behavior while at the same time, reinforcing desirable competing behaviors.

There are many procedures that can be used with children with ASD in order to change their behavior. For example, Schreibman, Whalen, and Stahmer (2000) found that using stimulus-based procedures helped a participant with ASD to reduce his behavioral problems. These procedures involved events that occur just before the display of an undesirable behavior, such as changing in the curriculum, schedules, and physical settings, as well as implementation of social organization and instructional design. The

results of this study suggested that using stimulus-based procedures with children with ASD can cause a significant reduction in behavioral problems, with positive effects being maintained with follow-up sessions and generalization to similar transitional activities or locations. In addition, Newman et al., (1995) found that providing direct instruction on desired or targeted behaviors helped children with ASD to decrease their negative behaviors and helped them to manage their behavior by learning to anticipate transitional periods between activities in a daily or school routine. Extinction-based procedures can also be used with children with ASD. These procedures reward desired behavior while identifying and controlling triggers that result in undesired behavior. To be more specific, this procedure is designed to identify and eliminate or reduce suspected reinforcers of undesirable behavior (Charlop-Christy & Haymes, 1996). Additionally, Bui, Moore, and Anderson (2013) found that the reinforcement-based procedures designed to identify and provide positive motivators can help and encourage children with ASD to demonstrate the desired behaviors.

Academic interventions. Children with ASD often have difficulty in learning. Bell and Egan (2009) defined academic skills as all skills that are necessary to help students participate fully in the academic environment, such as interaction and communication abilities. I identified a number of effective interventions that could be used to improve the academic, including literacy, skills of Saudi children with ASD. To start with peer tutoring, Kamps et al. (1989) conducted peer tutoring intervention with two children with ASD who attended special education classes. Students without disabilities spent 30 minutes, three times a week, with these students. During these sessions, students without disabilities read tasks to their peers who have ASD and they

must read orally and respond to their peers orally. Results suggested that this intervention helped children with ASD to improve a number of areas, including sight-word coding, fluency, and word recognition. A number of studies (e.g., Arreaga-Mayer, 1998; Kamps, Barbetta, Leonard, & Delquadri, 1994; Kourea, Cartledge, & Musti-Rao, 2007) have demonstrated that peer tutoring, where students work together with assigned partners or within small groups, is effective in an inclusive environment for students with learning problems.

The strategy of using sight-words is another intervention that can be used with Saudi students who have ASD to improve their literacy skills. There are many ways that sight-words can be used. Mule et al. (2015) found that sight-word drills with the use of flash cards and practice resulted in increased reading skills for children with ASD. The procedure used in this study involved the teacher showing the students some cards while reading the words simultaneously. Then the teachers repeated the same process, such as three times per word. Then the teacher would shuffle the cards and direct the students to order the words they were shown randomly. Crawley et al. (2013) carried out a study aiming at examining the use of flashcards system along with a reading racetrack in teaching sight-words. Their results indicated this intervention was successful in teaching students reading sight-words, as well as in increasing the students' fluency at the general level. Fossett & Mirenda (2011) found that sight-words and accompanying pictures are also helpful in learning and improve the academic skills for children with ASD. Yaw et al. (2011) found that reading skills also increased with the use of computerized flash cards and audio-recording of the student reading aloud the word. This research suggests

that sight word instruction may be a useful component of literacy instruction for some Saudi students with ASD.

Adapted versions of literary is another intervention that could be used to improve the literacy skills of Saudi students. Browder et al. (2007) investigated how to increase the participation in middle school literature for students identified as having cognitive disabilities. Strategies used for adapting books included providing in-text definitions of unfamiliar words, adding images to support the learning of vocabulary words, and the retelling of the story on a lower-reading level. Their results indicated that adapting books helped students increase their literacy skills, including listening comprehension and a sense of independence in interacting with text.

Repeated reading is another strategy that has been found to be an effective literacy intervention for students with ASD. Fuchs et al. (2001) investigated the effects of repeatedly reading a passage; This involved students reading short passages several times. The findings of the study were that students did improve their literacy skills with this intervention. In fact, it increased their reading rate. A listening passage is yet another intervention shown to be effective for students who have ASD. Noell et al., (1998) investigated the use of the listening passage preview strategy and contingent reinforcement to aid in increasing oral reading skills for three children identified as having high-functioning autism. In this study, researchers read aloud a part of the passage for the participant so that the participant could see how to perform the reading task. Then, the participant read back to the researcher the same passage, with the researcher providing corrections as needed. After that, the researcher used both the listening passage preview and the contingent reinforcement strategies for each of the three participants.

The result of Noell et al. showed that one of the three participants showed a significant increase in oral reading skills with the use of just the listening passage preview, whereas two of the participants showed an increase in their oral reading skills as a result of the combined use of both strategies.

Literacy skills can also be improved by reading aloud to students with ASD. According to Rosenhouse, Feitelson, Kita, & Goldstein (1997), when teachers read stories aloud as part of their instruction, it helped students with ASD develop better reading abilities and increased their ability to acquire new vocabulary. They also found that teachers reading stories and instructions loud contributed to improving the level of knowledge students have and expanding their ability to comprehend what they are reading.

Visual and textual cues can also be used to improve the literacy skills of children with ASD. According to Snow (2002), the process of forming visual images while reading a passage can be understood as the process of creating images out of the words in the mind. Snow suggested that pictures can facilitate students with ASD understanding the meaning of the words, because this strategy helps them to save these pictures with their words in their minds. He reported that images help readers to understand the main idea of a passage. Bryan and Gast (2000) investigated using pictures schedules with four students identified as having ASD. They found that using picture schedules with these students helped them to manage the students' learning process and behavior. Using the tool of picture schedules with these students motivated them during their literacy-based activities because the students showed the high sense of dependence during the activities

inside the class. This study demonstrated that picture schedules can help students with ASD understand the activities inside the class independently.

Computer programs can also help children with ASD to improve their academic skills. Basil and Reyes (2003) investigated the use of computer programs to increase reading motivation for students with autism. After comparing traditional approaches in teaching reading with the use of computer programs, the researchers found that students were more motivated to read with the use of the computer programs. As a result of using computer programs, children spent more time reading, which helped to improve their reading skills. Finally, studies have shown that children with ASD respond exceptionally well to phonological training for developing reading skills (Feehan, Francis, Bernhardt, & Colozzo, 2014; Grabig, 2010). All of these strategies might be useful for improving the education of students with ASD in Saudi Arabia.

Chapter 3

Methods

The purpose of this study was to explore the beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and their teacher preparation experience to meet the need of their students with ASD. The questions addressed were:

1. What do teachers of students with ASD in Al Qassim believe they know about ASD and how to teach students with ASD?
2. What do teachers of students with ASD in Al Qassim believe they need to be successful teachers of students with ASD?

Methodology

The purpose of the study and the kind of data needed to address the research questions determines what kind of methodology is used (Gall, Gall, & Borg, 2003). Qualitative methodology was appropriate for this study because it provides understanding about (a) what ASD means to special educators working with students with ASD, (b) how these teachers believe they teach and treat their students with ASD, (c) what their perceptions are about teacher preparation programs which focus on ASD, and (d) what these teachers believe they need to improve their knowledge and teaching skills in order to meet the needs of students with ASD. Merriam (1998) defined qualitative research as "an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena with as little disruption of the natural setting as possible" (p. 5). Qualitative research is an inquiry-based methodology that seeks to understand one's experiences of a particular phenomenon. Therefore, it is interpretive in

nature, relying on the experiences, thoughts, and understandings of individuals who are affected in some way by the phenomenon being studied. Merriam (1998) further stated that "other terms often used interchangeably [with qualitative research] are a naturalistic inquiry, interpretive research, field study, participant observation, inductive research, case study, and ethnography" (p. 5).

Procedural rigor calls for clear explanations of "how data are collected, recorded, coded, and analyzed; and accounts of the manner in which errors or subject refusals are dealt with" (Kitto, Chesters, & Grbich, 2008, p. 244). Rigor also includes how participants are selected and then invited into the study, and how issues of confidentiality and trust are addressed, including any kind of compensation for participation in the study (Kitto et al., 2008). Other issues addressed in checking for procedural rigor are knowing how the researcher has access to the participants or settings as well as who interviews whom or who is observed and by whom and for what period of time (Kitto et al., 2008). Moreover, information should be provided on what other data is to be collected and in what manner, and how it is to be evaluated (Kitto et al., 2008). Finally, issues should be addressed on how the data is to be stored, where it is to be kept, and for how long (Kitto et al., 2008). I attempted to ensure rigor in this study by checking and explaining of how subjects were selected and then invited, how data collected and analyzed, and how data was to be stored. I addressed each of these in the relevant sections below to provide assurance of the rigor of this study.

Participants

Saudi Arabia is a large country with has thousands of teachers. As previously noted, this study focused on one region, which is Al Qassim. According to General

Administration of Education in Al Qassim region (2016), there are more than 600 teachers who teach students with disabilities in Al Qassim region. In this study, I interviewed in-service teachers who met the following criteria: (a) teachers who teach in the Al Qassim region, (b) teachers who teach students with ASD and, (c) teachers who have an undergraduate degree in special education with a specialization in ASD. I excluded teachers who: (a) were general educators; (b) work with students identified with other disabilities and; (c) have just a certificate with a specialization in ASD, but not an undergraduate degree in special education. I worked hard to recruit teachers who specialize in teaching students with ASD in Al Qassim to participate in this study. Seven teachers agreed to take part in this study. I will explain in the following section how I invited these teachers to participate in this study.

Recruitment Procedures

I contacted two supervisors in the education department in Al Qassim to determine which teachers teach students with ASD because the education department in Al Qassim has personal information for all the teachers who teach in this region. Then I asked these supervisors to contact teachers who teach students with ASD in this region and forward a letter to them inviting them to participate in this study. See Appendix B for the English translation of this letter. In addition, I asked the teachers who decided to participate in this study to contact their colleagues in Al Qassim who are working with students with ASD to encourage them to contact me if they were interested in participating.

Potential participants texted me to let me know that they were interested in participating in this study (see Appendix B). After each individual contacted me, we

figured out which day that we can meet to conduct the interview, which I would conduct over the telephone. I texted the participant with a reminder earlier on the day of the interview.

Data Collection and Recording

Interviews. In this study, I interviewed practicing special educators in Al Qassim, Saudi Arabia, who are working with students with ASD. Merriam (1998) stated that the most common kind of data collected is probably through interviews. There are various types of interviews, as well as guides on how to formulate good interview questions, how to record interviews, and strategies for analyzing interview responses to identify emerging themes and categories (Merriam, 1998). Interviews can be highly structured, very unstructured, or semi-structured, which is a combination of both highly structured and unstructured (Lapan, Quartaroli, & Riemer, 2012; Merriam, 1998). Since semi-structured interviews are designed to cover several topics and to look for commonalities (Lapan et al., 2012), I used semi-structured questions to collect the data in this study. The quality of the questions is important. Good questions tend to yield useful data whereas poor questions may not provide the kinds of data needed to address the research question (Merriam & Tisdell, 2015). See Appendix A for the English translation of the questions that I asked the participants in the study.

I used phone interviews, rather than face-to-face interviews, because I could not go to Saudi Arabia for the data collection. A significant advantage in using telephone interviews was that the interviewees could select a secluded location of their choice for the interview. I conducted the interviews from my home office so that no one could overhear our conversation and privacy for the participants was assured. Each interview

took around 60 minutes. Upon finishing the interview, I made sure to personally thank the participant for cooperating with me.

Recording of interviews. I used a digital recorder to record my conversations with the participants. The recording process took place from the very beginning of the conversation. The consent form mentioned that the interviews would be recorded, and I reminded participants of this before the interview. I also took notes during the interviews. This helped me not only ask appropriate follow-up questions during the interviews, but also supported analysis of the data and drawing big ideas about what I should write in chapter five.

Data Management and Analysis

Transcription. After I interviewed these teachers, I repeatedly listened to each interview and transcribed it directly in written Arabic. I transcribed interviews verbatim, using Express Scribe Transcription Software with a foot pedal to control playback. Only participants' pseudonyms were used in the transcriptions and no personally identifiable information was included. For example, I replaced the names, cities, schools, or other individuals mentioned by participants by a generic term in brackets, such as [city name], [school name], [student A], or [name of fellow teacher]. Because I used pseudonyms for all participants in the transcription, the only link between the participants' actual names and their pseudonyms was a handwritten list which I stored in a locked file cabinet in my home office until all transcription and member checking were completed. I will explain more about this point in the ethical considerations section.

After completing the transcriptions of the audiotaped interviews, I started the second cycle of transcription, where I translated the Arabic transcriptions into English.

After I completed the translation of the transcriptions from Arabic into English, I met with two of my colleagues every Saturday and Sunday for a whole month to check the quality of the translated English transcriptions. These two colleagues, included an Arabic-speaking theoretical linguist. They looked over the Arabic transcriptions and my English translations for accuracy to ensure that the translation did not convey the information in a way that was either unidiomatic to English or that introduced unintended connotations or emphases. These individuals included in the IRB package as a team member and completed all required IRB training.

Analysis tools. I used Dedoose, an online qualitative software program, to code the date and develop the thematic analysis. I analyzed the data with the use of Dedoose, which is a software program that allows for the uploading of complete transcripts. Below I describe the process that I used to develop codes and themes.

Data analysis. According to Merriam (1998), qualitative research is used when the researcher wants to understand a process or the meaning of a lived experience. Ritchie and Lewis (2003) noted that individuals respond with different thoughts and insight about their experiences in life. They additionally stated that these varying responses and questions about how knowledge can be acquired and in what way "have led to the emergence of numerous different schools of thought within qualitative research" (p. 11). My analysis was based on the initial development of codes which I found best represented the informants' comments, and then, on the themes that emerged from examination and clustering of these codes in an iterative process. My findings and analysis were organized around these themes. The procedures of the analysis in this study passed through the following four stages.

In the first stage, all interviews were audio-taped and then transcribed verbatim, including pauses and incomplete phrases in Microsoft Word. As discussed prior, I translated the transcriptions into English. After that, I uploaded the transcriptions to Dedoose.

The second stage of data analysis involved coding the transcripts/translations of the interviews to establish a link between the collected data and what that data means. Saldaña (2016) explained that the purpose of coding is to convey the very essence or nature of what is verbally expressed by the interviewee. The coding process for the data analysis required two cycles. For the first cycle, I had already uploaded the transcripts into Dedoose. From there, I read each sentence and decided on a word that indicated the main idea or subject of that sentence. The idea was to find commonalities among the transcripts through coding. As noted by Saldaña (2016), the initial process generated a considerable amount of coding, which then needed to be refined. In the first cycle, I came up with 62 codes.

For the second round, I limited the analysis to the codes generated in the first cycle. This is in keeping with Saldaña (2016), who stated that the purpose of the second cycle is to work with the codes from the first cycle. In examining the codes, I looked to combine similar codes. The codes used this study were those that appeared several times across the conducted interviews and were then gathered under overarching codes. Codes that appeared only for one time were eliminated. In this cycle, I came up with 18 codes.

The next stage in data analysis was to examine the codes that emerged from the second cycle and collapse them into themes. Saldana (2016) defined a theme as “an outcome of coding, categorization, or analytical reflection” (p. 15). I carefully reread the

codes several times, looking for commonalities in meaning that match a specific theme. I came up with three themes that used to convey the general or overall meaning of the data grouped under that theme. These themes are: (a) participants' perceptions of their teacher preparation programs, (b) post-BA learning, and (c) the reality of teaching in schools. I will discuss these themes and their subthemes in chapter 4.

All stages of the data analysis involved peer review by fellow doctoral students and my dissertation advisor. These students acted as project team members assigned to my project by the University of New Mexico's institutional review board (IRB). My peers provided critical commentary on my data analysis, thus far. They did so by writing memos in Dedoose and/or providing oral comments during doc group meeting when this project was discussed. They did not have access to descriptive information on the interviewees, nor did they have access to the participants' actual names.

Member checking. To reduce errors and ensure credibility, I asked teachers who participated in this study to read a summary of the emerging thematic analysis, along with the codes under each theme. I then asked for their feedback about the extent to which themes represented well the excerpts from their interview that I provided. This increased the trustworthiness of the findings, as well as suggest areas for additional refinement or clarification of the themes or their descriptions.

Ethical Considerations

Consent form and procedures. When I contacted with the participants, I explained why they had been chosen to be a participant in this study, what the purpose of this study was, and any associated risks from this study. For example, following the consent form, I let participants know that they do not need to answer any question which

they do not feel like answering or were uncomfortable with. Along with reminding them that the interview would be recorded, I emailed them the official consent form as an email attachment. Participants printed, signed, and then scanned the consent form. I asked them to email their signed consent form to me at my UNM email for security reasons. I received both Arabic and English consent forms from all participants. The consent form in Arabic and the English translation is provided in Appendix C.

Privacy. I respected the privacy of teachers who participated in this study. The initial contact was through the supervisors who were working in the department of Education in Al Qassim and I did not know the names of the teachers in the pool of potential participants. In addition, no one knew whether any of the potential participants responded to the invitation other than me. Once the teacher had made the initial contact with me as I mentioned above, we determined a date and time for the interview. I stressed the need for privacy, not only in conducting the interview, but also in the information the participant chose to share with me. For example, I requested that the teachers not share with me the actual names of their peers, supervisors, teachers, or students. I also tried to avoid obtaining any other type of information irrelevant to the present study, other than that gained from common greetings, such as politely asking how someone is doing at the beginning of a conversation, which in some cultures can be a bit more extensive than in English-speaking culture. In that way, the participants' privacy was established, as well as respect for the privacy of anyone discussed during the interview. Participants also had the option of choosing the amount of information that they decided to share and the amount they decided to keep to themselves.

Confidentiality. I provided each participant with a pseudonym that I used in reference to them, including in discussions with doctoral student peers and dissertation committee members and in dissemination of the study results. The pseudonyms associated with the participants' real names were listed on a sheet of paper which I stored in my home office, which was also locked at all times once I began data collection. None of my colleagues or dissertation committee members had access to the real names of the participants or would able to associate them with the names in the present study. I referred to participants only by their pseudonym in the collection and analysis of data. The actual names of the participants never were mentioned by me to anyone, nor were the names of their schools mentioned anywhere in the de-identified data.

Data storage. Data consist primarily of electronic files, including digital audio recordings from the interviews, interview transcripts, translations, and field notes in Microsoft Word. I saved all of these documents in separate folders (e.g., one for audio recordings, one for transcriptions, and one for field notes) on the hard drive of my personal computer. I also collected signed and scanned consent forms. Participants sent their signed consent form as an attachment to my UNM email. I downloaded the signed consent forms and saved them in a separate folder on my personal computer. After I downloaded and saved the consent forms, I deleted the email messages from my email folder and then emptied the trash folder.

I initially saved all electronic data on my personal computer, with a backup to an encrypted external storage device (e.g., external hard/flash drive). I placed the data on a data CD, and I will give it to my dissertation advisor to keep in a locked file cabinet in her locked UNM office for three years. The purpose for doing so is in case of an audit

centering on completion of my degree requirements. After a three-year period has elapsed, I will ask that the information on the CD be wiped clean and the CD be destroyed.

Data security. While it is possible that others might have listened in to the interviews on the participants' end, I ensured that the conversations on my end were private. I conducted the interviews in my private home office; no others were being present during the interviews. I saved the audio files of the interviews in an encrypted folder on my personal computer, as described below.

I used only my personal computer for data collection, recording, and analysis. When not in use, this computer remained either on my person (e.g., in my computer bag) or in a locked file cabinet in my locked home office. The computer was password protected to ensure that all files and folders containing data related to this study were secure, in the event that my computer were to be stolen.

I stored copies of data in an encrypted external storage device; this external drive encrypted and stored in the cabinet in my locked home office, except when I was backing up files. I did not bring this drive to campus, nor leave it in my computer bag along with my personal laptop. Dedoose requires a personal account secured with a unique login and passcode. I did not share my account information with any other person. Only those individuals who were listed in the IRB and approved to have access to the de-identified data (e.g., doc group members and my dissertation advisor) were invited onto the research project on Dedoose. According to the Dedoose website "Dedoose data are fully encrypted at rest and when moving between our servers and your computer" (Dedoose, 2016). Therefore, I made every effort to ensure that the research data were secure.

Risk factors. Before beginning the interviews, I reminded participants that their participation in the study would remain confidential at all times, and their identities will not be disclosed to anyone other than the researcher. However, no participant expressed concern that his responses might lead others to identify him. Moreover, I carefully reviewed the procedures in place to protect the identity of the participants and to ensure their comfort with the interview process because some questions might make them feel uncomfortable, such as if they were to discuss feelings of lack of preparation to work with all students who they are assigned to teach.

Benefits. There was little extrinsic motivation for the participants to take part in the study. However, intrinsic rewards of knowing that by sharing their thoughts, experiences, and insight in working with students with ASD that they may inform the current practice for these teachers were possible. Contributing to one's profession can be rewarding and can potentially benefit everyone connected with a student's learning and developmental outcomes. In addition, having the opportunity to share their thoughts and ideas with an interested interviewer is often a positive experience for people. Therefore, it is possible that these participants found the interview experience positive and empowering.

Participant withdrawal. Participation in the study was voluntary. Each participant had the right to withdraw according to the stipulations set forth in the consent letter, which stated that the participant could withdraw from the project, as long as their request came no later than two months following the completion of the interviews. However, none of the participants who agreed to participate in this study chose to withdraw.

Chapter 4

Results

The purpose of this study was to explore the beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and their teacher preparation experience to meet the need of their students with ASD. The questions addressed were the following:

1. What do teachers of students with ASD in Al Qassim believe they know about ASD and how to teach students with ASD?
2. What do teachers of students with ASD in Al Qassim believe they need to be successful teachers of students with ASD?

As mentioned in Chapter Three, I first contacted two supervisors in the education department in Al Qassim to help me to invite teachers who teach students with ASD to participate in this study. I invited the educators by asking my contacts at the education department to forward them the invitation letter. Seven teachers agreed to participate in the study. Of note is that all of those agreeing to participate had between two and four years of experience, at the time of the interviews. In addition, although both male and female teachers were invited to participate, only men responded to the invitation to participate. All of the participants met the inclusion criteria of this study, which were as follows: teachers who a) teach in the Qassim region, b) teach students with ASD and, c) have an undergraduate degree in special education with a specialization in ASD. In order to maintain the participants' confidentiality, I asked them to choose a preferred pseudonym. They chose Mohammad, Salem, Ibrahim, Hamed, Abdullah, Fares, and Majed. In the following section, I will give a brief description of each participant.

Mohammad was very successful in his undergraduate program, achieving a cumulative average of 4.50. Since graduating, Mohammad has been teaching students with ASD for four years. He currently teaches elementary school and has four students with ASD in his class. Mohammad chose to study ASD because the topic intrigued him. So, this is what pushed him to study ASD: because the topic of ASD stimulated his curiosity and he did not know much about ASD before he started studying for his bachelor's degree. Mohammad also chose to major in ASD because ASD was one of the most needed specializations in special education and ASD specialists were in high demand.

Salem has also been teaching for four years and is currently teaching students with ASD in elementary school. He chose the field of special education because his nephew has learning disabilities. After his second year in university, he chose the ASD track to complete his degree after he consulted with some colleagues and professors at his university. They all recommended ASD as a major because of recent trends and needs in that area. Salem still maintains good relations with some of his professors from his university and consults with them from time to time.

Ibrahim has three students with ASD in his elementary school classroom. He has been teaching students with ASD for three years. He decided to study ASD because of the good job opportunities, but reported that he has come to love teaching students with ASD as well. He also divulged that he is considering pursuing a master's degree in the same major. Ibrahim stated his belief that the more a teacher learns, the better he serves his students. Ibrahim reported he likes to see his students improving and developing their skills.

Hamed has been teaching students with ASD for three years. He teaches in elementary school and he has four students in his class, all with ASD. He chose special education for financial purposes. After graduation, Hamed found that he did not enjoy teaching students with ASD and reported that he wished he had chosen a different major.

Abdullah teaches in a public separate day school for intellectual education where he teaches three students with ASD in the elementary and intermediate grades. He has been teaching students with ASD for three years. Before he studied special education, he did not have a significant background in the area of ASD, but some friends and families recommended the ASD specialization because the job prospects are so good.

Fares has been teaching students with ASD for two years and in each year he has had different experiences. This year, Fares teaches intermediate grades in an inclusion school. At the time of the present study, he was responsible for supporting one student within an inclusive environment. However, the previous year he taught in public separate day school. Fares has a positive attitude toward inclusion. He chose to major in special education with an emphasis in ASD because his friend's father worked in the field and positively described his work as a teacher of students with ASD. Fares also applied for this specialization because he knew after graduation he would be able to obtain a job with a good salary.

Majed has been teaching elementary grade students with ASD for two years. He has a brother with a disability and his mother has gradually become blind, so he decided to study special education after high school graduation. He studied in a two-year, general special education program. In the third year of his program, he specialized in ASD. He

chose this major because he likes to teach children and it was a good niche in the job market for him.

Three themes emerged from the analysis of the participants' responses to the interview questions. These themes captured the various aspects of teacher preparation and the real-life experience of these novice teachers of students with ASD. The themes are as follows: (a) participants' perceptions of their teacher preparation programs, (b) post-baccalaureate learning, and (c) the reality of teaching in schools. I found three categories that fit under the last theme, the reality of teaching in schools. They are (a) teaching practices and resources, (b) teachers' perceptions and attitudes towards students with ASD (c) teachers' perceptions and attitudes towards teaching students with ASD. Under each theme and category, there are several subthemes. See appendix C for an outline of the relationship between the themes and subthemes. I will discuss the three themes and their subthemes below.

Participants' Perceptions of their Teacher Preparation Programs

This theme describes the teachers' perceptions and beliefs about the teacher preparation programs that they attended. This theme captures teachers' explanation of how these programs prepared them to work with students, what these programs lacked, and what issues they encountered after their graduation. I also used this theme as a way to describe how the teachers perceived their teacher-preparation programs, what they believed about them, and how these programs prepared them for their future careers. When asked about their perceptions of their teacher-preparation program, participants spoke at great length and with great detail about them. I found some of the points to be salient and common across all interviewees and resulted in several sub-themes: (a)

positive attitudes toward teacher preparation programs; (b) *shocked by the reality of teaching;* (c) *criticism of the quality of coursework*; and (d) *field experience.* In the following paragraphs, I will explain the subthemes that go under participants' perceptions of their teacher preparation programs.

Positive attitude toward teacher preparation programs. Most of the participants in this study had positive attitudes toward their programs. This subtheme encapsulates the positive attitudes that participants had towards their programs. For example, Salem remarked: "my teacher preparation program was excellent," regardless of some issues that he pointed out. This indicates he had a highly positive attitude towards his program. He added that the department of special education in his college had qualified and knowledgeable professors from different countries, namely Jordan, Sudan, and Egypt. All of these professors helped him improve his knowledge about ASD and teaching students with ASD. Abdullah also spoke positively about one of his professors in his program who taught courses that were not in the professor's area of specialty. He stated: "Although the professor was specialized in intellectual disability, which was different from my track, he was excellent in preparing and teaching us." Abdullah talked positively about his professor because he taught him the different types of ASD and interventions that he can use with students who have ASD. Abdullah added that: "I still remember his speech and explanation until now. His way of teaching was good." Mohammad also had a positive attitude toward his program. He stated that "my program was good, but it needs more courses especially on practical side." Even though Mohammad criticized the lack of practical application in his program, he still had a positive overall image about his program since he described it as "good." He reported that

the theoretical information that he learned in his program was useful and helped him to understand ASD. Fares, who graduated from another program, agreed with Mohammad that his program was excellent, but he also criticized the lack of focus on application in his program.

All the participants in this study pointed out that their four-year programs provided them with knowledge about disabilities. For example, Ibrahim stated: **"**We study for four years about disabilities and how to teach students with ASD. In the last semester, the program sends us to the schools to apply the knowledge we have learned with students who have ASD." Their programs were designed with the requirement that students choose one track and complete their program to be specialized in that track after their second year of study. For example, Abdullah said: "After the second year in our teacher preparation program, we were offered two majors to choose from to complete our program: the first was ASD and the second was learning disabilities." According to the participants, this way of choosing a track and completing their degrees helped them, in a theoretical way, understand more about the disability that they specialized in. For example, Ibrahim recalled that: "My program taught me the definition of ASD, characteristics of students with ASD, interventions that can be used with these students, and ways of teaching these students." According to all the participants, their programs also offered a chance for them to work directly with students with ASD during the last semester of their programs. For example, Abdullah said that "in the last level in our program, we taught students with ASD for one semester." This requirement helped them to practice what they learned in their programs with students who have ASD.

Even though most of the participants pointed out positive aspects of their programs, they were shocked, as newly employed teachers of students with ASD, by the day-to-day realities of working as teachers. This elicited criticism about some aspects of their teacher preparation programs. They criticized the lack of application and the ways of teaching in their programs, the professors who teach in their programs, and their field experiences. The following sub-theme captured how the participants explained their reaction to the realities of teaching and will be followed by two other sub-themes that discuss courses and issues related to field experience.

Shocked by the reality of teaching. This sub-theme captures quotes of some of the participants as they expressed their shock after graduating from their programs and started teaching in schools that have students with ASD. All of the seven interviewed teachers complained that the reality of Saudi schools and Saudi students with ASD shocked them. For example, Majed expressed his thoughts in the following way:

> Reality shocked me. When I was a pre-service teacher, I thought that upon graduation and working as a teacher; I would teach students with ASD and help them move to the next grade easily. I thought that I would improve their skills and see their progress. However, it is hard to do that with my students. Teaching students with ASD is not an easy task.

As illustrated in the excerpt, the participants, as pre-service teachers, thought that it would be easy to teach students with ASD. He believed that it would be easy to create individual educational plans and that the students would “smoothly” follow and achieve the goals set for them. Majed indicated that teachers often feel helpless about helping students with ASD because they could not achieve their goals with their students easily.

Fares is another teacher who was shocked by the reality of teaching students with ASD. He stated that:

> I was completely new to this field when I graduated from my program. Having to teach with students with severe ASD is a complete shock, let alone the shock of realizing what the reality of teaching looks like. You feel like you cannot do anything for them, and you feel like you are lost.

A potential consequence of not providing opportunities for pre-service teachers to visit schools and apply what they are learning until the last semester is that they were surprised by the realities teaching. Moreover, some teachers' surprise at the circumstances facing them in the schools made them feel that they are not yet ready to teach these students. Fares, for instance, noted: "I do not feel like I am ready to work and teach students with ASD." He attributed his un-readiness to the fact that his professors had not provided pre-service experiences teaching actual students with ASD. He thought that his program was only good at teaching the "theoretical side." The deep challenges of working in Saudi schools and with Saudi students with ASD caused some of the participants to criticize their programs about the lack of practical application. In the following sub-theme, I will discuss this issue as well as others related to the coursework in Saudi teacher preparation programs.

Criticism of the quality of coursework. This sub-theme reflects the teachers' perceptions about the courses that they took and professors who taught them in their teacher-preparation programs. The participants discussed two areas that I describe within this sub-theme. They talked about their frustration with (a) an emphasis on theoretical

information and the lack of practical application in their classes, (b) and the professors who taught them.

During the interviews, I asked all of them about what they thought of the teacher preparation programs that they attended. The participants reported positive attitudes about the theoretical aspects of their programs. However, even though the interviewed teachers studied and graduated from different teacher preparation programs, they all agreed that most of what they studied was theoretical and that they did not have a chance to apply the theories that they learned to the classroom before the field experience. For example, Fares stated that “the problem was with the professors in the department who were giving us theoretical information only.” He added that pre-service teachers were not given any chance to practice with students with ASD before the field experience. Fares pointed out that "when I start teaching in a school as an in-service teacher, I was shocked because there was no practical application in our Bachelor’s program.” According to Fares, he felt that he had knowledge but he did not have the skills of applying what he had studied in his program. Salem also spoke about the prevalence of theoretical teaching in his pre-service education, saying that:

> One professor taught us intervention that we can use with children who have ASD to improve their communication skills. We studied this intervention in six or seven lectures. I remember that most of the questions on the final exam for this class were about this intervention.

However, despite the significant attention given to this topic, Salem noted that he was not able to apply the intervention that he had studied. Therefore, no matter how thoroughly they had studied a certain intervention, they were not to apply it when they started

teaching. Salem provided another example of the theoretical information that he studied in his program. He said that he took several classes on behavior modification methods, but they were taught from theory alone. Salem continued with the following:

> I studied 14 credits in college about modifying human behavior. All subjects that I took were theoretical information only. I was only reading and writing about interventions that can be used with these students. It gave us some benefits, but I believe the application is better because you apply what you learn.

Although Salem benefitted to some extent from his university classes, he stated that experience with practical application would have produced “better results than reading.” Several other participants agreed that the high grades that they earned in their theoretical classes made them think that they would do well in their future careers. Hamed pointed out that a pre-service teacher might be doing very well in his university studies because he is receiving theoretical information only and is not put into a real-life situation where he can test what he is studying. Hamed gave an example stating that “we never developed an individual educational plan with students who have ASD in my program.” In addition to Hamed and Salem’s concern about this issue, Majed stated that:

> I know how to write the individual education plan. I know that I have to write the student's name and his age as well as how to diagnose the student. We studied all these information, but we did not apply it with real students.

According to Fares, the lack of opportunity to work with real students who have ASD during the teacher preparation programs affect some practicing because they might be highly proficient in the theoretical side but know nothing about practical skills. Ibrahim

pointed out that he and his colleagues wanted to get more hands-on experience in the classroom as pre-service teachers and that they had made this suggestion as students:

> We specialized in level five and we had some suggestions for the college administration. We asked them to add one class for field experience starting in level five. In this class, we could learn much about ASD. However, they did not approve our request.

Hamed also asked his college administration to arrange for observations at schools for students with ASD. However, similar to Ibrahim's and his cohort's request, Hamed's college administration rejected his request. These college administrators reportedly said that pre-service teachers would have field experience during the last semester of their programs and that there was no need to add field experiences earlier.

Even though many newly employed teachers of students with ASD held positive attitudes about most of their professors in their programs, few of the participants stated that the problems with their teacher preparation programs were not restricted to the lack of application alone. They also felt that their professors relied too much on book learning and did not provide for practical experience. Many of the participants explained that professors who taught them only explained the information included in the books. For example, Ibrahim elaborated on the problems he encountered with the faculty in his teacher-preparation programs. He stated that "the problem is that the department's professors do not encourage students to visit and deal with students who have ASD. They would only read and explain what is in the books." Ibrahim explained that the professors who taught him did not require pre-service teachers to visit schools before their field experience. Although I did not directly ask about their instructors in their teacher-

preparation programs, some of the participants noted that few of their professors did not know the Saudi schools. This is either because professors did not visit these schools or because they were foreign faculty. Hamed criticized his instructors, stating that "some professors were only sitting in his office, knowing nothing about the reality of Saudi schools. They only taught us what is in the books." He added that faculty did not do anything to encourage pre-service teachers to practically apply what they learned theoretically. He suggested that:

> Professors were supposed to add the practical side to every theoretical class. They are supposed to give us an individual education plan and let us apply it on students who have ASD, instead of giving us theories and theoretical information.

Even though instructors did their best by showing some students with ASD to pre-service teachers, the participants described their desire to go to schools with children with ASD instead of watching these students from videos. They contended that this would have helped them have an accurate picture of their future students. For example, Majed related that: "Professors showed us some YouTube videos. However, all of those videos were foreign. So, they did not reflect the right picture of Saudi students with ASD." In addition, some of the informants reported their belief that students who they encountered in Saudi schools were different from those they saw in the videos during their teacher-preparation program. Ibrahim reflected that although some instructors would to show videos of children with ASD from YouTube to their pre-service students, they were not considerably helpful. He noted that in these videos, students with ASD responded quickly to their teachers and they easily achieved their goal. Ibrahim pointed out that "those videos made us feel that teaching children with ASD is an easy task." The informants

suggested that videos negatively influenced their attitudes towards their own students because they want to see their students quickly achieve their goals, as they saw in the videos. Ibrahim stated: "We thought that we could deal with Saudi students with ASD just as we saw in those videos and make our students respond to us."

Abdullah argued that pre-service teachers should be taught better ways of finding the information that they will need in the classroom when they are teaching Saudi students with ASD. He said:

> The special education department should have a lab that has computers. In this lab, pre-service teachers can learn how to search for information about ASD and interventions that can be used with children with ASD. Professors should teach pre-service teachers how they can find the needed information.

The challenge of the reality of being newly employed teachers of students with ASD made them wish that their instructors had conducted field visits to Saudi schools. For example, Ibrahim stated that "professors should take trips to schools that teach students with ASD to find out what the obstacles are that in-service teachers face. Those obstacles should be researched and pre-service teachers should be trained on how to deal with them." According to Ibrahim, this would eventually result in having faculty know what information they ought to include in their curricula so that pre-service teachers are able to deal appropriately with students upon graduation. He additionally stated that "the inability to apply" skills learned in his teacher preparation programs was the primary problem that influenced his career. In the following sub-theme, I will discuss the views of the participants toward their field experience.

Field experience. All of the participants' university programs offered a chance for their students to work with students with ASD in the last semester of their programs. All the participants in this study confirmed that field experience (student teaching) helped them better understand students with ASD and their schools' environments. For example, Majed stated that "I taught students with ASD for one semester before I graduated from my program. It was a good experience because I interacted with students with ASD and in-service teachers during this semester." The participants reported that their field experiences gave them a chance to apply what they had learned in their programs. Salem pointed out positives about his student teaching by saying that "we [pre-service teachers] practiced what we learned in the university in the field experience. It was so important for us."

The reason expressed for their positive attitudes toward field experiences was the opportunity to apply their learning. Majed recounted that he learned more from his student teaching than what he had learned from his programs' coursework about teaching students with ASD. However, some of the participants also talked about issues they faced during their field experience. For example, short duration of the field experience was a major issue that most of the participants spoke about. For example, Salem said that "we did our field experience in our last semester; however, it was short." Fares agreed and elaborated on the short time allocated for field experience, by stating that "it was just a 45-day training. It was a very short time." He further noted that his student teaching consisted of three days per week for a full semester. He thought that this experience, in comparison to the time they spent learning theoretical information, was a very short. Majed, who graduated from different program, also supported Salem and Fares, saying

that “in my program, the field experience was only three days per week. We couldn’t learn much. It was a good experience but it was short.” Majed also remarked that some student teachers additionally had to take some required courses during the field experience semester in order to graduate on time, and/or take care of some paperwork for the university. Therefore, these participants expressed concern that they did not have enough time to focus on their field experience work, in order to learn as much as they could to become more proficient teachers of students with ASD.

All of the participants had supervising faculty during their field experience who observed their work. Most of the participants had positive attitudes toward their faculty supervision because they visited them on their school continuously. However, a few participants said that their supervising professors did not visits their school site to observe their work, nor did they provide corrective feedback, nor offer necessary guidance. Hamed talked about the supervisor’s visits that he was supposed to have during his field experience. He noted that “my supervisor was supposed to visit me in the last week of the field experience. However, he couldn’t come to school because he had an accident.” Therefore, the supervisor asked the student teachers to bring their paperwork to his office. Fares communicated that the absence of observing teachers continued to negatively impact them because they do not know what they should do with their students.

Another problem associated with their field experience that was identified by several participants was that because they wanted to learn much during the field experience, they turned to the in-service teachers for help. However, the ability of student teachers to learn as much as possible during this time was reportedly reduced by the fact

that all teachers were also new to their careers. Majed continued that “in-service teachers who worked with us during our field experience were new teachers. They did not interact or deal with us appropriately.” These factors appeared to negatively influence the quality of the pre-service education of the participants. In addition to the issues pointed out previously, Mohammad added an additional problem that he faced during his field experience. He explained that there were too many pre-service teachers doing their training in the same school and so he did not get enough time to practice teaching students with ASD. He reflected on his field experience, saying “it was not enough experience.” He added that pre-service teachers need more time and to have more chances to practice with students with ASD during student teaching. Majed supported Mohammad’s contention by noting that pre-service teachers need more time to accept and understand the environment and the reality of Saudi schools and working with students with ASD.

Post-BA Learning

The second theme, post-BA learning, portrays how participants described they developed their knowledge about ASD and improved their ASD teaching skills after they graduated from their teacher-preparation programs. The participants conveyed their desire to improve their knowledge about teaching students with ASD by attending professional development courses. This theme focuses on teachers’ attitudes toward these professional development courses and the issues they reported about these courses. The three sub-themes that emerged under post-BA learning. They are (a) *effective professional development; (b) professional development issues; and (c) a continued desire for learning*. I will elaborate on these sub-themes below.

Effective professional development. This subtheme depicts the teachers' satisfaction with the professional development courses that they attended and the importance of these courses to them. Six of the interviewed participants noted that they had attended professional development courses. During their interviews, these participants described how these courses improved their knowledge and ability to teach students with ASD. For example, Mohammed stated that: “I benefited from those courses. Through those courses, I reviewed my understanding about ASD. Those courses helped me to teach and work with my students correctly.” However, Mohammad noted that not all of the courses directly related to his work at school, nor did they all focus on ASD. Even though some courses covered other topics, he maintained they still helped him with his job. He stated that “there were some courses about human development. These courses are not related to my major, but they were useful for me.” Mohammad thought that any professional development courses are helpful for teachers. Ibrahim likewise spoke well of the professional development courses that he attended. He stated that:

> The best thing about these courses is that when I learn something, I can go and apply it to my students. I learned much in this way. However, in college, they gave us a lot of information, but we did not know how we could apply it because we did not have the chance to apply it with support from my professors.

It is clear that teachers liked the professional development courses because they had a chance to use what they learned with their students who have ASD. Ibrahim confirmed that “the benefits of the professional development courses are not limited to receiving new information, but extended to exchanging information and teaching skills with other

teachers who attend those courses." The informants' comments supported that professional development courses are a good place for new teachers to interact and communicate with expert teachers and make a connection with them. Many of the interviewed teachers echoed Ibrahim's positive view of these courses. For instance, Hamed opined that: "I believe the course that I attended was an equivalent to the four years of studying in college." Majed agreed, saying that "honestly, the professional development courses that I attended summarized all that we learned in college." He continued, by stating that by attending courses after he has gained some experience teaching, he now has a "better understanding" of his work. The informants suggested that professional development courses were helpful by giving them new information to apply with their students, and that these courses helped them address the difficulties that they faced during their first year of teaching. For example, the difficulties that Mohammad encountered made him look for ways to improve his knowledge about ASD and teaching skills. He stated that:

> I remember that I had many challenges with my students during my first year of teaching. At that time, I could not understand what should I teach or how to deal with my students. However, I attended several professional development courses and contacted experts in this field. Those ways helped me a lot.

Mohammad noted that courses that he attended helped him in improving his knowledge and teaching skills. However, he pointed out that there is still a lot to learn because ASD is a significantly broad major. Despite all the positive points the participants recounted about the professional development courses, they also discussed some drawbacks. These drawbacks are summarized in the following sub-theme.

Professional development issues. Even though most of the participants talked positively about the courses that they have attended, several noted problems that negatively affected the quality of these courses or made it impossible for them to attend these courses. For example, most of the participants experienced difficulties attending professional development courses about ASD because none were held in Al Qassim. For example, when Abdullah was teaching in another region in Saudi Arabia, he attended several courses. However, he reported after moving to Al Qassim he "did not attend any courses because the department of education in Al Qassim did not organize any of the courses about ASD." Similarly, Hamed noted that he attended many professional development courses when he was teaching on the another region of Saudi Arabia. However, he recounted his experience after moving to Al Qassim by stating that "I have been teaching for two years in Al Qassim. The education administration in Al Qassim did not organize any course about ASD in those two years." Nevertheless, the lack of professional development courses held in Al Qassim does not mean that the participants were not aware of the benefits of professional development courses. Many of the interviewees affirmed they would like to attend professional development courses. For example, Fares said: "I wished that I could attend professional development courses, but most of them were held in cities that are far away from my city." Fares was the only participant who had not attended any professional development courses, even though he has been a teacher for two years. When he was teaching in both another city the previous year and Al Qassim at the time of the interview, there were no professional development courses held on special education-related topics or ASD. Other participants complained of the same problem, stating that all courses about ASD were held in Riyadh, the capital

of Saudi Arabia. Fares explained that because there is no professional development in Al Qassim, teachers would have to leave the region and abandon their students for a few days to attend these courses in Riyadh. Abdullah shared the same problem. He stated: “I wish I could attend courses but no professional development courses are held here in Al Qassim about ASD. The coming course will take place in Riyadh.” Participants noted that it is difficult to improve their skills in teaching students with ASD through professional development courses while working in Al Qassim because such courses are not offered in their region.

Participants also had suggestions to solve the problem of the lack of professional development courses in Al Qassim. Ibrahim reported that:

> We need professional development courses on how to teach students with ASD. These courses must be organized by the Ministry of Education and not by any other institutions such as a private institution. When the Ministry of Education organizes these courses, the time slots should fit the teachers’ schedules, so they do not fall short on doing their teaching tasks.

The content, location, and time of the professional development courses were not the only issues that participants discussed. Some participants, such as Salem and Hamed, also touched on the instructors themselves. For example, Salem complained about the course instructors. He declared that “those who hold these professional development courses are not qualified.” Salem mentioned that someone who had an advanced degree, such as a PhD, or someone who had extensive experience in ASD should present these courses. He complained: “I studied what he studied and I know what he knows. So, I cannot consider it as professional development course.” Salem added that instructors

mostly used theoretical information which he thought was “pointless." These two factors were the main reasons why Salem and Hamed reported they did not get any benefit of some professional development courses that he attended.

A continued desire for learning. This sub-theme captures teachers’ readiness, desire and willingness to improve their knowledge and teaching skills through attending professional development courses or workshops that specialized in ASD. All of the interviewed participants attended professional development courses, except Fares, and all those involved in the study expressed desire to learn more about teaching students with ASD. For example, Mohammad stated that he attended six professional development courses and noted that it was his choice to attend. The courses he attended were organized by the Department of Special Education within the Ministry of Education. He reported attending these professional development courses because he felt they gave him the opportunity to learn new topics related to ASD. Ibrahim also considered himself lucky for doing his student teaching at a private center for ASD where he knew that they held professional development courses on a regular basis. Ibrahim stated: **“**When I worked at [a private center for ASD] as a pre-service teacher, they told us that they hold professional development courses on ASD. The information about these courses is available on their website.” Ibrahim demonstrated his desire to improve his knowledge about ASD and his teaching skills by looking for professional development courses. He stated: “Recently, I started checking their website every now and then to see whether they are holding courses or not.” Counter to the criticism noted by some participants, Ibrahim talked positively about the instructors who gave these courses in the private institution. He pointed out that "the good thing about these courses is that they bring experts to

present. They bring experts from other countries or professors who are specialists in ASD." Most participants recommended that ASD teachers should attend professional development courses. For example, Salem said: "I think that it should be among the teacher's top priorities to continuously attend these professional development courses." Even though he noted some negative points about the professional development courses that he attended, even though he still thought that it is important for teachers to improve their knowledge about ASD and teaching skills. Ibrahim supported Salem by noting that when teachers learn more, they will help their students more and they will achieve more things. For this reason, Ibrahim applied for the master's program. He provided this reason for doing so: "I am trying to improve myself because I believe that the more a teacher learns, the better he serves his students." In addition, Ibrahim contended that any course he could take would help him learn more about teaching and dealing with students who have ASD.

The Reality of Teaching in Schools

The third theme in this study is the reality of teaching in schools. A core point in this theme is how the participants reported teaching students with ASD inside their classrooms. They also discussed the interventions that they used with their students who have ASD. Moreover, this theme captures the way teachers perceive workers inside and outside the school who contribute to the educational process. This theme paints a picture of how some Saudi special educators approach teaching students with ASD. The participant's responses related to the reality of teaching in schools is grouped into these three subthemes: *(a) teaching practices and resources; (b) teachers' perceptions and*

attitudes towards students with ASD; and (c) teachers' perceptions and attitudes towards teaching students with ASD. I discuss both of these below.

Teaching practices and resources. This category represents the sources and references that participants used to improve their knowledge about students with ASD and the teaching methods they reported using with their students. This category also encapsulates some of the interventions and strategies the informants described using to change challenging student behaviors and develop their skills in many areas. This subtheme, teaching practices and resources, is further divided into four sub-subthemes: (a) available resources; (b) activities and interventions used by teachers; (c) problematic practices and shortage of expert mentor teachers; and (d) perceptions about supervision.

Available resources. During the interviews with the participants, they discussed the resources they used to gain and update their knowledge. For instance, Abdullah and Ibrahim talked with other teachers about the obstacles that they faced in the classroom. Abdullah stated that: "when I could not teach my students, I consulted other teachers at my school. There are more than four teachers who teach students with ASD." Abdullah added that when other teachers suggested methods for him to adopt, he tried them with his students. He reported this helped him teach his students better. Ibrahim also discussed the idea of learning from experienced teachers, explaining that:

> I tried to benefit from the previous teachers who worked before me in this field. We, as new teachers, learn from their experiences. If you become a teacher, you should sit with the teachers who worked before you to benefit from their experiences.

Other participants used different resources, such as the internet and social media networks, to stay updated and learn about new methods for teaching students with ASD. For example, Fares stated that “I follow accounts on Twitter. This gives me good and useful information.” He added that he also benefits from books about ASD and enjoys reading books about ASD. Mohammad reported he used YouTube to learn from foreign experts. These videos demonstrated various methods that he could choose from to use with his students. The internet was also an excellent source of information for Hamed. He recounted that he began “searching in different websites and started reading about programs and interventions for ASD." Hamed noted that the internet was his first “resort” in his work as a new in-service teacher. He added that: “I use the internet whenever I face a problem with my students." Reporting that he often performed an internet search for problems he had with his students to get some information, Hamed added that this way helped him so much to know new strategies and how to teach his students with ASD. On the other hand, Salem is a friend of university faculty who have PhDs in special education focusing on ASD. He stated: “If I have a situation that I cannot deal with, I communicate with my professors and ask them how I can deal with this situation.”

All of the participants had easy access to the sources of theoretical information, such as books or studies that were conducted in the field of ASD. However, Majed pointed out that while he could use and read information just like others could, he did not know where to find practical information. He stated: “We do not have any references to update our information and improve our skills in interventions.” Majed explained that the available references are only theoretical, just like the books that they studied in university. Majed complained that these resources do “not offer any benefits for teachers

since it is just theoretical information and cannot help us in the field." He added that while reading what is available in these sources seems to be interesting, he cannot apply it with his students in his classroom. However, Majed still took the advice of more experienced teachers in his same school as sources of information. He noted that ASD is a spectrum disorder, and there are many ways to support and teach students with ASD. While the informants noted a variety of sources of information related to ASD that they could and did access, this did not appear sufficient to meet all of their questions related to practice.

Activities and interventions used by teachers. This sub-subtheme showcases the various interventions and activities that the participants reported having used to teach their students who have ASD. For example, most of the interviewed teachers noted that they use reinforcement with their students with ASD to improve their academic skills or change their challenging behaviors. For example, Abdullah said that:

> One of my student likes to play on the cell phone. I give him the cell phone as a reinforcement. For example, if I want to teach him to read, I give him a book and ask him to read. Once he does what I ask him, he can get the cell phone.

Salem reported using reinforcement to create and encourage the spirit of competition among his students. He contended that “giving one student a gift encourages the other student who works with me because he wants to get a gift, just as his friend did.” Ibrahim also reported using reinforcement to encourage his students to pay attention to him in the following: “I praised my student once he responded to me. If he did not respond, I gave the gifts to his classmate who tried to learn and who responded to me.” Ibrahim opined that using reinforcement was a good way to encourage and push students towards

learning because, as he stated: “students with ASD tend toward jealousy.” According to Ibrahim, if the student sees his teacher give his classmate a reward, the student with ASD works hard because he wants to get a reward as well.

While Abdullah, Salem, and Ibrahim used reinforcement for academic purposes, other participants reported using reinforcement for behavioral purposes, such as changing challenging behaviors or teaching desired behaviors. For example, Hamed related trying to teach his students how to scrape their food leftovers from their plates after finishing meals. He stated that:

> I told my student that you should keep everything that you eat in front of you. Once you finish eating your breakfast, you should take the trash and the leftovers and throw them in the trash can. Once the student did these steps, I (as a teacher) gave him juice as a reinforcement.

Participants also reported ignoring their students’ negative behaviors. For example, Abdullah gave the example of a student who tended to engage in undesired behaviors to attract his attention. He said: “One of my students would grab my clothes, or pull the dress of the other teacher. However, the best way to deal with him was by ignoring him. Ignoring his actions made him reduce this behavior.” Ignoring was reportedly an effective way for Abdullah to decrease the undesired behavior of his student. Abdullah concluded that: “Once I used this strategy with him, I noticed that his behavior was reduced." Abdullah also mentioned encouraging other teachers who worked with same student to ignore the inappropriate behaviors in order to reduce their occurrence.

In addition to the methods mentioned above, Hamed stated he used modeling to teach his students new behaviors or to modify some of their undesirable behaviors. Hamed explained that he taught a student how to dispose of his trash in the following:

> I taught him this through modeling. For instance, I took the trash myself and threw it to the trash bin and then I went back to my table. I did this once or twice. Then, I asked one of the students to do what I did. Therefore, my student had a chance to see me and one of his classmates doing the desired behavior.

After this modeling, the student threw away his trash. Hamed added that "after he threw the trash, I praised him. I gave him some cookies." Ibrahim also reported modeling the behavior he expected from his students. For example, he stated he used it to teach his students to perform Wudu (a ritual ablution) and to pray. Ibrahim explained that he went with his students to the restroom and the mosque attached to the school. He first modeled performing Wudu and praying and asked his students to watch him. He then asked the students to do these things by themselves after practicing with him.

Some of the participants reported using picture books to teach their students new academic skills. For instance, Abdullah noted that:

> The book I gave him has around 20 pages that include small pictures. There is a picture for each word. The student benefited from these pictures. My student was able to read words because these pictures prompted him to read words such as apple, umbrella, and so on.

Abdullah added that he used picture books to make sure the student received the utmost benefit from the educational process. Salem also used pictures with his students who do not use language to communicate. According to Salem, since some students who have

ASD cannot use language to express themselves, some Saudi teachers use picture books to help their students express their different needs. Salem stated that "for instance, a student might want to drink juice during the break. At that time, I have a book with pictures. I open the book and make him choose what he wants." As Salem explained, these students would point with their fingers to the picture that represents their needs such as *eat*, *drink*, or *bathroom*. The students reportedly learned to choose the pictures that expressed their needs so that their teacher could understand them.

Several of the participants also conveyed that they resorted to technology to teach their students. For example, Abdullah said: "Using technology with [student's name] made teaching him easier for me because he responds very well." Abdullah explained that he used a tablet computer to teach his student different topics. He maintained that technology was a more exciting for the student to learn and to respond to instruction. He observed that when he asked the student to perform the same task on paper, "he refused to do it." Ibrahim provided another example using of technology to teach students with ASD. He stated that:

> I only use the iPad with my students because I think you can teach anything by using it. For example, if I want to teach my student how to brush his teeth, I can use the iPad. I ask him to watch a video of a person who is brushing his teeth.

Ibrahim reflected that using technology is easier and more effective than modeling the behavior in the classroom. Majed also reported using technology to facilitate the academic learning process and to teach his students some basic skills. He said that:

> I use my cell phone and iPad with my students. For example, there are games for students with ASD in cell phones and iPads called jewelry games. I like to teach my students colors through this game. My students like this game.

For Majed, a game on the tablet proved more effective for teaching young students the colors because the game requires students to put similar colors in groups. He affirmed that "after using this game, one of my students started to differentiate colors." Hamed also reported using an iPad for various purposes in the classroom. He stated he has: "used an iPad to show my students videos on how to throw away the trash. I also used it to show my students some games of alphabets: once you press a letter, you will hear it. This helped my students to learn the alphabet." Hamed also said that he used the App Store to download games that helped his students learn to read words. In these games, students would choose a word and hear it pronounced.

Problematic practices and shortage of expert mentor teachers. Even teachers who reported that they knew a number of interventions that can be used with students with ASD, they indicated a lack of experience in many areas, perhaps due to their limited teaching experience. This sub-subtheme captures the implications of the participants' limited experience. This sub-subtheme also described the negative impact of the lack of mentor teachers on the teaching ability of these relatively new teachers. For example, Fares had difficulty communicating with his students in the previous year. He explained that "It was hard for me to communicate with my students, I tried sign language, talking to their parents, and many other ways with no luck." Fares said that this made him feel like he was not the right person to teach students with ASD, because he did not see his students making improvements. Fares also related that it was extraordinarily hard to teach

students with ASD who require more extensive supports during his first year of teaching. He concluded: “You need an expert teacher to deal with those students.” Abdullah had the same experience. He gave the example of a student who went to him and attempted to tell or ask him for something but, because the student did not talk, it was extremely difficult for Abdullah to understand what the student wanted. Abdullah added: “This is painful because I wanted to help him and I wanted to know what he wanted but I could not.” This experience frustrated Abdullah. So, not knowing what else to do, Abdullah reported he focused on students’ "gestures” to attempt to understand what they wanted. Majed also reported being unable to understand what his students with ASD wanted. He stated that:

> Some students with ASD were constantly shouting for a whole class. It is difficult for me to understand what they wanted. I became confused about what I should do. The students and I could not understand one another, which made the situation even worse.

Their lack of experience and knowledge reportedly caused some of the participants to look for mentor teachers to teach them what to do in these situations. However, the lack of mentoring from experienced teachers was a fundamental problem for most of the interviewed teachers.

Another difficulty some reported was that they did not understand the purpose of some interventions used in the schools. For example, Salem explained what he understood about using videos as interventions in the following: “What I know about video modeling is that it is not for educational purposes. It is used for recreational purposes like cartoons. You can’t use these things to teach them academically or

behaviorally goals." With this explanation, Salem clearly demonstrated that his understanding of video modeling did not match professional norms. Lack of understanding resulted in some participants to misusing interventions. For example, Abdullah recalled giving his student a cell phone without follow all of the steps of using video modeling. Therefore, his student apparently did not seem to enjoy watching videos and repeatedly throwing the phone. Abdullah concluded that video modeling did not work very well with this student because the student had "severe ASD."

In addition to misunderstanding the purposes of some interventions or how to implement them, the comments of some of the participants suggested they did not know how to develop a system for teaching students with ASD in the classroom. For example, Ibrahim explained that:

> Sometimes you write the subject and the lesson on the board intending to teach the student something. After I wrote on board and got ready to interact with the student, I found him to be completely unresponsive. It would be impossible to teach him what I had planned.

He continued: "I called off the lesson and changed my plan to chatting with the student. I must make it a helpful and useful talk by teaching him obedience to parents and how to communicate with others." Ibrahim contended he did his best to use the class time wisely and provide some type of productive learning activity, even if by just conversing with him. Although the majority of participants reported trying different instructional methods, some conveyed it was difficult to modify students' problematic behaviors. For example, Mohammad described a student who threw pens at his teachers and his classmates. Mohammad tried many ways to reduce this problematic behavior, but Mohammad noted

that “the behavior of this student tends to happen regularly with me.” Mohammad concluded his lack of experience made it difficult for him to teach his students how to behave in the classroom. He noted that new teachers encounter these situations often, and they often “cannot find solutions for these situations.” Abdullah related similar problems. He stated: “My problem is all about [student’s name]. I cannot bring anything to the class because he will break it. Sometimes he goes to the gym, gets a ball, tears it up in front of the class and puts it in the trash.” Abdullah reported that he tried several solutions, but nothing proved useful for solving the student's problematic behavior. Abdullah explained “the problem is that when he insists on something, he must do it.” While most of the participants complained about their lack of experience, and the shortage of expert mentor teachers inside the schools, Mohammad concluded this is because the ASD major is “a very broad major.” He pointed out that most all the schools he taught in had new teachers who teach students with ASD and therefore, it is very difficult to find mentor teachers from whom one can learn.

Perceptions about supervision. All the teachers in Saudi Schools have supervisors who advise and support them in their work. This sub-subtheme captured the informants’ perceptions of how supervisors work in Saudi schools and how they felt about them. All the participants expressed they liked having supervisors come to their classes to evaluate and advise them. For example, Abdullah affirmed that “supervisors are a good thing; they direct us in how to teach our students. Most of them are experts in the area of disabilities.” He stated he tried to follow the instructions of his supervisors, as he was keen to improve his teaching skills, for the benefit of his students. Salem shared that his supervisor “comes to check on my work, directs me, and teaches me new things”

and stated that “I feel happy when my supervisor come to my class.” Fares also appreciated that the supervisors advise teachers how to improve their teaching. He said that:

> I want to be supervised by someone who can teach me how I can deal with my students. I want to be supervised by someone who can direct me when I do something wrong. I would like to deal with someone who has information and understands what ASD is.

Salem reflected on the benefits of supervision by remarking that teachers do not usually recognize their mistakes and may prioritize certain aspects of their work over others. Salem explained that “the experienced supervisor knows what to look for to help the new teachers. The supervisor will point out my mistakes and he will teach me how I can correct them.”

While recognizing the benefit of supervision, Fares stressed that he would welcome supervisors who are more familiar with ASD and who can direct the teacher to appropriate ways of working with students with ASD. He said: “Some supervisors who come to supervise teachers of students with ASD in schools are not specialists in ASD. Mostly, they are specialized in intellectual disability and so they are not the appropriate supervisors to comment on the work of an ASD teacher.” Fares contended he did not get the appropriate comments from the supervisors who did not specialize in ASD. Even with his few years teaching, Fares thought that he had acquired more relevant experience than his supervisor who majored in intellectual disability not in ASD. He stated that he wanted to receive feedback from supervisors who specialized in ASD and therefore knew the professional literature and had experience with this population. Ibrahim reflected that

most supervisors are highly qualified, but, like Fares, he noted that “ASD is a new major. My supervisor is expert and highly qualified supervisor in intellectual disability. However, I am specialized in ASD.” Like Fares, Ibrahim wanted to have a supervisor who majored in ASD, not in other disabilities, such as intellectual disability. The lack of experts in the area of ASD to provide supervision appeared to be a problem that most participants faced. However, most of the participants showed their desire to learn from their supervisors and they appreciated them.

Teachers’ perceptions and attitudes towards students with ASD. This subtheme captures participants’ feelings and attitudes towards children with ASD. Their comments clustered into two groups were included under this category, positive and negative attitudes.

Positive attitude toward children with ASD. Most of the participants reported positive attitudes and feelings toward students who have ASD. For example, Ibrahim commented: “When I specialized in ASD and started working with students who have ASD, I liked the department and loved children with ASD. Right now, I am considering getting my masters in the same major.” Indeed, he argued that “when you teach a student with ASD and see his skills improve and develop, you will have a strange feeling like the feeling of happiness.” He divulged that when he felt happy with his students’ achievements and successes, he was inspired to “offer them more than what I possibly can.” Ibrahim’s attitude toward his students was not confined to the educational scope only. It extended to treating them equitably and seeing their needs as not unlike every other human being. He argued that although they need special supports, teachers should always be positive and work to have students feel more positive and to be more open to

learning. Mohammad also related positive attitudes toward his students, becoming more familiar with them, and establishing new ways of learning. He pointed out that "you start with him step by step without feeling bored or tired." Mohammad stated he felt happy when he saw his student excited and ready to interact with him. Mohammad stated that "every day I feel more and more optimistic. I found that they have good abilities, but they need more than what we have done for them." Abdullah related that "students with ASD have some strengths but differ from one another." He noted that over the years, working with his students who have had ASD, he has begun noting their strengths and their differences. For example, he recalled a student, "who is academically excellent. I finished reading a book with him and another book, which was about the principles of math, like sizes and numbers." Abdullah noted that each student with ASD might be talented in some areas, such as painting, memorization, comprehension, and working with their hands.

Several participants conveyed positive attitudes toward students with ASD related to their willingness to work hard to take student abilities and strengths to a higher level. For example, Mohammad reported he did his best to make sure that his students benefitted from his work, stating: "I offered them all that I could. The results of my work with my students showed up fast. They improved remarkably." According to him, when teachers see the results of their work with their students, they feel more confident in their job and more satisfied with what their students are achieving. Abdullah also described how he works harder with his students when he observes them making improvements. Salem explained how using interventions with a student helped modify his behavior. He recalled that after observing this progress, he was more positive about the student and

continued trying hard to achieve better results. Salem related that “now, this student sits properly in class. His behavior was 90% modified.” However, participants’ attitudes towards students with ASD were not uniformly positive ones. Participants also conveyed some less positive feelings.

Negative attitudes toward children with ASD. While several participants communicated some negative attitudes toward children with ASD, these attitudes were limited. For example, Majed gave examples of situations that can provoke negative attitudes, such as when students repeatedly shout, cry, or move around the class, causing chaos and annoying their classmates. He stated that “the problem is that students with ASD cannot understand when you tell them to sit on their chair or leave the class. They do not understand these orders.” Because Majed did not have much experience on how to intervene in these situations, he blamed his students by saying that “they do not understand the meaning of these words.” Fares characterized teaching students with ASD are “tiresome.” He worked in a public separate day school last year. He reported that he had to teach 16 class periods for students with ASD, which he maintained was too demanding. He compared his job teaching students with ASD with teaching students without disabilities, which he thought would be easier. Ibrahim also explained that it is not only teachers of students with ASD who compared their students to the general education students, adding that “general education teachers always compare their students to the students with disabilities from the perspective that their students listen and understand them.” Majed also noted students’ difficulties with communication in the following:

> I used social stories that have pictures with my students, but it is hard to make them understand the meaning of the story. They might laugh, but I think they do not understand the story. I am talking about the students that I teach.

Majed related that reading social stories would not work with his students because their mental capacities limit understanding of the embedded meanings, rendering this intervention ineffective.

Teachers' perceptions and attitudes towards teaching students with ASD. This subtheme represents teachers' perceptions and attitudes toward teaching students with ASD. Five sub-subthemes emerged as components of teachers' attitudes about teaching students with ASD: (a) assigning students to teachers; (b) lack of appreciation for special education teachers' work; (c) feelings of frustration and disengagement; (d) strong sense of responsibility for teaching students with ASD; and (e) positive perceptions about inclusion.

Assigning students to teachers. The participants explained how students with ASD are divided among teachers in their schools. At Fares' schools, for example, "every teacher is responsible for one student. We are working in an inclusion program, and we have many ASD teachers. Therefore, each teacher is fully responsible for one student." According to him, being fully responsible for one student allows him to devote all his focus and time to the student and yields better results. Teachers are responsible for everything, as Fares explained, including "dealing with the student's parents, administration and working in class." In contrast, Mohammad is assigned to two students. He recalled that "we tried a different method, which is teaching students individually. I was assigned to work and teach two students with ASD. I worked with a student

[student's name] and another student [student's name], each on a separate basis for the whole year." In Mohammad's school, each teacher works with these students on all aspects of their educational program, including educational, social, and behavioral skills, as well as administrative paperwork.

Some participants contended that teaching one or two students works better than assigning many students to each teacher. For example, Mohammad recollected when he was assigned just two students because there were more teachers available: "it was a perfect experience because I was giving all my attention to those two students." He argued that having each teacher assigned to work with two students was more successful because "the results of your work showed up fast and the skills of your students improved well." Salem also agreed that assigning a small number of students to each teacher helps teachers focus their efforts. He recalled that:

> we planned that each teacher would take one student so that he works with the same student for the whole school year. Teacher is responsible for his student with ASD. He should be responsible for the student in all the subjects and behaviors.

According to Salem, they are adopting the same method for another year because "it gave us good results."

Lack of appreciation for special education teachers' work. Some of the interviewed participants noted that they encountered a lack of appreciation for their work. Fares stated: "I do not feel that working in the special education field is appreciated." He expressed concern that "even if I did my job such as prepare my lessons and go to my classes on time, I feel the school principal always thinks that we are not doing our work

perfectly." Fares related his impression that non-special education school personnel do not understand, and therefore, do not appreciate, the work of special educators. He stated: "I think that because the school principal does not specialize in ASD, he does not know what I did with my students. He thought that I was not working with my students." Fares added that general education teachers do not know what it takes to make students with ASD respond to their teachers and modify their behaviors. The perception of general education teachers was also as problematic for Ibrahim as he explained in the following: General education teachers always blame special education teachers because they think that we didn't deal with our students correctly. If general teachers tried teaching our students with ASD for one day, they would understand the situation and excuse us. The problem is that they have no background about students with disabilities.

Mohammad agreed about the lack of appreciation that special teachers receive and opined that general education teachers should have basic information about ASD and other disabilities to help them communicate and interact with students with ASD and their teachers appropriately.

Strong sense of responsibility for teaching students with ASD. Most of the participants made comments that reflected a high sense of responsibility toward their work. For example, Salem expressed his desire to teach his students something that could help them in their future. He said: "I keep thinking how to make my student a successful and useful person to the community, and how to make him use the information that he learned with me in his life." Fares echoes this sense of responsibility:

> I always organize all of my lessons at the previous night or during the morning assembly. Sometimes I stay in the teachers' room so that I do not attend the

> morning assembly because I am working with one of my students or preparing some papers for my students.

He reported his students occupy so much of his thinking and time that he does not join the morning assembly and spends most of his time inside the staff room. Mohammad also conveyed a feeling of responsibility: “What we do with them is almost nothing compared to what students with ASD needs. They deserve more work from us.” Abdullah related that the lack of ability to communicate with his students is a major concern. Speaking about one student in particular, he stated that “this is painful because I want to help him and I want to know what he wants.” Because communication can be difficult with students with ASD, Abdullah tried hard to understand what they students wanted “through observing their body gestures.”

The sense of responsibility that some participants feel for their students made some of them feel guilty for not doing enough. For example, Abdullah divulged that he felt guilty because “I know I fall short on these things. I neither have the references nor do I use interventions with the students.” However, expressed hope to improve his practice in the future. He stated that:

> This interview is useful to me. When someone talks about his job, he can understand where he falls short and what his mistakes are. I will try to correct these things. I am thinking about some of your questions and will search them. I honestly benefited and gained more information.

According to Fares, "a teacher is supposed to devote all his time to his students completely." Yet, because Fares is working on moving to his home city, he cannot fully allocate his time and efforts to his students. As a result, Fares characterized this as a

“mistake,” because other issues should not intervene in a teacher’s work. According to Fares, devoting all of one’s efforts to benefiting their students and working on improving their skills should be a teacher’s top priority. Mohammad echoed Fared by saying that "the problem is that we do not feel like we are working." With this statement, he indicated feeling guilty that he does not do his job the way he is supposed to. Salem also recognized that, as teachers of students with ASD, they are supposed to work more with their students using multiple interventions, aids, and activities that can facilitate the learning process.

Feelings of frustration and disengagement. Working hard with students with ASD but not seeing positive results engendered feelings of frustration in the participants. For example, Hamed reflected that:

> After one year of working with students with ASD, I did not see any achievement with my students and there was no progress. For example, I worked hard with one of my students for two months to achieve one goal. After two or three weeks of achieving the two-month goal, I found that he had completely forgotten the goal that we worked on. Moreover, sometimes, I work for two or three months on one goal, but I couldn't achieve it with this student.

When, as Hamed stated, “you work but no results show up,” feelings of frustration can result. Talking about one of his students who reportedly did not learn anything nor communicate effectively, Abdullah stated that “I tried everything possible with him, such as clay, books and all other things. There is no hope that he receives or learns anything from me. Maybe my way of teaching and my methods are not suitable for him.” However, Abdullah explained that he did not give up hope that the student would learn

something someday. Frustration with students' progress also caused Salem mixed feelings:

> I always think how to become special to my student and get him to remember me in the future because I did something good for him. However, sometimes I get disappointed and feel like I do not need to make a lot of effort because no matter what, the student I work with is a student with ASD. Some of them cannot read or write. I keep asking myself how I can deal with him. A feeling between negligence and a feeling that I have to do my job and that is it.

Some of the teachers indicated a level of frustration that made them want to change their job. According to Ibrahim, some teachers become special educators just because they know employment after graduation is likely. However, the lack of knowledge and sense of self-efficacy made some participants consider they should "stop teaching and try to find another job." For example, Hamed admitted that he does not like his job and would change it if he could: "If I have the opportunity to change my job, I would love to."

Positive perceptions about inclusion. Some participants expressed their belief that inclusion programs positively affected their students. Fares explained that:

> I was teaching in a school for students with disabilities last year. This year, I am teaching in an inclusion program. I think that inclusion can positively affect the students with ASD. There are two classrooms for students with ASD in my school now. My students are excellent. I think that I can do one program for the morning assembly with them.

Fares concluded the inclusion programs helped his students improve their skills rapidly. He elaborated this point by saying that the inclusion programs give students with ASD a

chance to interact and communicate with students without disabilities in ways that positively help his students with ASD. Fares opined that students with ASD who he is now teaching in an inclusion program have achieved better results and their skills have improved more than the students who he taught last year in public separate day school. He suggested their progress “is because of the inclusion program. I am not sure whether it is the main factor or not, but I think it helped them.” In contrast, when discussing students in public separate day school, he stated, “as a novice teacher, it's hard for me to deal with students who are in a public separate day school. I need a lot of time to understand them.” Hamed echoed this preference for working in an inclusive setting: “As a teacher, I do not want to work in a public separate day school. I want to work in an inclusion school.” Hamed suggested that these programs have many advantages for students with ASD, their teachers, and their families. Abdullah also maintained that newly employed teachers should not be assigned in public separate day school. He explained that beginner teachers should not teach students with ASD in public separate day school because they do not have enough experience teaching and understanding students with severe ASD.

Conclusion

In conclusion, the Kingdom of Saudi Arabia continues to address issues of meeting the needs of people with disabilities. One way to improve the quality of life for citizens with disabilities is through education. The purpose of this study was to explore the beliefs and perceptions of teachers of students with ASD in Qassim about their knowledge, teaching skills, and preparation to teach students with ASD. As I discussed above, three themes emerged from the data analysis. They captured the beliefs and

perceptions of teachers of students with ASD in Qassim about their teacher preparation programs, post-BA learning that they attended, and the reality of teaching in schools.

To provide a quality education for this segment of society means ensuring high quality teachers for these students. These teachers must know how to address the needs of students with disabilities, including those identified with ASD. Although much research has been conducted on identifying and addressing the needs of children with ASD, more is required. This is especially true in Saudi Arabia, as social, cultural, and religious beliefs may influence teachers and, subsequently, the teaching of ASD. Therefore, the findings of this dissertation might help stakeholders in Saudi Arabia to provide a broad range of best practices in preparing future special education teachers to help children with ASD to learn, thus helping to improve their overall quality of life. Additionally, there is a need for creating a higher education appropriate to prepare professionals to improve their knowledge and to provide better guidance to schools and to families of children with ASD.

Chapter 5

Discussion

The purpose of this study was to explore the beliefs and perceptions of teachers of students with ASD in Al Qassim about their knowledge, teaching skills, and preparation to teach students with ASD. This study addressed two questions. The first question was what teachers in Al Qassim believe they know about ASD and how to teach students with ASD. The second question was what teachers of students with ASD believe they need to be successful teachers of students with ASD. I addressed these two questions by interviewing seven practicing special educators in Al Qassim, Saudi Arabia. Below, I offer a summary of my findings and discuss them in terms in depth. I also drew implications for practice and research, based on the findings of the study.

Summary of the Results

I identified three major themes: (a) participants' perception of their teacher preparation programs; (b) post-BA learning; and (c) the reality of teaching in schools. In the first theme, the participants talked about their programs and how these programs qualified them to be special education teachers for students with ASD. The participants pointed out that they studied four years in their programs about disabilities. After their second year, the participants chose one track (ASD) and completed their program to be specialized in that track. All the participants spoke positively about the theoretical information that they studied in their programs. Mostly, the participants related concerns that the curriculum of their teacher preparation programs was primarily theoretical. They contended they were not exposed to the practical aspects of the theories that they learned in their programs, which resulted in a lack of practical skills. Most of the participants had

positive attitudes toward their field experience. While some of the participants noted that they taught students with ASD on the last semester in their programs, they complained that their teacher preparation programs did not allocate enough time for field experience in order for them to become sufficiently familiar with the environment of the Saudi schools and Saudi students with ASD. It was clear that one of the major issues that effected the attitude of the participants about their teacher preparation programs was their perceived lack of sufficient practical experience in their programs.

Participants in this study also talked about their post-BA learning interests. Most of the participants spoke positively about the professional development experiences they attended. They reported that the information and methods that they learned in these courses were more helpful because they touched on some obstacles they faced during their schools' day. For example, two of the participants reported that some of the professional development courses they attended were equal to what they learned during the four years that they studied at university. However, a few participants noted that they did not benefit much from some professional development sessions they attended due to problems such as the qualification of the presenters and quality of the material taught. Some participants relayed concerns about the content of the professional development, the time, and the location where these courses held.

The reality of teaching in schools was the third theme in this study. The informants reported using various interventions and activities to teach their students who have ASD. In addition, the findings indicated that most of the participants held the positive attitude toward children with ASD and a high sense of responsibility to teach these students. However, negative attitudes toward students with ASD and feelings of

frustration were reported as well. Some participants did not expect what they encountered because they had not anticipated teaching students with low functioning ASD. According to some, these students need well-experienced teachers. As captured in this theme, the informants relied on a variety of resources to gain and update their knowledge. Mentor teachers were reported to be good resources for some participants. However, in light of the shortage of experts on ASD in their schools, some divulged they used the internet, social media, books, and contacted university professors with Ph.D.'s in special education. Interviewees also discussed the kind of supervision available to them. Most of the participants had positive attitudes toward their supervisors. However, some relayed concerns about a shortage of supervisors in Al Qassim who are experts in ASD. The informants noted that some of the supervisors who visit schools are specialized in other disabilities which is intellectual disability. The primary reason stated for wanting supervision was to have their work corrected if done inappropriately, and supported and encouraged if going well.

Discussion of Results

In the following sections, I will discuss the results of this study and connect the findings with other studies that I reviewed in Chapter two. I used the theory of expertise in this study. I found solid foundation between the results of this study and the theory of expertise. However, even though there was a high cohesion between the results of this study and theory of expertise, some of the results of this study do not coincide exactly. I will discuss these points in the following sections.

Participants' perception of their teacher preparation programs. The results of this study revealed that teachers had both positive and negative attitudes towards their

teacher-preparation programs. The reviewed research showed a high relation for special educators between good preparation during their teacher preparation programs and their performance in their professions. The interviewees reported that they were enrolled in teacher-preparation programs for a minimum of four years. During this time, the participants learned how to teach students with ASD. This contrasts research that carried out in countries other than the Saudi Arabia where some studies (e.g., Ludlow et al., 2007) have indicated a significant lack of pre-service teachers who had taken coursework on how to teach students with ASD and that addressed the various learning needs of students with ASD. Another positive aspect of the teacher-preparation programs revealed in this study is that the interviewed teachers received two years of specific training on ASD out of their four-year bachelor's program. This finding contrasted with some of the reviewed research that investigated teachers of students with ASD in other countries. Some studies, such as Ryndak et al., (2001), credited the lack of bachelor's programs specialized in ASD to the significant level of difficulty usually associated with the field of ASD. That was different from what the results of this study revealed about teacher-preparation programs in Saudi Arabia.

And yet, the findings of this study showed that the training the interviewed teachers received was still not quite adequate to prepare them for the realities of teaching. All of the interviewed teachers reported that they were shocked for when they experienced working with real students with ASD. Hence, these findings were consistent with some of the studies reviewed earlier which revealed a significant number of special educators start their job with inadequate training and low level of experience of working with students with disabilities. Lee et al., (2011) for instance found that several special

education teachers start their job with inadequate training. Thereby, they are prone to losing confidence in their qualifications. Additionally, similar to the findings of Campbell et al., (2003), the results of this study showed that teachers who start their job with insufficient training and working experience are more susceptible to questioning their confidence and suffering lack of motivation to teach students with ASD.

The participants in this study had between two and four years of experience in teaching with students with disabilities. According to the theory of expertise, reaching the level of expertise is highly associated with how long practitioners have worked and acquired experience, as well as the quality of the preparation they received. Ericsson and Lehmann (1996) explained that in a given domain, an individual is in need of a minimum of ten years of practice to achieve the highest level of performance. Therefore, given the assumptions of the theory of expertise, all the participants in this study fall under the category of novices. Their actions were inflexible and impractical in certain incidents, and they would try to apply what they learned during their teacher preparation, regardless of its relevance to the specific situation. These characteristics are consistent with what Berliner (1988) identified as characteristics of novices, who may behave in certain ways without relating their actions to the specific goals at hand. Based on the characteristics of novice and expert teachers posited in the literature, it is fair to conclude that lack of experience and lack of practice during their teacher preparation programs was the leading cause of the shock the interviewed teachers reported feeling once they started working. The results of this study regarding the participants' perception of their jobs and the shock of reality were consistent with the predictions of the theory of expertise. Therefore, it would be important to evaluate teacher-preparation programs in more depth to determine

the main reason behind teachers' feeling of shock. I provide more explanation and discussion related to this argument inspired by the theory of expertise in the section on future research below.

One problem all participants talked about was the absence of practical aspects of courses in their teacher-preparation programs. As stated earlier, this appeared to be the preeminent cause of the participants' shock when beginning teaching. This finding was consistent with some of the studies reviewed in Chapter two that identified the dire need for practical courses to help pre-service teachers conceptualize the real tasks they are going to do as educators and the actual disabilities of students identified with ASD. Haverback & Parault (2011) examined the development of teacher self-efficacy through pre-service teachers' participation in field experiences during the last two years of a four-year teacher education program. Pre-service teachers participating in a semester course on language and reading development were divided into two groups, with one group observing students in a large group setting and the other group observing students in a small group setting. The small group setting allowed the second group to assist the students in their learning activities. The findings from the study showed that although both groups of pre-service teachers benefited from the field experiences, as reflected in an increase in teacher self-efficacy, the group that was allowed to interact with the students in small group settings reported that their experiences were more meaningful to them than what the other group reported, helping to facilitate the development of content knowledge as well as their sense of teacher self-efficacy. Feiman-Nemser (2001) emphasized that doing prolonged periods of field experience allows pre-service teachers to develop an idea about how theory relates to practice. This result is also consistent with

the findings of Masterson et al., (2014) and McCabe (2008), who noted the critical importance of adequate field experience so that teachers can build positive relationships with their students. Simpson (1995) showed that teachers did not receive enough training on pedagogy and did not acquire the skills necessary for aptly using various teaching methods, similar to this study. Nakai and Turley (2003) suggested that pre-service teachers need a variety of field experiences that allow them to observe a wide range of grade levels, teaching styles, and students from various demographic backgrounds. In addition, Cooley-Nichols (2004) found that some teacher preparation programs do not provide sufficient coursework in pedagogy or strategies that address the needs of students identified with ASD. This again was consistent with the finding of this dissertation, as well as the theory of expertise, which postulates that lack of practical application and low-quality field experience is the key factor behind designating teachers as novices. It is crucial to consider that what Ericsson and Lehmann (1996) referred to as deliberate practice plays a significant role in reaching the status of expertise. To achieve the level of expertise, teachers must practice what they learn theoretically with experts. I discuss this issue further in the suggestions section.

According to the participants, they were allowed one full semester in which to do field experience and teach students with ASD. Most of the participants who participated in this dissertation had positive attitudes toward their field experience. Capraro, Capraro, and Helfeldt (2010) suggested that pre-service teachers benefit significantly when provided with opportunities to examine preconceived ideas about teaching through field experiences that allow them to observe and participate in teacher and student interaction. However, some participants who participated in this dissertation contended that this

amount of time was insufficient to achieve the necessary expertise and apply all of the theories and information they learned during the preceding three years of their teacher-preparation programs. This result strongly supports the findings of other studies carried outside the Saudi Arabia. For instance, Donaldson (2015) and Morrier et al., (2011) concluded that some teacher-preparation programs do not offer enough time for field experience, negatively influencing the overall performance of teachers when they start their teaching profession. Bransford, Brown, and Cocking (1999) suggested that experiences in teacher education programs are essential in providing pre-service teachers with opportunities to develop teaching pedagogy through field experiences and the needed reflection that should accompany those experiences. One concern expressed is that once a teacher enters the classroom as an in-service teacher, time becomes greatly limited for reflection and experimentation in developing pedagogy and both content and technological knowledge. This finding is also compatible with the postulations of the theory of expertise that suggest daily practice with a pre-set number of minimum hours should be spent on practicing in order to ensure concentrating on the job. (Ericsson et al., 1993). This implied that teacher preparation programs should have courses with a practical component, where students practice applying theoretical information with feedback from the instructors of these courses. Boyd, Grossman, Lankford, Loeb, and Wycoff (2009) noted that pre-service teachers are able to perform better during their first year as classroom teachers when their last year of teacher education provides field experiences that directly relate to their first-year teaching assignments. Liaw (2009) reported that one way to support the development of self-efficacy in teacher education is through providing a number field experiences for pre-service teachers as a way of

bridging theories they learn in the program to practical applications in the classroom. These opportunities allow the pre-service teacher the opportunity to develop and deliver lessons, while further developing teaching pedagogy through classroom management and teaching strategies. I provide additional suggestions about this this point later in this chapter.

The number of supervisors' visits to pre-service teachers doing their student teaching was among the concerns the interviewed teachers talked about. This finding was similar to Busby et al., (2012), who noted that trainee pre-service teachers need to practice and experience how to teach students with ASD in a real special education environment with the help of supervisors to ensure their future success. These findings also reflect the suggestions of the theory of expertise which postulates that achieving successful teacher training is primarily based on the availability of supervisors. In this case, to improve the outcomes of field experience supervisors must give necessary and incident-related recommendations and suggestions for the trainee teachers. Similarly, Ericsson and Lehmann (1996) explained that the role of the trainees is to extend from their supervisors' feedback to decode it and attempt to perfect their performance in the future. Thereby, results of this study largely supported this suggestion as participants complained that one of the core issues that hampered the process of improving their performance was the lack of supervision during their field experience.

Post-BA learning. This theme refers to the activities participants reported they were involved in in order to improve and update their knowledge and teaching skills after graduation from their teacher-preparation programs. Hendricks (2011) also emphasized the importance of post-BA learning, noting that special educators need professional

development to develop a better understanding of ASD and the specific needs usually associated with students identified with this disability. The results of this study uncovered primarily positive attitudes of participants towards post-BA learning. Interviewees expressed keen desire to improve their skills and strategies by learning new methods of instruction and gaining up to date information on ASD. The theory of expertise implied that professional development would help teachers reach the needed level of expertise. This assumes that professional development includes qualified experts, as well as chances for teachers to obtain good information and opportunities to promptly apply what they learned. Ericsson and Lehmann (1996) explained that in essence, theory of expertise has to do with developing specific skills over a certain period of time through appropriate instruction and practice. Studies conducted outside of Saudi Arabia suggest that professional development courses provide these benefits to the teachers who participate in them. The same results applied to this study, which revealed that professional development courses were helpful for those participants who engaged in them. Professional development courses reportedly helped participants gain updated information and opportunities for practicing skills. Indeed, most of the interviewed teachers had a positive outlook on the professional development courses they attended. This is consistent with other studies conducted outside Saudi Arabia, such as Browder et al., (2012), Hill et al., (2014), Koegel et al., (1977), and Lerman et al., (2008), which found that professional development increased the quality of teaching and classroom practices. Such professional development helped teachers better appreciate the capabilities of students identified with ASD and become better able to teach them.

As a place where all these benefits are available, participants in this study reported positive attitudes towards professional development. Typically, they were pleased that professional development offered them opportunities for practicing what they learned with their students, which they lacked during the teacher-preparation programs. The results of this study are consistent with other studies that noted teachers benefited most from professional development courses because they were able to practice and apply what they learned with their students identified with ASD (Browder et al. 2007; Lerman et al., 2008). With that said, the results of this study, and others conducted outside Saudi Arabia, highly support the theory of expertise which stresses the importance of training and practice to build practitioners experience in the best way possible.

Nevertheless, a few participants noted that they did not benefit from some of the professional development courses they attended, which they attributed to certain problems. Chief among their concerns were the lack of qualification of the coaches and the quality of materials used in these professional development opportunities. Some studies conducted outside Saudi Arabia found similar results, indicating that there are some weaknesses of professional development courses that need to be attended to and addressed in the future. Other studies have identified feedback as an essential element of professional development. It is crucial for professional development to provide opportunities for teachers to practice with their students and receive feedback from supervisors and coaches (Coogle et al., 2015; Parsons and Rid, 1995; Simonson et al., 2010). This finding was echoed by the participants of this study and is consistent with the theory of expertise, which suggests the importance of ensuring professional development

by qualified teachers. Some Participants pointed that they need qualified coaches to run professional development courses so they can effectively communicate and interact with them so as to ensure the success of the professional development experience. Ericson and Lehmann (1996) likewise emphasized the importance of an expert coach in the courses who can offer feedback to the individuals for purposes of refining their skills.

Some participants also criticized the time and location of these professional development courses, which negatively influenced their ability to attend these courses and gain the desired benefits. The weaknesses of professional development courses this study uncovered were similar to those identified by previous research. For example, Joyce and Showers (2002) noted that the lack of follow-up sessions to encourage teachers to utilize the strategies that they learned in these courses is a serious problem. Both this study and the result of this dissertation suggest that teachers need follow-up sessions to improve the skills they learn during professional development courses.

The findings of this study, as well as those of some of the reviewed research, regarding the importance of practice are strongly supported by the theory of expertise which emphasizes the need for practice to gain sufficient levels of expertise (Ericsson et al., 1993). Realizing their importance, informants expressed enthusiasm for taking part in professional development training in the future to further improve their teaching skills, strategies, and learn more helpful information. Similarly, participants in other research projects expressed more willingness to develop positive relationships with students after participating in professional development, with the goal of improving students' knowledge and skills (Machalicek et al., 2010; Shepis, Reid, Ownbey, & Clary, 2003).

The reality of teaching in schools. According to Leko and Brownwell (2009), special educators need to develop the necessary knowledge to eventually understand their students' disabilities and be well prepared with strategies that help them manage their challenges. Even though all of the participants reported they did what they could do with their students, their comments suggested that their low level of expertise was a primary obstacle in delivering effective instruction. For example, Mohammad noted that teachers "cannot find solutions" for some problematic behaviors of their students. As such, the findings of this study resonate with the results of Leko and Brownwell. Expertise per se was defined by Berliner (1988) as the "ineffable ability to get things done and to perform in an almost effortless manner" (p. 39). Chase and Simon (1973) similarly argued that one part of developing a level of expertise in a particular domain includes years of experience, acquiring considerable knowledge, and the ability to perform pattern-based memories. Using these definitions of expertise, it can be argued that it is hard to find experts in ASD in Al Qassim because this is a relatively new major and therefore, teachers and instructors of ASD in Al Qassim will need more years to acquire expertise in this field. Ellis and Porter (2005) found that one benefit of increasing the knowledge level of teachers of students with ASD is that they build a more positive attitude towards working with these students. Ibrahim, for instance, said that he loves his students and working with them that he is considering applying for the master's degree. The results of this study suggested that the reason the participants had such positive attitudes is that they had at least a few years of experience and they were able to achieve some positive results with their students. This positive outlook on students with ASD was also shared by Mohammad, who explained that helping his students make any achievements gave him

impetus to “offer them more than what I can.” These type of feeling reportedly compelled participants to use interventions with to improve their students’ skills. One of the major questions of this study was what interventions special educators used with their students who have ASD. The participants reported they faced significant challenges when trying to communicate with their students with ASD, especially those who work with students identified with higher support needs. For example, Abdullah explained that because some students with ASD cannot speak, it is difficult for the teacher to understand them. Bloom and Lahey (1978) defined communication as the act of exchanging information involving two or more people. In addition to Abdullah, Majed also had this difficulty. He clearly stated: “I cannot understand what the student wants.”. In order to facilitate their students’ communication, some participants in this study used Augmentative and Alternative Communication and the Picture Exchange Communication System. Most of the participants in this study reported that this intervention helped them communicate with their students. Results of studies like Ganz and Simpson (2004), Lunda and Troha (2008), and Murdock and Hobbs (2011) suggested that using cards with photographs, images, or words that represent tasks or objects can increase the communicated requests made by students identified with ASD. Another intervention that participants in this study used was video modeling. Tetreault and Lerman (2010) found that video modelling helped students with ASD to improve certain behaviors and develop social skills. This type of intervention was reportedly used by some of the interviewed teachers, who used videos for several purposes. For example, Hamed used videos to show his students some behaviors he wanted them to imitate. However, in general, the content of the participants’ interviews suggest that Saudi teachers need additional support to learn more how to use

interventions with their students who have ASD and that this support be provided by experts who can teach them how they can use these interventions and evaluate them and provide corrective feedback once they apply these interventions with their students.

According to the theory of expertise, an individual who has achieved the level of expert develops a highly organized memory to pull out and apply relevant information as needed (Ericsson & Lehmann, 1996). A number of the informants' comments suggested they lack of experience to teach with their students effectively. The theory of expertise suggests that it would be easier for expert teachers to handle their students' frustration or obstacles, whether in or outside of school. This theory also predicts that when they reach the level of expertise, teachers can see and delve into the root causes of the students' problems. For expert teachers, stopping the cause of the problem is as crucial as solving the problem itself (Berliner, 1986). This characteristic of an expert teacher did not apply to all of the teachers interviewed in this study. For example, Majed recalled a student who used to interrupt the educational process by walking around the classroom and talking loud. When Majed could not handle the situation anymore using the strategies he knew, he would ask the student to leave the classroom. Majed did not report trying to investigate the causes behind the student's behavior, rather, dealt with the problem behavior in isolation of possible causes. The results of this dissertation suggested that the root cause of such reactions on the part of the participants was a lack of expertise with methods of modifying problematic student behaviors. As the theory of expertise predicted, these novice teachers turned their focus to resolving the direct problem of the student at the moment but failed to investigate and address the core reason behind the problem (Berliner, 1986).

Although the majority of this study's results were consistent with the suggestions and principles of the theory of expertise, there were several examples where the results did not agree with the theory of expertise. For example, the theory of expertise suggests that a major attribute of expert teachers is their capacity to handle teaching, especially in changing situations or instances where the teaching plan does not go as planned. Berliner (1988) explained that only expert teachers would have contingency plans in case the original plan did not work as expected. Novice teachers, in the light of the theory of expertise, do not usually make a backup plan for such situations. In contrast to this suggestion, this study found that although all participants were in the category of novice teachers, most of them had a contingency plan for when their original plan did not go as planned. For example, Ibrahim, a teacher with only two years of experience, would start the lesson by writing the subject and activity on the board. However, if the students were not responsive, he reported that: "I called off the lesson and changed my plan to chatting with the student." Even when the lesson did not go as planned, Ibrahim allegedly tried his best to have a valuable and beneficial conversation with the student to make up for not teaching the lesson as planned. Through this chatting, Ibrahim tried to teach the student morals and improve his communication skills.

Implications

Practical applications. This study has some practical implications for universities that have special education programs, as well as the centers that offer professional development courses to help in-service teachers. It has implications for educators and decision makers at the Ministry of Education to help clarify what these teachers want and need to have in their job of teaching students with ASD. More

importantly, the findings of this dissertation have implications for teachers who seek to better develop their teaching skills.

Suggestions for Ministry of Education. Teacher evaluation has shown many benefits and is supported by a number of studies (e.g., Leko & Brownell, 2009; Lerman et al., 2004; Helps et al., 1999). Such evaluations can reveal areas of strength and weakness of teachers and assess teachers' knowledge of ASD. Therefore, The Ministry of Education in Saudi Arabia might consider conducting regular evaluations of practicing special educators, with a particular focus on those working with students with ASD. These findings also suggest that identifying experts in ASD who could work with teachers to assist them to find ways to address the needs of their students with ASD could help foster the development of teachers from novices to experts. Additionally, the results of this qualitative study suggested that the times and locations of professional development courses were not a good match for some of the participants, which inhibited their opportunities to attend these courses. Therefore, among the steps that Ministry of Education might undertake is a reconsideration of the professional development courses provided for teachers of students with ASD. First, The Ministry of Education might consider evaluating the extent to which those who conduct these courses are expert in the field and qualified to provide the training. This might increase the chances of success of these courses. The Ministry of Education could modify the time and place where these courses are held. In addition, the Ministry of Education could poll the opinion of teachers regarding these courses, such as what they think were the strengths and weaknesses of the training and the extent to which they feel it would affect their success in the classroom. Finally, this results of this dissertation suggest that teachers of students with ASD may be

interested in updating their knowledge about methods of teaching students with ASD. The participants of this study indicated interest in knowing more about what methods and interventions to use with students with ASD. Therefore, the Ministry of Education could provide sources and references for the latest updates in the field of ASD and a list of all the available websites that maintain updated information on ASD and the various interventions for students with ASD.

Suggestions for universities. Even though Saudi pre-service teachers study for four years about disabilities including ASD, university administration could evaluate the material and curricula that their pre-service teachers are exposed to during their teacher preparation programs. According to AL-Babtain (1998), the Ministry of Education encourages the universities and stakeholders to assess the programs at the universities in Saudi Arabia. Therefore, university administrations might consider reviewing their teacher-preparation programs to ensure they are producing more experienced graduates. The findings suggest programs should include more courses with practical content and give students additional experience practicing with students with ASD. This would give pre-service teachers a realistic perception of what teaching students with ASD looks like, what they should expect after graduation, and what they will need to fulfill their job successfully. Wilson (1996) investigated the impact of various kinds of field experiences on pre-service teachers' sense of self-efficacy, which is the belief that one is capable of developing teaching skills. Wilson found that pre-service teachers reported a greater sense of self-efficacy when field experiences were carefully planned out, helping the pre-service teacher to understand the relevance of field experiences to the development of teaching pedagogy.

Some participants related concerns about the faculty in their teacher-preparation programs. As Addison et al., (2004) reported, there is a notable increase in the number of children diagnosed with ASD; the increase attributed to the revised criteria of diagnosis of ASD. Therefore, there is a growing need for programs for teachers who will be working with children diagnosed with ASD who have a curriculum that addresses the needs of these teachers and which instructors knowledgeable about this subject area. The results of this dissertation suggest that universities should consider what criteria would be appropriate when hiring professors who will be preparing pre-service educators to work with students with ASD. Additionally, it would likely be useful for program faculty, both international and domestic, to spend time observing local schools. This would give them insight into the contexts in which their students will be teaching post-graduation. This could ultimately help faculty better determine what should be taught to pre-service teachers to evade the difficulties these research participants reported experiencing. In addition, these findings suggest that these be more frequent and consistent supervision of student teachers by program faculty. Receiving systematic observations and evaluation by their university supervisors should help pre-service teachers recognize and address their mistakes when identified with the assistance of their supervisor's feedback, and avoid repeating them after graduation. This would ideally eventually contribute to improving the educational process of students with ASD. Related to this, the timeframe universities allocate for pre-service teachers to engage in field experience could be extended to more than one semester. This time extension might allow pre-service teachers to gain additional scaffold practical experience that might improve how they teach Saudi students with ASD after they graduate. Extending the amount of field

experience in their teacher preparation programs would also grant these novice teachers the opportunity to get familiar with the environment of Saudi schools, conceptualize the difference between what they are learning as best practices and what reality might be in the schools, and what they need to focus on in order to succeed in their future careers. Grisham, Laguardia, and Brink (2000) examined the factors that make a quality field experience. Participants in the study included five pre-service teachers enrolled in the last year of their teacher education program. Findings suggested that teacher education programs should provide a full year of field experiences so that the pre-service teacher has ample opportunity to conduct action research and to participate in group study activities. In addition, pre-service teachers should be closely supervised by a committee composed of university faculty members, as well as school personnel, including the school's principle and multiple mentoring teachers. Requiring that pre-service teachers observe and deliver lessons in multiple classrooms allows them to broaden their experiences in observing different teaching styles and different grade levels, as well as the teaching of different content material.

Finally, the results of this dissertations suggest that special education teach preparation programs are teaching their students how to update their information about ASD and teaching students with ASD and find new information in the field of ASD after graduation, so as to instill the expectation that they be life-long learners. One possible avenue is for universities to establish resource centers that include information about how to obtain information and new resources on ASD. Such a center could help teachers look for information about new interventions, as well as provide them with information about

how to deal with unexpected and stressful situations they might encounter with students with ASD.

Suggestions for teachers. Teachers are the cornerstone of the field of teaching. The results of this study suggest that teachers need to continue improving their instructional practices across their career. Other research suggests that advanced training can help teachers develop and maintain positive attitudes and beliefs about students with ASD (Desimone, 2009; Lee et al., 2011). Gresham (2008) found that two major factors are involved in promoting a sense of self-efficacy in teaching. One is that teachers develop a level of confidence in their ability to develop the skills necessary to be effective in the classroom. This includes content knowledge as well as teaching methodology, technological skills, and classroom management skills. The second factor in promoting teacher self-efficacy is the belief that teachers can have a positive impact on student learning, regardless of outside factors over which the teacher has no control, such as the student's socioeconomic level or home life. Therefore, one recommendation is that teachers attend professional development courses where they would have opportunities to exchange ideas with other teachers who have experience teaching students with ASD. Through these nascent networks, they might also learn new teaching skills and methods. This could eventually help teachers become more effective in teaching their students.

Moreover, novice teachers could also build and maintain relationships post-graduation with professors who taught them during their teacher-preparation program or with their student teaching mentor teachers. It could be that by staying connected with professors and mentor teachers, they could request assistance and consultation when facing dilemmas of practice. Keeping in contact with professors and mentor teachers

could also help in-service teachers review their plans, methods, styles, and interventions as a way of seeking improvements for their career and students. Teachers might also seek updated information though the professional literature or by joining professional organizations that might offer help and suggestions for educators who work with students with ASD.

Limitations. This study is not without its limitations. Foremost, there were limitations related to the study sample, in terms of gender, experience of the participants, and number of participants. First, the participants were all men, which might have skewed the results of this study to some extent. For results with wider applicability, future research should include female teachers. Including women in the study could result in findings different those presented here because the experiences of female teachers may be very different from those of male teachers in Al Qassim. Additionally, all of the participants had between two and four years of teaching experience. It is unknown whether the participants are representative of the entire pool of teachers in Al Qassim who work with students with ASD, in terms of teaching experience, or if any of the individuals who declined to participate had more than four years of teaching experience. If the latter is true, this may have skewed the results to reflect the experience of only those with less experience and knowledge of ASD. To address this limitation, future research could attempt to recruit teachers with more years of experience and knowledge about ASD. Another limitation is the sample size, as only seven individuals participated in the interviews. This represents a third of those recruited for this study. Compared to the number of teachers of students with ASD in Saudi Arabia, this is a relatively small percentage. Ideas to increase participation in future research include: (a) offering

incentives to participate, (b) developing relationships with local practitioners, such that they might feel more comfortable volunteering to participate, (c) teaming with a female colleague who could recruit and interview female participants, and (d) eliciting the support of school administrators and university faculty to recruit participants, as having those individuals make personal contacts with potential participants might encourage more to consider opting to become involved in research efforts.

Another limitation of this location in which I conducted this study. All participants teach in schools located in the Al Qassim area. Like the limitation of participant gender, the location of the study may also have influenced the results of this study because there may be some aspects of the context that might be different from other regions in Saudi Arabia. For example, it could be that teachers of students with ASD in Al Qassim are relatively inexperienced, in comparison to other regions. Future research, therefore, could include teachers who work in schools located in other areas or provinces. Interviewing teachers in other areas could reveal differences in teacher education programs and the experiences of teachers between regions. For example, Riyadh, the capital of Saudi Arabia, has a longer history of teacher education programs specialized in teaching students with ASD than in Al Qassim. Such a cross-region study might reveal differences between novice and expert teachers of Saudi students with ASD, as well as other potential differences between regions.

Another limitation of this study is the order of questions directed to interviewed teachers of students with ASD. The way I organized the interview questions in this study might have contributed to some negative comments of participants about their teacher-preparation programs. In the interview protocol, questions about how the participants use

interventions with their students with ASD and how they teach them came before questions about their experiences in their teacher education programs. The opportunity to consider some limitations in their teaching practice might have led them to perceive the education they received in their teacher preparation programs more negatively when asked about such afterward.

Future research. One of the themes emerging from the analysis focused on the view of in-service teachers toward their teacher preparation programs. Several studies reviewed in Chapter two, such as Busby et al., (2012), showed the benefits of evaluation the teacher preparation programs. To obtain a more comprehensive view of the quality, weaknesses, and strengths of teacher preparation programs, future studies could include interviews with faculty who teach in teacher-preparation programs, and conduct observations of their teaching style and method inside classes. The scope could also include an evaluation of the overall curriculum (e.g., sequence of coursework) and the syllabi of individual courses. This latter could include a review of the required teaching, such as textbooks and professional articles, as well as instructional activities and assignment. Future research could extend to a comparison of teacher preparation programs at various universities. This could eventually allow for means of determining program quality.

Learning more about the ways that teachers update their knowledge offers a potentially useful initial perspective on their desires and inclination for professional improvement. Future research on teachers of students with ASD and ASD-related issues could explore aspects of post-BA learning, such as the quality of those teaching professional development courses, the information that these courses present to in-service

teachers, and whether it helps teachers carry out their jobs more effectively. Such research could also help identify what would make them more useful for in-service teachers, such as considering the time and location of these courses and how these aspects influence in-service teachers' opportunities to attend these courses. Because these courses are intended for the good of in-service teachers, they should be thoroughly studied to evaluate the extent to which they achieve this goal.

The participants showed positive attitudes towards inclusion programs. However, the design of this study was such that determination of the reasons for their positive attitudes cannot be made. However, in future research, questions might be asked about their beliefs about inclusion and about the inclusion of students with more intensive support needs in general education classrooms and regular schools. Or, questions could be asked about how and where teachers believe such students should and could be educated and what it would take to educate students with more intensive support needs in more inclusive settings. There appears to be a need for future studies that investigate that issue more closely.

In addition, the results of this study suggest there is a need for qualitative research that includes observation of the practices of in-service teachers inside their classrooms. Research is needed to observe the instructional methods and teaching styles of in-service teachers and the activities and interventions they use with their students who have ASD. Observation should additionally focus on the way teachers deal with unexpected incidents and difficult situations that take place inside and outside the classroom. Observation could also focus on the ways that students with ASD respond and react to their teachers and to the different interventions and activities that are used in the

classroom. Such research could help identify shortcomings of teachers' instructional practices and suggest what could be done better. Furthermore, in this dissertation, I conducted interviews with in-service teachers who have only a bachelor's degree in ASD. Therefore, future research could involve those who have achieved a masters' degree in order to investigate whether such advanced study assists them in obtaining better results with their students with ASD. Such research could further help us suggest needed improvement of bachelor programs in Saudi Arabia, as well as the strengths and limitations of masters' programs.

Conclusion

Due to the importance of helping students with ASD learn and improve, officials in Saudi Arabia are working on developing the field of ASD to ultimately offer students with ASD the best possible resources and help. The purpose of this research was to explore the beliefs and perceptions of teachers working with students with ASD in Al Qassim, Saudi Arabia. It provided a close-up view of the participants' knowledge, teaching skills, and methods of preparation to teach students with ASD. The results of this study clustered into three themes: (a) participants' perception of their teacher preparation programs, (b) post-BA learning, and (c) the reality of teaching in schools.

Each of the themes and subthemes discussed in this study might provide some useful information for certain special education-related entities, officials and decision makers in Saudi Arabia. The Saudi government has invested significantly to improve education in Saudi Arabia, such as by sending Saudi special educators to study outside the country, with the ultimate goal that the new knowledge and experience they gain will be brought back to their home country eventually. The ultimate purpose of all these

efforts is to develop education and consequently help to improve the life of students with ASD.

The results included in the first theme of this study might benefit those involved in university education in Saudi Arabia. Founders of special education programs might find that these findings give them hints into what they might want to consider to develop unique and effective special education programs. The findings of this research suggest that there are good four-year programs for special education in which pre-service teachers obtain specialized training related to one particular disability, such as ASD. However, program administrators and faculty might make use of this study's results to continue with their ongoing program development efforts. For example, such individuals might consider whether the impressions reported by these research participants reflect real shortcomings in their programs and, if so, to what extent are the suggested changed possible and warranted.

The second theme focused on the development of teachers and might be a good source of information for officials the Ministry of Education who are in charge of teacher development. Results under this theme uncovered the potential advantages teachers might gain from professional development workshops and courses. The results of this study might be taken into consideration during effects directed at improving professional development courses to ensure teachers can benefit from these courses to the fullest.

The third theme might speak most directly to teachers of students with ASD. Results of this theme showed that even though all of the participants were novices, they tried their best to educate their students and use whatsoever interventions available for them. This should instill confidence in other teachers, teacher educators, school and

university administrators, and Ministry of Education officials that special educators in Al Qassim have strong professional identities and a sense of responsibility for their students. The participants reported they worked hard to improve their students' abilities, regardless of their lack of experience and still developing knowledge and skills. However, both the theoretical grounding for this study and the results suggest it is a must for novice teachers to practice and communicate with expert teachers to ensure improving their experience, teaching skills and abilities. Therefore, it is essential for teachers of students with ASD in Saudi Arabia to find ways to communicate with expert teachers, whether inside or outside Al Qassim, to continue to develop their ability to support students with ASD in their growth and development as students, individuals, and members of their communities.

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Appendices

Appendix A

The initial interview questions for teachers who participated in this study

Demographic Questions

- Tell me about yourself.
- Do you have a master's degree or an undergraduate degree in special education?
- Which university did you go to?
- Which grade(s) have you taught?
- Which classes have you taught?
- Do you have students with ASD in your classroom?
- How long have you been teaching students with ASD?
- How many students with ASD in your class?

Main Questions

1) Tell me about ASD.

<u>Follow up questions under this question:</u>

- Give me some examples of the characteristics of people with ASD.

2) How did you get into this field?

<u>Follow up questions under this question:</u>

- What made you decide to become a teacher of students with ASD?

3) Tell me about your experiences teaching students with ASD.

<u>Follow up questions under this question:</u>

- Describe a typical day from beginning to end in your classroom
- Tell me about some of the activities you use with your students.

- Why do you use these activities?

4) Tell me about the interventions you use with your students with ASD.

Follow up questions under this question:

- Can you give me some examples of the interventions that you use?
- Tell me how you use these interventions.
- Tell me how you think your students respond to these interventions.

5) Tell me about the teacher preparation programs you attended.

Follow up questions under this question:

- How did your university program prepare you to teach students with ASD?
- Is there anything that you think the program could have done to prepare you better?

6) Have you attended any additional training or professional development since you graduated?

Follow up questions under this question:

- If yes, tell me about it.
- If no, probe whether such training is readily available?

7) What recommendations do you have to improve the quality of teachers who are teaching or who will teach students with ASD?

Possible Prompts for all my Questions

- Can you explain _____ more?
- I'm not sure what you mean by _____, can you tell me more? I meant _____, what do you think?

- What do you feel about_____?
- When you say_____, what do you mean by that?

Appendix B

Letter which was sent to the teacher in order to invite them to participate in this study.

Dear colleagues,

I am a graduate student at the University of New Mexico, Albuquerque, in the United States of America. I am currently doing research to explore the beliefs and perceptions of teachers of students with ASD in Qassim. The purpose is better understanding teachers' knowledge, teaching skills, and preparation to teach students with ASD. I invite you to participate in this study, as it might one day help to raise the level of education for students with ASD in Qassim, in particular, and in the Kingdom of Saudi Arabia, in general. I will conduct this study d through personal interviews via VoIP applications. If you chose to participate, you will choose the time of this interview.

Your participation would be voluntary and I would use a pseudonym (false name) for you, so that your responses would be confidential and I would not reveal how participated or not to anyone. Participant responses will be summarized and reported under their pseudonyms. Your participation will be useful and important for this research. But if you decide not to participate in this study, it would not affect your work or your future career in any way. If you accept participation in this study, please contact me at my Saudi phone number (+966546649339), my American phone number (234-281-5921), or my WhatsApp number (+966546649339).

For any questions about this study, you can contact me at the phone numbers above or through my university email (salothaim@unm.edu). Or you can contact my

faculty advisor, Julia Scherba de Valenzuela, Ph.D., through her email address

devalenz@unm.edu.

Best wishes

Suliman Saleh Alothaim

Appendix C

Outline of themes identified in the analysis.

1.) Participants' Perceptions of their Teacher Preparation Programs

a. Positive attitude toward teacher preparation programs

b. Shocked by the reality of teaching

c. Criticism of the quality of coursework

d. Field experience

2.) Post-BA Learning

a. Effective professional development

b. Professional development issues

c. Continued desire for learning

3.) The Reality of Teaching in Schools

a. Teaching practices and resources

i. *Available resource.*

ii. *Activities and interventions used by teachers*

iii. *Problematic practices and shortage of expert mentor teachers*

iv. *Perceptions about supervision*

b. Teachers' perceptions and attitudes towards students with ASD

i. *Positive attitude toward children with ASD*

ii. *Negative attitudes toward children with ASD*

c. Teachers' perceptions and attitudes towards teaching students with ASD

i. *Assigning students to teachers*

ii. *Lack of appreciation for special education teachers' work*

iii. *Strong sense of responsibility for teaching students with ASD*

iv. *Feelings of frustration and disengagement*

v. *Positive perceptions about inclusion*

Appendix D

The University of New Mexico

Consent to Participate in Research

Interviews with Saudi Arabian Special Educators Working with Students with Autism Spectrum Disorder (ASD) Regarding their Beliefs About Knowledge, Teaching Skills, and Needed Knowledge in order to Meet the Needs of Students with ASD

I am Suliman Alothaim a doctoral student in special education department, at the College of Education, University of New Mexico (UNM). I am conducting a dissertation research project as a partial fulfillment of the requirements for the degree of Doctor of Philosophy in Special Education. The purpose of the research is to explore the beliefs and perceptions of teachers of students with ASD in Qassim region with regards to their knowledge, teaching skills, and preparation to teach students with ASD. You are being asked to participate in this study because you are in-service teachers in the Qassim region, you teach students with ASD, and you have an undergraduate degree in special education with a specialization in ASD.

I am pleased to invite you to take part in this study. Your participation in this study is voluntary. This study will begin from January 2017 and ends in July 2017. Your participation in the study will be highly appreciated. Your role in this research is to be interviewed one time about your beliefs and perceptions which regarding to your knowledge, teaching skills, and preparation to teach students with ASD.

The study will be conducted through personal interviews via VoIP applications. Interview session will be scheduled for no longer than 60 - 90 minutes. I would like to let you know that our interview will be recorded by using Audacity software. This software

will help me to record our interview. You have the choice to decline not to be audiotaped during the interview. If you plan not to be audiotaped, you will need to inform the researcher prior to the interview date so that the researcher can take written notes only.

My role is to conduct the interviews. In the interviews, you will be asked some questions about your personal and professional experiences. Once in a while, there will be some questions that might make you feel uncomfortable during the interviews. Therefore, you have the right not to answer these questions. Also, you may experience some level of stress during the interview due to the minimum one-hour duration, but you are free to request a break time in order to relax yourself, stop or reschedule the interview. No compensation is involved in this study. I would like to assure you that all information gathered from all the participants would be only used for research purposes. I will maintain confidentiality of all information obtained from you.

Your real name will be known only to the researcher; you will choose a pseudonym to be used in place of your name in all data. The researcher and the advisor Dr. Julia Scherba de Valenzuela are the only ones who have an access to the data. The audio-file will be kept in the researcher's password protected computer, while the paper and documents will be sealed in an envelope and kept in a cabinet in the advisor's office in UNM.

If you agree to participate, you will receive a copy of this document. For any questions about this study, you can contact me or with my faculty advisor, Julia Scherba de Valenzuela, Ph.D., through her email address devalenz@unm.edu. If you would like to speak to the interviewer, Suliman Alothaim, contact me at my Saudi phone number which is +966546649339, my American phone number which is 234-281-5921, or my

WhatsApp number which is +966546649339 at any time. If you have any questions about your rights as a research subject, or about what you should do in case of any harm to you, you may contact the office of the Institutional Review Board at The University of New Mexico, email IRBMainCampus@unm.edu or by calling (505) 277-2644.

Your participation in this research study is completely voluntary, and you will not incur any sanctions or loss of benefits if you refuse to participate or decide to withdraw. You they can withdraw within 2 months; at that time the project will be closed. If you choose to withdraw, the data will be destroyed. By signing this document, you indicate that you have received an oral explanation of the study, including the information mentioned above, and that you agree to voluntarily participate in this research.

_____ _____

Participant Printed Name &Signature **Date**

_____ _____

Investigator Printed Name & Signature **Date**