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*Teacher Education and Educating Children with
Autism: Bridging the Gap between Theory and
Practice in Saudi Arabia*

إعداد

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Abstract

In the past few decades the number of children diagnosed with autism spectrum disorder in Saudi Arabia and their educational provisions have been increased significantly. However, although the majority of teachers within these programs have experienced pre-service preparation, it seems that a large scale of them have difficulty dealing with those children in practice. Therefore, this study aimed to investigate this phenomenon in order to obtain deeper understanding about the extent of these programs to development the competence of teachers, which could contribute to raise the quality of the programs provided to children with autism. Firstly, this qualitative research reviewed the literature regarding to teachers' competence (attitude and capacity) and teachers' education programs. Then, this study collected the data through conducting five interviews; four current teachers and one university faculty member, followed by a thematic analysis process. Two main themes, including *Knowledge and Experience*, and *Content and Pedagogy*, have been identified from the participants discourse. Sequentially, interpretations of result have been done in relation to the research questions. Consequently, recommendations regarding to the study limitations and for further studies were discussed

ملخص البحث

في العقود القليلة الماضية، لوحظ زيادة في أعداد الأطفال الذين تم تشخيصهم باضطراب طيف التوحد في المملكة العربية السعودية وبالتالي زيادة مطردة في أعداد البرامج المقدمة لهم. وبالرغم من أن المعلمين والقائمين على تلك البرامج قد حصلوا على الأعداد المناسبة قبل الدخول في ميدان العمل، إلا أنه يبدو أن أعداد كبيرة منهم يواجهون صعوبات متعددة في كيفية التعامل مع هذه الفئة كممارسة عملية. لذلك، هذا البحث هدَف إلى دراسة هذه الظاهرة من أجل الوصول إلى فهم أعمق عن فعالية برامج اعداد المعلمين -العاملين مع فئة التوحد- في تنمية كفاياتهم العملية والتي سوف تنعكس ايجاباً على جودة البرامج المقدمة لهؤلاء الأطفال. حيث تناول الإطار النظري لهذا البحث النوعي الجوانب المتعلقة بكفايات المعلمين من حيث (اتجاهاتهم والكفاءة العملية لديهم) وعلاقتها ببرامج اعداد المعلمين. أيضاً، عمدت هذه الدراسة إلى جمع المعلومات من خلال القيام بخمس مقابلات شخصية (أربع منها مع معلمين حاليين - وواحدة مع عضو هيئة تدريس في برامج اعداد المعلمين)، حيث تم تبني طريقة التحليل المواضيعي للبيانات المُجمعة. وقد تم تحديد موضوعين رئيسيين كنتيجة لعملية التحليل تتعلق بجوانب (المعرفة والخبرة) وأيضاً (المحتوى وطرق التدريس). وبناء عليه، نوقشت التوصيات المتعلقة بحدود الدراسة والحاجة إلى دراسات أخرى في هذا المجال.

1. Introduction

ASD is one type of special needs classification. It must be properly understood prior to any attempt of intervention or discussion. Hoffman (2009) provided a definition that describes the main deficits that are associated with ASD, which states that “ASD can be defined as a neurodevelopmental disorder that is characterized by dysfunction in three core areas of early childhood development, namely social interaction; communication and language skills; and behaviour” (p.36). Similarly, the American Psychiatric Association adopts a similar strategy in defining ASD through describing it as a developmental disorder that can be recognised via its deficits that include social interaction impairments, communication deficits, inflexibility and rigidity in behaviour (Simpson, 2013). From another perspective, the Individuals with Disabilities Education Act (IDEA) defined ASD in terms of the possible impacts of these deficiencies on the abilities of people with ASD and their educational performances, when they report that “autism means a developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects educational performance... The term does not apply if a child’s educational performance is adversely affected primarily because the child has a serious emotional disturbance” (Lindsay 2011, p.4). Therefore, with a wide range of symptoms and deficits, the educational provisions that are offered to this category of disability should be able to meet their individual needs, and should involve a high level of appropriately trained staff including professional teachers. Indeed, with the wide range of symptoms and the different levels of severity within ASD, the task of educating such children is challenging. For this reason, the individual needs and skills of the teachers of children with ASD must be considered as well as the individual needs of each child.

The incidence of ASD has risen dramatically worldwide. In the United States of America, according to the Centre for Disease Control (CDC), approximately one in every 110 American people is diagnosed with ASD (Liberi 2012, p. 2). Furthermore, the number of

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children with autism who are receiving educational support within American schools has risen dramatically from 22,000 in 1995 to 140,000 in 2008, and this number is expected to increase further (Haimour and Obaidat, 2013). In the United Kingdom, a study by Baron-Cohen et al. (2009) which aimed to determine the prevalence of ASD indicated that approximately 1.1% of the UK population may be diagnosed with ASD. As a result, they estimate that nearly 157 children in every 10,000 are expected to be diagnosed with ASD symptoms, and approximately 695,000 children with ASD benefit from educational support. In Saudi Arabia, the Ministry of Education entrusted a number of scholars to determine the prevalence of ASD in Saudi Arabia in 2012 (Almasoud, 2013). The results showed that in every 1000 children in Saudi Arabia, there are four to six children diagnosed with ASD. Taking into account international statistics, close to 30,000 people may be within the ASD range of symptoms and could be targeted for special educational programs (Alkhashrami, 2011). However, these results seem did not address overall prevalence and did not take into account different determinants, such as age and the severity of symptoms, which could provide more detailed information.

The research problem and its significance

The gap between theory and practice is considered as one of the problems that may face novice teachers when they begin their teaching career (Aldabas, 2015; Westbrook et al. 2013; Forgacs, 2012). In other words, there is great disparity between what teachers learn about the different educational theories during their teacher training and the actual reality when they face traditional and unfamiliar strategies that are followed in the field. Furthermore, the sense of frustration experienced by teachers as a result of various challenging situations, especially with regard to special education, may adversely affect their performance and quality of teaching. Therefore, there is no doubt that such a gap needs to be addressed in order to provide highly qualified teachers equipped to deal with the various challenges that teaching may present. Shulman (2004) argues that better preparation for teachers is a fundamental factor that will improve the quality and increase the likelihood of a successful educational program. He proposes three key elements to

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be included within the teacher training program in order to ensure the concept of universality in education, which are theoretical knowledge, practical and technical skills, and beliefs and attitude aspects. This paper would help to shed light on and address the last two of these three elements.

The aim and research questions

The aim of this research is to explore the role of teacher education programs in increasing or decreasing the quality of educational provision for students with ASD in Saudi Arabia. The research main question and sub-questions to achieve this aim are as follows:

- What are the relationships between the teacher education components, in terms of attitude and pedagogy, and the quality of the offered educational provisions for students with autism in Saudi Arabia? (This research question is branched out into the following two sub-questions)
 - To what extent does teacher's education improve the attitude of future teachers towards working with students with autism?
 - Do the teaching approaches that are used in teachers' preparation truly provide well-skilled teachers who would help to increase the quality of practice inside the classroom?

2. Literature review

It consists of two parts in order to illustrate a comprehensive overview about the research topic. First, the current provisions for children with ASD will be discussed. The second part will review the literature to identify the different variables that could have an impact on teacher competence in relation to their attitudes and teaching performance.

The educational provisions for students with autism in KSA

Due to the increase in the number of individuals with special needs, the Saudi government felt that there was an urgent need to provide different educational services to these individuals in order to integrate them properly into the community (Almousa, 1999; Almousa, 2008). Also, it provides a various range of programs for students with autism depending on their capabilities and severity of disability (Alkhashrami, 2003; Almousa, 2010; Alquraini, 2011; Almasoud, 2013; Alnahdi, 2013). Consequently, students with high functioning autism often gain their education within regular schools alongside their peers (Alquraini, 2011). They also receive a similar structure and amount of time studying the general curriculum with some modifications and support from special education services, such as specialist teachers in autism or resources (Almasoud, 2010). Students with lower cognitive ability still receive their education within the ordinary public schools but in separate classrooms (Alnahdi, 2013). They receive special education provisions that are different from the general curriculum offered to their peers at the same school (Almasoud, 2013). Students with autism are allowed to share and spend their free time, such as lunch time, with their peers within the school facilities. These two types of programs are designed to serve those students from the age of 6 until 14 years old, which means that students with mild and moderate disability would have the opportunity to experience elementary and intermediate schools (Alquraini, 2011). However, after their graduation from intermediate schools, students with autism are more likely to end their education in public schools or be part of a private program aimed to develop their vocational skills to support their independence.

On the other hand, the majority of students with low functioning autism or those who have severe or profoundly challenging behaviours are more likely to be enrolled within special institutions which aim to take care of them rather than educate them (Alquraini, 2011). These institutions are residential schools where students are accommodated all week and return to their homes for

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the weekends. Apparently, these kinds of placements do not, or more often, allow their students to participate in social events side-by-side with their peers or even with their families which could facilitate more natural interactions between them. Indeed, there are many justifications for the adoption of these segregation models in the education of those students, which may include the lack of highly qualified professionals to deal with such students (Alkhashrami, 2000), the fear of possibility decreasing the quality of general education by including those students (Almoussa 2010), and the overall preference to adopt special placements for education (Alquraini, 2011). Finally, both models of education, whether inclusion or special education, often provide a variety of related services to those students in order to maximize as many aspects as possible of their personalities. These services such as physical therapy, speech and language therapy, simple vocational training and occupational therapy are provided free of charge by the Ministry of Education and the Ministry of Health (Almasoud, 2010). In fact, the importance to understand the relationships between teacher training programs and how they could affect teacher capabilities, especially with regard to attitude developments and their pedagogical competence, has been raised in this context.

Teacher attitudes towards educating children with autism

According to the fact that many factors can influence the performance of teachers, whether in general or special provisions, the attitude of the classroom teacher seems to be one of the elements considered as higher influential in this matter (Strong, 2014; Bakhsh, 2009; Shulman, 2004). Since the ‘No Child Left Behind Act’ was established in 2001, a great deal of research has focussed on the influence of teacher attitudes and beliefs on the classroom context and the achievements of students. According to Klehm (2013), the attitude that teachers and children hold about their own achievements and the feelings that they acquire about their performance play an essential role in leading the learning process and enhancing the level of achievement in schools. In addition, in terms of special needs education, a study by Levins et al. (2005) concludes that the thoughts of classroom teachers, who work directly

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with students with SEN, about their deficits and abilities can affect their teaching performance and their reactions towards those students. Therefore, understanding the teacher beliefs towards educating students with SEN and their impact on the quality of education, especially students with autism, could help to raise the awareness about the importance of developing teachers' attitudes in the educational context.

A number of studies have been conducted to investigate the attitude of teachers towards special needs education, especially in respect to the inclusive model (Kleham, 2013; Hasting and Oakford, 2003; Kashkary et al., 2014). Kleham (2013) investigated teachers' attitudes towards the ability of their students to achieve a satisfactory level on the (high-stakes testing) HST. Depending on the results of this test, the author aimed to study the difference in the attitudes between special education teachers and general education teachers. Furthermore, a comparison between teacher attitudes, teacher practice and the level of achievement of students with disability was performed. The study sample consisted of 3180 teachers, both special needs and general teachers, from 52 schools. Teachers of students with SEN demonstrated high expectations towards the ability of students to learn in general, but not in respect to HST proficiency. Accordingly, there was a significant difference in relation to the attitudes of special and general teachers in favour of special teachers, who also reported a greater welcoming of implementing inclusive education. The most surprising result was the positive correlation between the lower expectations of teachers and the lower achievement levels of students. This relationship has been emphasized through complaints of two-thirds of the teachers that they do not have adequate resources and equipment to plan and address the lessons.

Hastinga and Oakford (2003) also attempted to study the attitude of teachers in regard to the different classifications of disabilities and the level of training that the teacher gained about a specific category in their preparation level. The study results were based on 93 out of 150 surveys completed by student teachers who were chosen according to their experience in working with students

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with special needs. The results indicated that teachers' attitudes were affected by the type and the severity of disability. Furthermore, the teachers of students with intellectual impairments reported less attitude than teachers who work with students with emotional or behavioural disorders. However, although this study reports a rational result to some extent, it only considered the level of experience of those student teachers and overlooked other factors that may play a key role in increasing or decreasing the level of attitude, such as teacher knowledge about a specific condition, or even the level of the success that they experienced.

In Saudi Arabia, although the education system is different from most other countries in terms of adopting gender segregation, the attitude of the teachers seems to be similar to the various voices that call for the equality of opportunities in education, especially in regard to inclusion model. Kashkary (2014) attempted to study the attitude of both genders of teachers towards adopting the inclusive model in education for students with SEN in Saudi Arabia, and their willingness to educate those children. The researcher aimed to collect the research data from 12 teachers in total, 6 females and 6 males, teaching in schools that adopt the philosophy of inclusion. The study relied on questionnaires consisting of two parts; the personal background information, and the scale of teacher's attitude towards inclusion. The results revealed that all participants (100%) agreed on that children with SEN not just have the absolute rights to be educated in the same conditions as their typical peers, but also to live equally in order to contribute positively within their societies. Further, 83% of the teachers reported that students with SEN seem to enjoy and benefit from mainstream classrooms more than the special programs, where this positivity can be seen generally throughout the rest of the classroom. In relation to teachers' ability to teach them, 5 teachers out of the 12 positively reported their willingness to take the responsibility of receiving those children within their classes, whereas the rest of the participants disagreed with teaching them or showed some hesitation in their responses. These negative attitudes could be generated from their sense of a lack of training or experience in teaching within these types of education, according to the participants.

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Studying the attitude of teachers seems to urge some scholars to further investigate other variables that may interfere with the relationship between teachers and their students with autism. Park and Chitiyo (2011) attempted to compare the regular and special education teachers' attitudes towards students with autism and identify variables which correlated with attitude. This study involved 127 teachers, mainly females, from 7 schools that represent different levels. It used the autism attitude scale for teachers (AAST) to measure the attitude of teachers towards children with autism. The results indicated that the majority of teachers showed a positive attitude towards working with students with autism especially in inclusive environments, but no significant difference was found between regular and special education teachers. In terms of the different variables, the results differed from one aspect to another. For example, the correlation between teacher age and their attitude favoured younger teachers. Further, elementary school teachers demonstrated greater attitudes than middle and high schools. In terms of gender variable, the female teachers seem to have more positivity in their beliefs towards students with autism. Finally, in relation to the amount of teacher attendance with students with autism, there was a noted positive correlation between the higher rate of attendance of teachers and their positive attitudes. Therefore, providing adequate support and training for those teachers, especially in the early stages of their career, could potentially develop their attitudes towards improving their capabilities to provide better education for this category of SEN.

Similarly, Wilkerson (2012) examined the relationship between the special and general education teachers' attitudes and some demographic variables including age, the amount of teaching experience and the role of teaching (special or general). The population of this study consisted of 2627 special and regular education teachers from 16 schools who adopt a different philosophy about inclusion. The researcher relied on two instruments to collect the research data, a demographic questionnaire and a modified teacher attitude towards inclusion scale (TTIS). The findings supported the results of Park and Chitiyo (2011) with regard to the overall positivity of attitudes towards implementing the inclusive

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model for students with autism. Further, a high level of teaching experience seems to have a negative impact on the level of acceptance to teach those children. Also, the regular education teachers were less accepting for inclusion than the special education teachers. In addition, this study emphasized that there was a strong correlation between the lack of training and knowledge about autism and the lack of positive attitudes of teachers towards those children. In another study conducted within the Saudi context by Haimour and Obaidat (2013), they reported similar results in terms of the relationship between teacher attitudes and beliefs and the other demographic factors. This study was conducted on 391 special and general education teachers. They found that the higher level of positive attitude was consistently related to the teachers' higher level of qualification, in other words, teachers who hold master degrees are more likely to demonstrate less negative attitudes than those who hold bachelor degrees.

In summary, according to the studies reviewed, teacher's lack of knowledge, training and teaching experience with regard to working with a specific category of children may possibly affect their attitudes towards those children. Furthermore, the attitude of teachers could also be affected by a number of variables including teacher age, teacher gender, the teacher's level of education as well as the type and severity of disability that teachers are dealing with. Therefore, the lack of teachers' positive attitudes towards their students could adversely affect their capacity to teach properly, thus, increasing the likelihood of these programs provide a poor education and service to children.

The influence of educational pedagogy on teachers

The quality of special needs provisions, in general, and programs that serve children with autism, in particular, seem to be affected by the type of pedagogy used within these programs. Thus, this section will discuss the issues related to the impact of pedagogy on special needs guides in the forms of being learners, then teachers.

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To begin, it is helpful for the to explain and define the word ‘pedagogy’ in this context. According to Alexander (2003), the word pedagogy is a broad concept that refers to an integrated combination of the classroom teacher’s knowledge and the necessary skills that would allow the teacher to act and make decisions about the right teaching methods to use with their students to achieve their teaching goals. Furthermore, Leach and Moon (1999) go beyond the abstract definition of pedagogy by describing the relationships within the practical setting of it. Accordingly, for the purposes of this paper, the author defines pedagogy as referring to the efforts and strategies used by the classroom teacher in order to achieve the aims of the education system, through using his theoretical background, practical knowledge and skills, or even make any adaptations to the educational environment to be more collaborative and supportive. For example, building relationships with other experts or adding and removing material and resources, to increase the effectiveness of their teaching.

The Special needs teacher as a learner.

The education that is offered for teachers in order to prepare them to work with children with special needs, whether prior or within the service, is considered as an essential element that has the potential to increase the value of those teachers, thus, increase the value of the outcomes of special education programs (Westbrook et al. 2013; Abadzi, 2012; Darling-Hammond and Bransford, 2005). This role could be viewed in relation to teacher education programs including the followed teaching methods in these programs, and the teaching philosophy that is adopted in these programs.

Firstly, the methodology of teaching that are followed in most teacher education programs worldwide, especially in the developmental countries, of which Saudi Arabia is one, seem to focus on teacher-centred rather than learner-centred methods. Although this method has several advantages in relation to education, the impact of its disadvantages seems to overwhelm the advantages. Forgacs (2012) clearly states that “use of teacher-centred rather than learner-centred pedagogy/methodology and therefore very limited

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participatory methods that encourage student teachers to be active in their own learning process and to use experiential learning; limited interaction, group work or other forms of collaboration between learners, limited use of methods that promote critical thinking, questioning and reflection on their own experience” (p.37). She also argues that one of the most notable disadvantages of the teacher-centred method is that the teacher educators of these programs (people who teach the SEN teachers) face a lack of experience of working with children with SEN in the actual field. Thus, this lack would be directly transmitted to their initial teachers, therefore, that would reflect on the overall quality of educational services of those children. Furthermore, the European Training Foundation (2010) reports that the type of knowledge and content that these programs provide is far from reality and does not reflect what it happens in the field. It also suggests that the training programs should change from providing only an abstract content to focus more on developing teaching skills and attitudes.

This persistence on the use of teacher-centred methods could also cause a lack of opportunities of teacher learners to practice the theoretical knowledge that they have learned from the program (Strong, 2014). Many pedagogies have been found to be effective with children with special needs, for example, group work teaching, a positive classroom atmosphere, behavioural modification approaches, phonological interventions, social skills training, direct instructions, augmentative and alternative communications, peer mediation learning and many other strategies that are reported in the literature as effective in special education needs (Mitchell, 2008). However, with the absence of real opportunities of classroom teachers to practice these methods with actual children, the question that arises is: how can these teachers use these helpful pedagogies effectively in their classrooms without being familiar with them in action? Therefore, considering the two previous situations, the lack of knowledge or practice at the pre-service education would continue to exist in classroom teachers during the in-service level and could also have a negative impact on their capabilities.

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This finding has also been emphasised with regard to the Saudi context by Aldabas (2015). He strongly recommends that the student-teachers in pre-service education should receive practical training within real classrooms, to increase their abilities and expand their capabilities to deal with children more efficiently. In addition, Imerovic (2006) supports the idea of adopting a more practical approach when preparing teachers for special provisions, a key factor to facilitate a transmission of knowledge from the preparation course to the classroom practice. He based this idea on the results of an experimental and observational study conducted to examine the impacts of using a workshop approach to educating SEN teachers. From another perspective, Hardman and Stoff (2012) agreed with these recommendations but stressed the importance of a combination of practical elements and the traditional methods of teaching, not just replace them.

Secondly, a number of perspectives have focussed on a broader picture of teachers' preparation for special needs education provisions, especially in respect to inclusive education. One of these perspectives suggests that as teachers have to deal with a diverse range of abilities of children within their mainstream classrooms, the special needs teachers should be educated comprehensively in order to meet all diversity. The debate about the need for a comprehensive education is extended to question the need to provide a special pedagogy for a specific group of children. Instead, classroom teachers should be taught and prepared to adapt their classroom methodology to facilitate the pupils' learning equally. According to Davis and Florian (2004), the differences between the methods that classroom teachers use are in the level of intensity not in the type of methods, therefore, the most important element is that these teachers have the ability to recognise the needs of their students in order to adapt and implement their instructional strategies.

In Japan, special education teachers are trained in work sites and specialization is considered according to the disability type, teacher age and their educational background. The education council organizes scientific symposiums, directional courses and training to send teachers to the homes, hospitals and institutions to

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guide students who are not able to attend schools for special reasons. Teaching is adapted according to the individual's condition, this is called 'ambulatory educational'. The Japanese community regards special education as a type of education provided to children facing different deficits in physical, mental and social abilities, so they need changes in common school and educational practices. Consequently, the training of their teachers must include these variations. Additionally, special education teachers are medically and vocationally trained, receiving continuous and official training in specialized knowledge and information, provided with special vocational membership and occupation practice certificates, and professionally obliged to uphold a set of moral and scientific standards. Finally, teachers are training in special education scientific practices and educational supervision (Matsuishi and Toth, 2002).

Other perspectives of inclusive education claim that instead of spending enormous efforts and budgets on providing special teachers for inclusion, the educational authorities should concentrate on developing the regular classroom teachers (O'Gorman. 2010). Although this argument seems to be valid in terms of the need to develop the capacity of general teachers to be able to meet the diversity of needs within their classrooms, it overlooks the complexity of symptoms associated with some disabilities, such as children with autism, who require a high level of understanding in order to respond properly to them. Instead, the argument should be in favour of developing all the parties that work in this field including special, regular teachers, administrators and even families, in order to provide a more supportive environment for learning.

In Saudi Arabia, several scholars attempted to provide the ministry of education with similar research-based recommendations (MoE, 2002, 2004, 2008). For example, the study of Alquraini (2011) suggests that to increase the effectiveness of any inclusive program, the whole school environment should be provided with the necessary information about the different categories of SEN, including their individual characteristics and needs. Further, AlHamli (2008) claims that based on the lack of in-service educational program throughout

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the Saudi education system, this type of programs must be established with the aim of developing the professional aspect of teachers. According to the results of her study, she identified four areas that require development, diagnosis background, teaching pedagogy, intervention programs and assessment skills.

Internationally, in Norway & Sweden the department of special education holds special education courses in co-operation with the universities. There is a trend to connect the research centres with the colleges that offer special education, to share experiences and exchange information in order to provide more in-service programs that aim to develop the teachers who work in inclusive schools (Zuljan and Vogrinc, 2011). The first international conference, held in Egypt under the name “Education for All” in 2002, called for the establishment of a joint body which included the participation of Arabic Countries to design a program for special education in which they must observe their traits and needs (Ministry of Education, 2002). This declaration explained that the school must enroll all students regardless of their intellectual, social education or lingual differences. It also called for all the workers in this field to provide in-service training for the teachers.

The special needs teacher as a practitioner.

Special needs teachers in the field often face challenges that may have an impact on their capabilities or teaching quality, positively or negatively. This section will deal with the issues related to the school environment that those teachers practice in, and the teacher’s capability in creating an inclusive environment.

Firstly, several scholars have reflected in the literature on their experiences about working with children with SEN and the impact of the school environment on their capabilities. They attempted to determine the good and bad schools according to the level of positivity in their school environment. Ainscow (2004) identified features for good inclusive practice including, good practical experiences of the school members, evidence of collaboration, flexible and systematic administration roles, good time

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management, and the permanent support between colleagues. Further, school members play an essential role in the development of a positive environment and should agree an educational philosophy with clear strategies for all children. In addition, the teaching materials and tools are also important in the educational process as teachers need to be supported by relevant and effective materials to help deliver the knowledge appropriately. In many cases the lack of materials and resources is consistently associated with lower teacher performance, and so lower educational outcomes (Forgacs, 2012; Alquraini, 2011).

In terms of collaborative work between teachers, there is much emphasis in the literature on the essential role of teachers being within an educational context that helps them to gain the required skills to work in collaboration with other teachers, families, and other experts in this field (Ainscow, 2004). In a study conducted in Saudi Arabia by Aldabas (2015), the results indicated that there is a need for establishing new in-service programs to develop teachers' skills to work together in a team, and how to be a collaborative and supportive teacher rather than working alone. In an experiment for American Aragon State of special education teachers', teachers were linked with other experts through online networks to enable them to solve their professional problems and develop their collaborative skills. The program consisted of six sessions and aimed to encourage special education teachers to provide leadership and professional support, and retain a different group of professional development activities for increasing the quality of the offered special education programs. In addition, these online sessions also helped students and their families to connect with the educational context, and helped teachers to communicate with other professionals via e-group, sharing their problems and discussing solutions in a collective way. The content of these sessions was planned and determined in advance as well as any problems raised by teachers. The use of advanced technology in teaching and communication helped to involve teachers with community and institutional sources that support students and their families in special education program, and encouraged those teachers and parents to participate more

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actively within both general and special education programs (Carin and Bass, 2001).

Secondly, there is an acknowledgment that special needs teachers have requirements of knowledge about their majors and most of them reach a satisfactory level in terms of their knowledge of SEN. However, the gap between their knowledge and educational outcomes of their students is perhaps related to the lack of their teaching skills (Miles, 2009). Therefore, Miles (2009) supports previous recommendations to train those teachers on how to use their knowledge to improve their teaching pedagogy. In addition, he assumes that special teachers do not lack the skills but confidence in their own capabilities to make progress with children with SEN as well as a lack of confidence in the ability of those children to learn, which returns us back to the matter of the importance of teachers' attitudes in the educational system. Thus, there is now an emphasis in teacher training programs on the theoretical, moral and practical developments of SEN teachers.

Another issue related to teacher ability is the ability of teachers to implement and design an inclusive lesson that matches the principles of inclusion and fits all students' abilities (Davis and Florian, 2004). Designing an inclusive lesson may require classroom teachers to have a high level of positive attitudes, knowledge, practical and collaborative skills (Parner and Porter, 2008). Therefore, the conference of education for all recommended that the worldwide education authorities have a responsibility to provide basic disability education, prior to the classification for different groups covering all categories of disability. In addition, it strongly encouraged the different educational systems to make connections with research, to integrate people with SEN to participate in the design or in the leadership of the training and to consider their point of view (The Ministry of Education, 2002).

Conclusion

This chapter has highlighted a number of issues related to the role of teacher training in improving the quality of teachers. In relation to Saudi Arabia, although the educational authority has made big steps towards developing their educational system and

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special provisions, there is an urgent need to spend more money and make more effort to improve the quantity and quality of these provisions, as well as teachers' capabilities in order to meet the needs of the increasing number of special needs children. This has been emphasized in the studies of Alkhashrami (2011) and Almasoud (2013).

Giving the importance of teachers' competence in the education of special needs children, some international educational systems have developed their teacher training programs to fulfil this purpose. Some countries use moral and scientific measures and professional membership whereby graduates qualify with a certificate of practice. Other courses are held in collaboration with colleges, schools and hospitals to improve their positive attitudes and make teachers more able to cope with any problems they may face in practice. The provision of new learning strategies such as cooperative learning, and through working with other professionals and facilitating the exchange of information between them, are also useful practices. Therefore, the next chapter will explain how this study will be conducted in order to identify the other factors linked to teachers' education and competence in Saudi Arabia.

3. Methodology

Research design

A qualitative research strategy was used in this study. Many scholars have attempted to define the qualitative approach in relation to social science. Golafshani (2003) provided her definition as "qualitative research uses a naturalistic approach that seeks to understand phenomena in context-specific settings" (p.600). Taking a broader point of view, MacDonald and Headlam (2009) defined it as "Qualitative methods are generally associated with the evaluation of social dimensions. Qualitative methods provide results that are usually rich and detailed, offering ideas and concepts to inform your research. Qualitative methods can tell you how people feel and what they think, but cannot tell you how many of the target population feel or think that way as quantitative methods can" (p35). Further,

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Glass (2001) considered qualitative methods in comparison to quantitative methods, and concluded that unlike the quantitative methods that tend to generalise, determine and interpret the research results according to numbers from a statistical point of view, the qualitative approach illustrates, understands, explores and reaches the research objects via the natural engagement between the researcher and the research participants. He also provided synthesized features of the qualitative methods that support the use of this approach in social science, which are the natural setting is the data resource, descriptive and incorporating language to report results, and the experienced researchers interpret the research phenomenon themselves.

Research method and participants

The data was collected by interview as this method is considered as one of the most important tools used in the scientific research (MacDonald and Headlam, 2009; Merriem, 2009; Lodico et al., 2010), allowing the researcher to address several aims at the same time (MacDonald and Headlam, 2009). Although the interview could be considered as easy, it requires careful planning and preparation with a high level of accuracy in the choice of terms, wording and design of questions in order to fulfil the purpose for which it was initiated. In addition, the interview is not just an occasional interview that takes place spontaneously, but it must be integrated in a scientific framework, whether at the preparation and planning level or at the level of implementation and evaluation (Lodico et al., 2010).

There are many definitions to explain the function of the interview especially as a research method. In general, it can be defined as a dynamic and verbal exchange between two people or more (Creswell, 2009). In another definition, the interview is a directed conversation between the interviewer and the interviewee(s) for reaching a truth or a certain position that the researcher seeks to know in order to achieve the objectives of the target research (Merriem, 2009). Furthermore, with the advent of the technological revolution with respect to social communication, it can be defined,

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according to the data collection technique that is used in conducting the interview, as a means of oral or direct telephone or other technological aids that are used for the purpose of asking individuals or experts some questions to gain the required information that is usually unavailable in books or other ordinary sources (Allassaf, 2006). Overall, it can be concluded that the interview is a meeting between two or more people to achieve a certain goal, for the overall purpose of research, through a number of pre-determined questions which may provoke a reaction from the interviewee.

According to the cultural boundaries in Saudi Arabia in relation to gender segregation, the overall targeted population of this study consists of six male participants. Four of those participants were teachers working in special or inclusive provisions currently offered to students with autism in Saudi Arabia. The interviews were conducted with specialised teachers to gain an in depth understanding of their experiences in relation to their preparedness to become a teacher in comparison with their actual practice in teaching students with autism, what worked well for them, and what the challenges that they faced. The other participants were two faculty members from Taif University, which has a special needs department that works towards providing a specialised teachers' preparation program for those who will work with children with ASD within the Saudi context. The purpose of interviewing those faculty members was to gain more information about how these preparation programs could be improved in order to develop the quality of teachers and pedagogical methods for this type of special needs education. Unfortunately, one the faculty members withdrew from the interviews without giving a reason, therefore, the data was collected from five participants including four teachers and one faculty member, and the researcher will refer to them within this research anonymously by their initials A, M, R, and W.

Data collection

An “Ethics statements Form” was completed as a part of the research approval procedure at the University of Nottingham before the study began, to ensure a high level of ethical practice in order to protect the research participants from any issues that may arise during the study. Further, the participants were provided with “the Research Information Sheet” that includes an overall idea about the research, and had the opportunity to ask questions about the research before taking part in the interview. In addition, all participants agreed to their participation in this research through the signing of the “Consent Form” that described their role in the research and explained the research procedure in more detail. It included several statements that reflected their agreement to being interviewed, the interview to be recorded, the anonymous use of the information by the researcher, and how the information would be protected. The researcher will refer to the participants within this paper using their initials A, M, R, W and S.

Semi-structured interviews were conducted with the participants in order to collect the research data. According to MacDonald and Headlam (2009), the semi-structured interview technique is one of the most commonly used in qualitative research as it allows the interviewer to interact with the interviewee more effectively and respond to them to ensure more flexibility, and develop and address more themes rather than questions. It also helps to explore the phenomenon depending on the understanding of the role that the interviewee plays (MacDonald and Headlam, 2009). However, this type of interview requires a degree of prior knowledge about the phenomenon under study as it aims to make connections between different elements and answer the pre-prepared research questions (Lodico et al., 2010). Therefore, a number of open-ended questions were prepared from various academic sources to be answered by teachers covering several aspects including general information (age, years of service and the type of provision), their attitude towards educating children with autism, professional skills,

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and their experience with respect to teacher education. Further, due to the different nature of information required from the faculty member, the aspect that related to their awareness of the impact of the course contents offered within teacher education programs and teacher capability in practice was added in order to determine the extent of matching these courses to the real needs.

Face-to-face interviews were conducted with each participant individually between July and August on different dates and locations according to the individual wish of each participant. Three of interviews with teachers were conducted in the interviewer's house, the other interview with the fourth teacher was conducted in a café, and the interview with the university faculty member took place in his own office at the University of Taif. The noise level and disruption were minimized to reduce the stress of the interviewees, improve the quality of recording and ensure a high level of engagement between the interviewer and interviewee to increase the validity of the participants' responses. The duration of each interview was between 30 to 45 minutes. Each interview record was transcribed for the purposes of analysis. Due to the lack of English speakers amongst the participants, the interviews were conducted in Arabic, and the translation to English was done by the researcher and another person from the translation department at the Taif University, when required after the analysis stage, in order to minimize the loss of meaning.

Data analysis

The thematic analysis technique was used to analyse the qualitative data collected from the participants through the interviews. The thematic analysis approach is considered as a comprehensive process that allows the researcher to identify a number of codes from the gathered data of participants and group them into a smaller number of themes (Fereday and Muir-Cochrane, 2006). This approach would more likely increase the ability of the researcher to analyse more specific extracts from different transcripts rather than deal with the data as a whole, and identify more relationships between the different variables in order to compare and contrast the data to determine different sets of

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evidence that may support the aim of research (Gibbs, 2008). In terms of the importance of using this approach in qualitative research, Alhojailan (2012) concludes that “It is considered the most appropriate for any study that seeks to discover using interpretations. It provides a systematic element to data analysis. It allows the researcher to associate an analysis of the frequency of a theme with one of the whole content. This will confer accuracy and intricacy and enhance the research’s whole meaning. Qualitative research requires understanding and collecting diverse aspects and data. Thematic Analysis gives an opportunity to understand the potential of any issue more widely” (p.10).

The process of data analysis based on this method followed several steps. The first step called data familiarisation, which was performed throughout the stages of implementation, transcribing and translating the interviews. The second step aimed to link similar ideas from all transcripts and identifies any correlations between the data content through consistent labelling. Then, in the third step, the researcher determined a set of codes to minimise the amount of data indications and enhance the clarity of the data. Finally, these various codes were synthesized and categorized within a smaller and final set of themes based on the nature of the data and reported according to the research questions. An interpreted data was compared and contrasted within the final set of themes with the aim of reflecting on the participants’ responses according to theoretical perspectives and empirical findings gained from the literature. Finally, the issues related to validity, reliability and limitations of the used methods in this study will be discussed within the next section.

Validity, reliability and limitations

According to Alassaf (2005), in order to assess the overall validity of any research, two dimensions of validity should be considered, the internal and external validity. The aforementioned dimension refers to the possibility of the data collection method to measure what it is really designed for, or the ability of the employed methods to answer or fulfil the research aim(s). The other dimension refers to the possibility of the research results to be broadly

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generalised or applied in different situations within different circumstances (Alassaf, 2005). Further, the reliability of the research is defined as the possibility of research findings and results to be replicated if the research was repeated using the same methods (Golafshani, 2003).

In terms of the internal validity, the researcher implemented a number of actions throughout the implementation process of this research in order to increase the research validity and minimize the level of subjectivity. The research participants were carefully chosen. The researcher and the first participant, who is a relative of the researcher, collectively helped to identify the most appropriate and relevant teachers to reach the minimum range of variety in terms of their type of provision, experience and age. Although the familiarity with the participants prior to the interview could cause bias in their responses, it can be argued that it helped to increase the openness in discussion and decrease the level of embarrassment and nervousness, therefore, facilitating the questioning and responding process. Consequently, it could impact positively on the participants' responses.

Further, as mentioned above, the interview protocol and the interview questions were based on the literature review of this research (for consistency) decreases the likelihood of bias or at least weakening its impact if it existed. At the data collection and analysis stages, due to the limited time to complete the research, the data was collected and analysed only by the researcher. Therefore, to overcome this issue, the interpretation of the data was applied according to the theory and the empirical findings of other studies found within the literature. This took place for the purpose of objectivity.

In terms of the external validity, due to the small sample of participants, the results of this study cannot be generalized to other contexts as they represent only this research population or those who live within similar conditions. Through the agreement of the results of this study with other studies' findings, using similar methods as this study was on a similar population within similar conditions, the

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reliability research-study could be maintained. In addition, due to the complexity of the research problem to be investigated, the limited use of one method in studying this phenomenon could negatively affect the level of understanding the different determinations and variables underpinning this phenomenon. Further, the small population size, especially in relation to the lack of the perspectives of teacher educators within teacher education programs, and the exclusivity of the male gender of participants, could be major limitations of this study which need to be taken into account in future research.

4. Results and Discussion

This section will report and discuss the results of data collection and data analysis stages, comparing and contrasting the results with pertinent literature.

Overview of the results

In terms of the participants, although the study sample is relatively small, it includes a different range of experiences in relation to the amount of time and the type of educational services. Participant A has six years of experience of working with children with autism in an inclusive program, while participants R and W have three and five years of experience respectively of working in special institutions. Participant M has three years of working as a private teacher, providing his services to individuals in their homes out of the school time. In terms of the thematic analysis, overall themes have been identified through the analysis process, which could reflect the gap between teacher education and teacher practice, including *Knowledge and Experience*, and *Content and Pedagogy*. The researcher will refer to these themes according to each research sub-question in order to answer the main question of this study.

Results of sub-question one

In order to answer the first question, (*To what extent does teacher education improve the attitude of future teachers towards working with students with autism?*), the participants were asked to reflect on their attitudes towards children with autism before, during and after their preparation level. All four teachers' responses indicated that there was a collective lack of knowledge about ASD prior the preparation program. Therefore, their attitudes towards those children were as similar as any other classification of disability, which were associated with compassion and passion feelings. Participants' responses included:

[before I enter the university] I had no knowledge or anything about Autism. While when I was looking to them I usually say "God heal him", and I pity him. (Participant A)

I have not held any attitude towards them [children with ASD]. In the past, when I was seeing any child with disability or with autism I thought that he is suffering from "Juggling" or something like this, because I had no idea about them. Accordingly, I was taking a distance from him not to harm me. (Participant M)

At the past, I have not met any child with autism and I did not have any knowledge about this disability, therefore, I was looking to them as useless and they require exhausting efforts from their families to meet their needs. (Participant W)

The correlation between the level of positivity in teacher attitude towards children with autism and the level of *knowledge* that has been reported in several studies in terms of the differences between the attitude of regular and special teachers, which refer to a positive attitude in favour of the special teacher due to the amount of knowledge they have about autism (Haimour and Obaidat, 2013;

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Park and Chitiyo, 2011; Park et al. 2010; Levins et al., 2005). Similarly, participant M tends to emphasize the importance of gaining more knowledge about autism in developing their positive attitude towards those children, when he states that:

After I entered the university and looked in depth about this category of disability, my attitude toward them has changed accordingly because I become more aware about their characteristics, needs and even how to deal with them. (Participant M)

Further, the faculty member at the Taif University stresses the role of the teacher education program in developing the attitude of future teachers in relation to working with children with autism:

The teacher education programs, especially talking about our program [at the University of Taif], should be designed in a way that help teachers to gain more information about the different classifications of special needs, especially autism. Therefore, these programs could contribute in developing their attitudes and perceptions towards those children through being aware of their real potentials and capacities, or in some cases their special talents and unique abilities.

The role of teacher education programs in relation to the development of teachers' attitudes has also been investigated by Shade and Stewart (2001), and Richards and Clough (2004) through examining the attitude of a number of regular and special teachers pre- and post-preparation program. The results of both studies indicate that the teacher education programs have an essential role in improving the positive attitude of regular and special teachers towards students with autism in the inclusive classrooms. In contrast, the rest of participants (A, R and W) returned the reasons underpinning the developments in their attitudes to their *experiences* when they practice the knowledge within the real field rather than spending their time in revising and remembering the theoretical articles in these programs:

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When I started working with them, I knew them, understood the rationale behind their “undesirable behaviours” which could be different from what we thought, it may be an expressive way to ask for help. I can say yes the preparation program slightly affected my attitudes, but the practical stage of my career has the majority of thanks in turning my attitude from the negative to the positive. I now believe that students with autism have the ability to learn when their teacher intends to do so. (Participant W)

In the study of Hastings and Oakford (2003), they concluded that the preparation programs should not exclude future teachers from practicing real teaching situations, which probably have a key role in improving their beliefs and perceptions towards working with the type of disability that they tend to deal with. From a stronger point of view, in addition to the positive changes in their attitude due to practice, participants A and R argue that teacher education programs do not just not improve their attitudes, but also impact negatively on their attitudes. They say:

The reason behind the development in my attitude is because I understood, taught and helped them through my work time with them. The study that I had during my time in undergraduate course was focusing on the weaknesses of those children rather than using their strengths. Therefore, my perceptions of my career become full of frustrating thoughts which decrease my passion towards working with them. (Participant A)

At the preparation level of my study, I did not know how to deal with students with autism, and my fears have been increasing by the time from working in this field due to the whole environment was repeating that “the autism is the hardest disability to deal with”. (Participant R)

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This argument seems to be supported by West (2009) and Pedersen et al. (2014). They argue that the level and type of teacher attitude is more likely to follow and be affected by the academic content that they receive within their preparation level.

In summary, the attitude of teachers towards working with children with autism seems to be influenced by several elements, including the level and type of pre-service knowledge, and the amount of practical experience. Therefore, these two factors should be integrated appropriately within teacher training programs to help increase the positive attitude of future teachers and their readiness to work effectively with those children. Finally, as participant R states that *“the development of my attitude helps me to use my creativity more frequently and to learn new teaching techniques that fit the individual needs”*.

Results of sub-question two

In order to answer the second question, (*Do the teaching approaches that are used in teacher education truly provide well-skilled teachers who would help to increase the quality of practice inside the classroom?*), the participants were asked to give an overall assessment about their satisfaction of the quality of services currently offered to students with autism. Two of the participants agreed that these services do not meet their expectations or what they are supposed to be, while the rest of them attempted to avoid answering this question due to their lack of knowledge about other provisions in Saudi Arabia apart from where they work. The faculty member acknowledged that:

From my point of view, although the offered services for children with autism are experiencing a great interest in, and making strides towards progress, it still substandard in regard to the good diagnosis services and the use of technology in their educational program. (Faculty member)

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Participant A had more reasons for the weaknesses in these provisions when he said:

I give these programs 3 out of 10 for many reasons including [.....], most of the teachers who work within these programs seem to face a lack of capacity in respect of dealing with different pedagogies, also the educational authorities do not support them properly or even do not provide in-service courses to develop them. (Participant A)

Strong (2014) argues that there is a strong relationship between the quality of SEN programs and the capability of teachers who work within these programs. Therefore, the weaknesses in the implementation tools, such as teacher capacity, could possibly reflect adversely on achieving the goals of any provision. In addition, the educational courses that the teacher experiences prior to their service have a key influence on their capacities. Also, the lack of the teacher preparation programs might continue to affect them in the field (Imerovic, 2006).

In terms of the participants' experiences regarding the effectiveness of their preparation level, they demonstrated an overall dissatisfaction about the *content and pedagogy* used within these courses. Firstly, they reported that there was a mismatch between some elements of the content and what is experienced in reality. On one hand, according to participant A:

When I have worked in inclusion model, I found it different from the books. It was a complete segregated classroom within a regular school. In addition, I had studied some modules that are not related to special education major. Yes it was including some modules about autism, but they were consisted of a number of theories only, which were not beneficial to me or my career, or even were not applicable in the real ground. (Participant A)

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This claim supports that of the European Training Foundation report (2010), which introduced earlier in section (2.2.2.1). On the other hand, the faculty member disagreed with this argument by stating that *“to some extent the theoretical frameworks that teachers receive are applicable in the real field, especially after practicing them several times during the last semester of the course as planned”*.

In response to this, Darling-Hammond and Bransford (2005) observed that the traditional pre-service teacher preparation programs often place the practical experience at the end of the programs, while a greater number of new programs tend to integrate more clinical and practical opportunities throughout their programs in order to close the gap with the reality. However, participant A complains that even with the presence of this opportunity to practice, the lack of proper supervision during the period of practice reduces its expected usefulness. Shulman (2004) suggests that many times teachers fail to teach as well as they know how.

Secondly, this argument seems to be broader than if these programs provide the practical experience during or at the end of program, it is about the effectiveness of the chosen pedagogy within these programs, whether theoretical or practical, to provide more qualified teachers capable of working effectively within reality. One of the most common complaints that arose from the data analysis was the lack of real opportunities to practice during the preparation stage, and these programs spend an unduly amount of time and effort in adopting only theoretical approaches rather than practical. According to participant R, *“the curriculums that are followed in the universities focus only on the theoretical side of the knowledge depending on the imagination skill of teacher-trainee, whilst they overlook the need to practice them”*. Further, participant W emphasized the same weakness when he said *“of course, the problem is that we studied for at least four years about SEN and autism; definitions, reasons and characteristics, but we had no chance to face them to learn how to treat them”*. He also added *“the modules that we studied is not enough, I took them theoretically as book chapters and sub-headings only, I did not use them with real people at that time”*.

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Apparently, this issue about preferring the theoretical approach to the empirical approach could be considered as one of the factors that widen this gap while providing more practice opportunities may possibly help to avoid it. Much research has argued that the parallel use of theoretical knowledge supported with real field experiences could allow teachers to implement, refine and combine the different knowledge and expertise in their favour (Darling-Hammond and Bransford, 2005). In support of this argument, participants A, M and W stress that the preparation level provided them with knowledge, but most of their experience of dealing with or teaching students with autism came from their direct interactions with them. Further, in spite of the presence of “the practical semester”, the faculty member seems to support the idea of increasing the amount of practical opportunities within their program when he was asked about the future developmental plan for the current program.

Through the interview sessions, some questions aimed to help participants to reflect on their own experience as learners and teachers to determine what they need to develop their capacities. This approach has been used in many teacher education programs to help them develop their programs based on real demands, which could help to bridge the gap in both educational systems (Birney, 2012). One issue about the probability of teacher-educators practice and behaviour to be learned unintentionally and transferred to teacher-trainees appeared again within the field. Participant A reported two different situations that seem to be linked to each other:

Situation (1): “[talking about his teachers in preparation level as a learner] look, they says that the main aim of these programs is to provide more qualified teachers to work with student with autism, but from how they deal with us, their aim is to pass all students regardless to if they worth it or not”

Situation (2): “[talking about himself as a teacher now and how he teaches his students] to be honest with you, I have an individual educational plan for each student

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before the academic year starts, but I do not follow it in my teaching. Because, they are designed for satisfying the school administration and the educational authority”

The similarity in both situations indicates the lack of following the pre-set goals for each program, and seems to be transferred from teacher-educator to be learned by teacher-trainee. This issue of knowledge transmission has been reported within the study of Imerovic (2006). Further, according to the observational learning theory by Bandura, learning can occur through observing and imitating others (Abadzi, 2012). In this case, the teacher-trainee seems to recognize the behaviour of the teacher-educator, which facilitates the transmission process to take place. Participant A confirms that:

My teaching experiences gained through my experience as a student when I was observing my teachers and watching their actions throughout my studying years regarding the organization of the class and how to deal with us.

Accordingly, Westbrook et al. (2013) uses the power of this theory rather than focusing on its weaknesses, which can be an effective and creative way to prepare future teachers. Indeed, designing educational programs based on this approach could be a two-edged sword that needs to be considered very carefully and requires a high level of control for all education parties.

In conclusion, and as an answer to the main research question, the type of academic knowledge, the philosophy of teaching and the pedagogy used in these programs could influence the level of future teachers' abilities to practice their knowledge with children with autism inside their classrooms. Consequently, the quality of these programs could be adversely affected.

5. Conclusion and Recommendations

This study aimed to investigate the gap between the theory and practice in respect of the ability of teacher education programs to provide highly qualified teachers who could increase the quality of the offered educational provisions for children with ASD, and their role in closing this gap within the Saudi context. A great number of research papers refer to the level of positivity in teachers attitude towards their students as a key factor that has an impact on the level of education. Further, the ability of teachers in teaching and the power of pedagogy, whether in teacher preparation programs or teacher practice, in education also seems to play a fundamental role that could affect the level of success of the special programs. Therefore, these two teacher competence components were the targeted elements of the discussion throughout this paper.

In KSA, the special education provisions have been dramatically developed in the past 40 years. Specifically, a variety of programs, whether special or inclusive, have been established to serve a large number of students with ASD. However, although the Ministry of Education in KSA spent all these efforts towards developing special needs education, some issues that related to the lack of qualified teachers whining these programs are still existed existent. Not just Saudi Arabia who that faces these problems with teachers' education, but other countries are facing similar issues. From the review of literature of this study, several issues are highlighted as to the possible weaknesses in these programs. The pedagogical approaches that are adopted in these programs and how they are implemented by the educative staff are considered as essentials to ensure the success of graduating more qualified teachers for this career.

Firstly, it seems that the weakness of teacher education is perhaps generated from the use of teacher-centered rather than student-centered pedagogy. The most of teacher-educators in these programs rely on the traditional methods in teaching, which puts the

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learners in the receiver position rather than encourage them to participate effectively within the classes. Whereas, the level of effectiveness in these classrooms should be characterized by a higher level of interaction between students and teachers, which probably increase the achievement and learning growth in comparison to the previous methods. Secondly, the way that future teachers learn and the type of curriculum are major concerns that might affect their capacity when they become real teachers in the field. These programs seem to teach their curriculum in isolation from the reality. In other words, they tend to provide a pure knowledge to their students with rarely opportunity to practice this knowledge. According to Rouse (2008), the effective teacher education programs should teach their participants three concepts including “knowing, doing and believing” (p.15). Further, as produced above in chapter 2, several studies found that the level of practical experience can impact the attitude of teacher towards their job and students. Thus, the lack of real opportunities to practice what is learned seems to be the missing link that could adversely affect the teacher capacity.

To gain a deeper understanding about this topic, the researcher of this study has interviewed four teachers and one university faculty member. And through the thematic analysis of the data collected from all participants, most participants complain that they have not had enough opportunity to practice before they enter the classroom for the first time. Also, the lack of matching between the content of these programs with what the reality is involved or needed. Furthermore, the collective carelessness among the education community members appeared to be one concern that could be educable, which possibly reflect on the teachers’ performance in the field, and needs more investigation.

Finally, due to the small size of participants in this study and the limitation that it is restricted to male gender only, the topic needs more investigation based on a broader scale of population. Further, in order to improve the quality of the educational provisions of students with autism the educational authorities in Saudi Arabia pay more attention towards developing the capacities of teachers who in turn would contribute to this development. This development

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requires activating the practical aspects in teachers learning through enhancing the collaboration concept more between and/or all education parties, including professionals, administration, schools or even families. Further, more observational studies are needed as to how teachers work within their classes and how they could be supported properly. In addition, the issue that is linked to the preference of providing comprehensive teachers to specialized teachers is facing a shortage of evidence in the literature, thus, requires more study.

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