



**Explanatory Sequential Study of Teachers’ and Students’  
Perceptions of Inclusion Provisions for Students with  
ASD in High Schools in Dubai**

دراسة تفسيرية تتابعية لتصورات المعلمين والطلبة بما يتعلق بدمج الطلبة من  
ذوي اضطراب طيف التوحد في المدارس الثانوية بدبي

by

**SUHA MOHAMMAD ALSHUAIBAT**

**A thesis submitted in partial fulfilment  
of the requirements for the degree of  
DOCTOR OF PHILOSOPHY IN EDUCATION**

at

**The British University in Dubai**

**May 2024**



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## **Declaration**

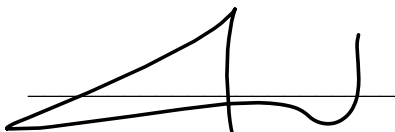
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## **Abstract**

This research provides an explanatory sequential analysis of teachers' and students' perceptions concerning the inclusion of students with ASD in private high schools located in Dubai. The method used is a combination of surveys and interviews, which allows the researcher to investigate teachers' and students' perceptions of inclusion policies, which act as support mechanisms as well as determines the resources utilised. The results also show that there is a huge deviation between the teachers' experience and training in accommodating students with ASD for inclusion, though challenges such as resource constraints and a lack of supportive structures are anticipated. The study reveals the difference in interpreting inclusion policies according to teachers' level of experience and special training which supports professional development that targets these problems appropriately. On the other hand, it shows from a very positive point of view how inclusion can be easily achieved in all kinds of materials if teachers and peers help out with their participatory efforts. The study focuses on the importance of powerful teaching strategies and a receptive learning space for students with autism spectrum disorder (ASD), as well as practical experience, to improve teachers' efficacy in inclusive education. Increasing the approach to inclusive classroom practices, emphasising individualised education plans for ASD students and improving communication between peers and teachers are some of the recommendations that can be made. This research makes important contributions to the understanding of inclusive education policies and practices for ASD students in Dubai, showing how, despite their efforts some reform is still needed.

*Keywords:* Autism Spectrum Disorder (ASD), inclusive teaching strategies, educational support systems, Individualised Education Plans (IEPs), educational reform, specialised training, inclusion policies, professional development

## خلاصة البحث

يقدم هذا البحث تحليلاً متسلسلاً توضيحياً لتصورات المعلمين والطلاب فيما يتعلق بدمج الطلاب من ذوي اضطراب طيف التوحد في المدارس الثانوية الخاصة في دبي. لإجراء هذا البحث، تم استخدام مجموعة من الوسائل البحثية تمثلت في توظيف الاستبيانات والمقابلات. هذا التنوع في الأساليب سمح للباحث بفحص وفهم تصورات المعلمين والطلاب حول سياسات الدمج والتي تستخدم كآليات لدعم هؤلاء الطلاب من ذوي اضطراب طيف التوحد وتحديد الموارد المخصصة لهم. تظهر نتائج هذا البحث أن هناك فجوة كبيرة بين خبرة المعلمين والتدريب الخاص بتمكينهم من دمج الطلاب من ذوي اضطراب طيف التوحد، مع العلم بأنه منذ البداية كان متوقعاً وجود تحديات مثل نقص كلا من الموارد والهيكل الداعم. وتكشف الدراسة عن وجود فروق في تفسير سياسات الدمج وتلك الفروق تعزى إلى مستوى خبرة المعلمين ومستوى التعليم الخاص الذي حصلوا عليه، مما يدعم الحاجة إلى طرح برامج للتطوير المهني تستهدف مثل هذه المشكلات بشكل مناسب. ومن ناحية أخرى وبشكل إيجابي للغاية، يظهر البحث كيف يمكن تحقيق الدمج بسهولة في جميع أنواع الظروف إذا أسهم كلا من المعلمين وأقران الطلاب بجهودهم التشاركية الفعالة. تركز الدراسة على أهمية استراتيجيات التدريس الفعالة وأهمية وجود بيئة تعليمية مهيأة لاستقبال الطلاب من ذوي اضطراب طيف التوحد، بالإضافة إلى أهمية وجود الخبرة العملية والتي تساعد المعلمين في تحسين كفاءتهم في البيئة الدامجة. وتقدم هذه الدراسة بعض التوصيات والتي من أهمها التركيز على زيادة نهج الممارسات الصفية الدامجة، والتأكيد على أهمية وجود خطط التعليم الفردية للطلاب من ذوي اضطراب طيف التوحد، وتحسين التواصل بين الأقران والمعلمين. يقدم هذا البحث مساهمات مهمة في فهم سياسات وممارسات التعليم الدامج للطلاب من ذوي اضطراب طيف التوحد في دبي، موضحاً كيف أنه على الرغم من الجهود المبذولة، لا تزال هناك حاجة إلى بعض التغييرات الجذرية.

الكلمات المفتاحية: اضطراب طيف التوحد (ASD) ، استراتيجيات التدريس الدامج، أنظمة الدعم التربوي، خطط

التعليم الفردية (IEPs) ، الإصلاح التربوي، التدريب المتخصص، سياسات الدمج، التطوير المهني.

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### **List of Abbreviations and Acronyms**

|               |                                                                      |
|---------------|----------------------------------------------------------------------|
| <b>ABA</b>    | Applied Behaviour Analysis                                           |
| <b>ANOVA</b>  | Analysis of Variance                                                 |
| <b>ASD</b>    | Autism Spectrum Disorder                                             |
| <b>EHA</b>    | Education for All Handicapped Students Act                           |
| <b>IB</b>     | International Baccalaureate                                          |
| <b>IDEA</b>   | Individuals with Disabilities Education Act                          |
| <b>IEPs</b>   | Individualized Education Plans                                       |
| <b>KHDA</b>   | Knowledge and Human Development Authority                            |
| <b>PECS</b>   | Picture Exchange Communication System                                |
| <b>SEL</b>    | Social and Emotional Learning                                        |
| <b>SEN</b>    | Special Education Needs                                              |
| <b>SEND</b>   | Special Education Needs and Disabilities                             |
| <b>TPB</b>    | Theory of Planned Behaviour                                          |
| <b>TRA</b>    | Theory of Reasoned Action                                            |
| <b>UAE</b>    | United Arab Emirates                                                 |
| <b>UN</b>     | United Nations                                                       |
| <b>UNCRPD</b> | United Nations Convention on the Rights of Persons with Disabilities |
| <b>UNESCO</b> | United Nations Educational, Scientific and Cultural Organization     |

## **Chapter 1: Introduction**

### **1.1. Background of the Study**

In recent decades, inclusive education has gained significant popularity and had a growing influence within the field of education. As discussed by Abduelkarem et al. (2019), inclusive schooling is an educational framework and mindset that seeks to ensure equitable access to education for all students in higher education, irrespective of their diverse talents, backgrounds, or personal growth, in addition to promoting physical integration, inclusive education endeavours to establish a secure and nurturing environment wherein students can engage actively in their educational pursuits, engage in meaningful interactions with their peers, and cultivate their complete capabilities. The origins of inclusive education may be traced back to the mid-20<sup>th</sup> century when it was widely acknowledged that individuals with disabilities were entitled to access academic opportunities (Scorgie et al., 2022). The Education for All Handicapped Students Act (EHA) of 1975 marked a pivotal moment in the history of the United States, as it established the fundamental principles for inclusive education by legally requiring that all students with disabilities be provided with appropriate and cost-free public schooling (Abduelkarem et al., 2019). The legal framework places significant emphasis on providing special education services within the least restrictive environment, mandating educational institutions to provide accommodations for a maximum number of students with disabilities in conventional classrooms whenever possible. An increasing corpus of research has shed light on the advantages of various classrooms and the negative consequences of segregating high school students with disabilities from their peers. This research has played a significant role in shaping the fundamental concepts of inclusive education (Scorgie et al., 2022). The Salamanca Statement and Framework for Action on Special Needs Education in 1994 and the 1990 World Declaration on Education for All strengthened the international commitment to inclusive education (Abduelkarem et al.,

2019). These texts emphasised that, regardless of abilities or characteristics, every child has the right to get an education specifically tailored to their needs.

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD), adopted by United Nations General Assembly in New York in 2006, is one international framework that has strongly endorsed inclusive education (Scorgie et al.,2022). The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) emphasises that individuals with disabilities have a right to interact fully in all spheres of society, including education, and it pushes for the removal of obstacles that stand in the way of such integration (Abduelkarem et al., 2019). Students with impairments and those from various cultural, linguistic, and socioeconomic backgrounds are included in the concept of inclusion. Every student's contribution to the educational environment is valued in inclusive education, a pedagogical approach that recognizes and values differences (Scorgie et al., 2022). All students can benefit from a diversified and all-encompassing educational experience promoting tolerance, empathy, and understanding. Inclusive education adheres to the universal goals of educational systems, including obtaining a high-quality education, offering opportunities for lifelong learning, and raising well-rounded people actively engaged in society (Alborno, 2022). Numerous studies have repeatedly shown that inclusive learning environments benefit both students with disabilities and their peers who are typically developing, including enhancements in both academic and social development. Adopting inclusive education encourages positive attitudes towards diversity, cultivates empathy, and gives students the abilities they need to thrive in a globalized and interconnected society.

Despite the widespread recognition of inclusive education's guiding ideals, it has proven problematic to apply inclusive practices in many educational environments. One of the significant issues is the need for more sufficient resources and support to address the

diverse needs of all students (Alborno, 2022). Although teachers play a crucial role in creating inclusive learning environments, they regularly express concerns about their need for preparation and readiness to meet the needs of students with different abilities. Additionally, the efforts of teachers, school administrators, families, and the larger community must be combined for inclusive education to be effective (Scorgie et al., 2022). As educational institutions work to provide inclusive education thoroughly and persistently, it has become clear that there is a need for improved collaboration and coordination among these many stakeholders.

The UAE has made a solid commitment to inclusive education. It has made significant strides toward fostering the inclusion of students with disabilities in regular classrooms by adopting specific policies and strategies. To ensure that every one of its residents has access to a high-quality education, the UAE has developed a comprehensive, inclusive education system. The importance of equity, excellence, and inclusivity within the country's educational system is strongly emphasised by the framework that has been put in place (Alborno, 2022). It is essential to understand the perspectives and experiences of teachers leading the way in adopting inclusive education as the educational landscape continues to change. The ability to instruct students with a variety of abilities, including those with autism spectrum disorder (ASD), is crucial and can have a significant impact on the success of inclusive education initiatives (Scorgie et al., 2022).

The main goal of this study is to examine the opinions and reports of teachers and teachers in the UAE with regard to inclusive education. The examination will focus on their level of experience and self-assurance in instructing students with ASD. The study seeks to provide substantial perspectives that can guide the formulation of regulations, design of education programmes, and the construction of support systems by thoroughly evaluating these elements. It is hoped that students in the UAE will benefit from these initiatives, which

are intended to promote more inclusive academic practices and a more inclusive and equitable learning environment.

Creating conducive learning environments in schools now heavily relies on inclusive education, regardless of the students' abilities, histories, or personal traits, making it inclusive and equal. The inclusive education ethos goes beyond the straightforward inclusion of secondary school students with impairments in regular classes (Alborno, 2022). It emphasises the importance of giving all newcomers the same opportunities to obtain excellent education and support services, assuring their chances of academic success and overall growth.

This research study uses a mixed-approach methodology that combines qualitative and quantitative data collection methods. The study will employ qualitative research methods, mainly interviews, to achieve a thorough and nuanced understanding of teachers' and students' experiences with inclusive education and perspectives on teachers' commitment to educating students with ASD and students' readiness to study next to students with ASD.

On the other hand, adopting quantitative survey approaches will allow the collection of statistical data to understand the prevalence of different attitudes and perspectives among teachers and students (Ktem, 2010).

The perspective of the historical growth and advancement of inclusive training as well as its core standards, theories, and practices, has benefited from a thorough analysis of the literature (Al Herbawi, 2018). The research review also looked at how inclusive training affects the academic and social outcomes of high school students with disabilities and their friends who were developing typically. Additionally, this analysis looks into the elements that support or hinder the efficient application of inclusive training in various contexts.

The need to include students with ASD in inclusive academic contexts alongside their neurotypical counterparts has been increasingly recognized in recent years (Pandia and Purwanti, 2019). According to Al Herbawi (2018), inclusive education is widely acknowledged as a strategy for promoting social integration, fostering positive attitudes, and ensuring academic and social success among students with ASD. The broad support, comprehension, and viewpoints of teachers who work closely with such students in mainstream classrooms is essential for the effective implementation of inclusive education. The UAE, which includes the cosmopolitan city of Dubai, has demonstrated a persistent commitment to promoting inclusive education and has achieved great strides in facilitating assistance for students with disabilities within mainstream educational institutions. In order to create a learning environment that supports and accommodates students with a variety of needs, including ASD, the Knowledge and Human Development Authority (KHDA) in Dubai has implemented an inclusion policy (Al Herbawi, 2018). The UAE has taken steps to enhance inclusive education. However, it is critical to examine the perspectives and application of inclusive practices by teachers in regular educational settings for students with ASD in high schools.

The study is grounded in a theoretical framework that includes social constructivism, ecological systems theory, and inclusive education. According to the tenets of inclusive education, every student should be given an equal opportunity to attend school and learn alongside their peers in regular classrooms, regardless of their skills or disabilities (Pandia and Purwanti, 2019). This approach calls for cultivating a general feeling of inclusion, and welcomes all students, while critically examining traditional notions of segregation. According to the social constructivism hypothesis, social interactions enable method learning by allowing individuals to create knowledge cooperatively in a social setting (Al Herbawi, 2018). Social constructivism strongly emphasises fostering learning and social

development for high school students with ASD through cooperation and peer support within an inclusive educational framework. The ecological structures idea of Bronfenbrenner emphasizes the importance of considering all the many levels that impact a character's development. The dynamic interaction between humans and various structures, such as the microsystem, which includes the immediate surroundings, and the macrosystem, which includes cultural and societal influences, is highlighted by this theoretical framework (Al Herbawi, 2018). The ecological structures concept is a valuable tool for understanding the complex dynamics of several elements that influence teachers' opinions and actions toward inclusive instruction for students with ASD within the context of this research.

The studied literature highlights the value of inclusive educational policies and laws in providing the same academic opportunities for all students. A massive report from 1994 entitled the Salamanca Statement and Framework for Action on Special Needs Education (Al-nawaiseh, 2021) marked a turning point in understanding the value of inclusive education that satisfies the diverse needs of all high school students. The UAE has implemented a strategy for inclusive education that highlights the value of diversity and ensures the inclusion of students with disabilities in regular classrooms. This policy it has introduced intends to cultivate a supportive and inclusive educational environment that fosters inclusion (Al-nawaiseh, 2021). Data were acquired through the administration of surveys and interviews with teachers inside the UAE as a crucial part of the research process.

According to Ramdoss et al. (2012), the responses to a survey they undertook produced sizable amounts of quantitative data about unique aspects of inclusive education, such as teachers' credentials, years of experience, and self-confidence in teaching high school students with ASD. The poll results revealed that, out of the eleven participants, all of the respondents identified as female. This finding shows a significant gender gap within the teaching profession, as seen in the particular setting of this study. Additionally, a sizable

percentage of participants (45.5%) had a Master's degree as their highest level of education, demonstrating a notable level of scholarly proficiency within the group of teachers who participated in the study (Al-nawaiseh, 2021). The participants' levels of knowledge varied, and they had a variety of backgrounds in both general and special education. Six out of the eleven participants (6%) said they had experience in special education, ranging from one to five years.

Regarding official credentials in special education, the survey's results showed that only 2 of the 11 respondents had a verified degree in special education. This emphasises how important it is to provide teachers with opportunities for ongoing professional development and training to improve their skills and knowledge of inclusive education techniques (Al-nawaiseh, 2021). When asked about their level of confidence in instructing students with ASD, the majority of participants (9 out of 11) said they felt confident in their capacity to educate such students in an effective manner. The positive response suggests that many teachers in the UAE have gained the necessary knowledge and skills to effectively support students with ASD in inclusive learning environments (Al-nawaiseh, 2021). According to the survey results a minority of the teachers, (2 out of the 11 participants), experienced difficulties effectively aiding students with ASD Ramdoss et al. (2012). This underlines the need for individualised support and chances for professional growth to boost teachers' competence and self-assurance in inclusive education.

## **1.2 Scope of the Study**

The implementation of inclusive education principles promotes the values of equity and diversity; however, the practical application of these concepts necessitates a significant time and effort investment. Inclusive education presents challenges and opportunities for teachers, administrators, and legislators. Implementing inclusive education requires sufficient funds and assistance. For inclusive schools to be effective, more resources must

be available, technology must progress, and teachers must receive in-depth training to meet the needs of diverse students in inclusive classrooms (Alzyoudi et al., 2021). Moreover, teachers need continual professional development in order to handle a variety of learning requirements properly, as students with disabilities might need particular help managing their behaviours. For example, teachers need to implement positive behaviour methods and create an inclusive classroom environment to encourage a sense of belonging among students. In order to create an inclusive learning environment, stakeholders must work together (Alzyoudi et al., 2021).

Inclusive education has several benefits, students can gain knowledge and skills through active participation and reciprocal interaction in an inclusive learning environment. A complex cultural framework encourages the development of empathy, comprehension, and awareness of individual variety. A broader and more adaptable curriculum that meets the needs of each individual student is fostered by the adoption of inclusive education (Alzyoudi et al., 2021). By differentiating instruction, teachers can tailor lessons and evaluations to each student's areas of strength and weakness, enhancing learning. Collaboration between the teaching and support staff is encouraged in inclusive classrooms. In order to meet the needs of their students, teachers can share knowledge and ideas through co-teaching and collaborative planning. It improves academic and personal advancement while boosting one's sense of self and belonging. Both benefits and limitations of inclusive education exist (Alzyoudi et al., 2021). The issues in education must be resolved collaboratively by all parties involved. By removing these barriers, schools can realize the full promise of inclusive education and give all students access to stimulating and encouraging learning environments.

Teachers' confidence while instructing students with autism spectrum disorder (ASD) determines how well inclusive education works. Teachers can create a positive and inclusive learning environment that supports academic and social growth for all students

when they have a strong sense of confidence in their ability to support and encourage active participation among students diagnosed with ASD. The degree of expertise and training that teachers have significantly influenced their confidence in their ability to teach students with ASD in an effective manner. Teachers can feel secure and prepared with inclusion- and ASD-specific training (Alzyoudi et al., 2021). The use of research-based techniques that suit the needs of students with ASD, as well as leadership and community support, can increase teachers' self-confidence. As a result, teachers are more at ease instructing students with ASD when their institution supports inclusive education and offers resources, support, and collaboration. Teachers acquire confidence in a supportive school environment by experimenting with new techniques and soliciting assistance (Alzyoudi et al., 2021).

Alzyoudi et al. (2021) discussed that when students with ASD succeed, teachers become more assured. Therefore, celebrating students' academic and extracurricular accomplishments helps students feel that their teachers are making a difference, meaning that success boosts confidence, which enhances instruction and student achievement. However, obstacles and difficulties could arise for ASD teachers, and to help inclusive teachers develop resilience, schools must offer ongoing support and professional development by providing support networks for school inclusion (Alzyoudi et al., 2021). Robust support systems are required to encourage an inclusive, student-centred learning environment, and training and professional development for teachers is essential for inclusive education. To analyse the various needs of students, teachers must receive training, including learning techniques, analyzing management, and specialised instructions with regard to best practices in continuous professional development courses.

The successful application of support systems depends on the cooperation of teachers. Both general and special education teachers frequently use co-teaching techniques in inclusive classrooms. To individualise instruction and offer students individualised

support, teachers can work together to accomplish this. For example, speech, occupational, and behavior therapists professionals work with teachers to meet the needs of students with disabilities in providing clear standards and resources for teachers and students in order to assist in creating inclusivity in schools (Elhoweris and Efthymiou, 2020), which in turn calls for the involvement of school leadership and administrators.

The UAE's commitment to high-quality education for all students and its educational vision depend on inclusive education. Regardless of talent or background, every child should receive a relevant and individualised education in the UAE, an approach which embraces diversity and encourages equal opportunity. The UAE's inclusive education policy supports every student's right to a regular education, including those with disabilities. The nation's dedication to inclusive education is evidenced by its efforts to remove barriers and create a culture that values and respects each person's unique qualities and contributions (Elhoweris and Efthymiou, 2020). The UAE strengthened its commitment to disability rights and inclusion, particularly in education, when it ratified the UNCRPD in 2006. The UNCRPD emphasises the need for appropriate accommodation, inclusive learning environments that foster student engagement, and fair access to education. An inclusive education policy has been implemented across the board in schools by the UAE Ministry of Education. The legal framework ensures that students with impairments get the support and adjustments they need to do well in regular classes.

The UAE's inclusive education emphasises that students with disabilities are accommodated as much as possible in regular classrooms, rather than being kept apart in special education settings. By encouraging a sense of belonging and social integration for students with disabilities, the UAE seeks to create an inclusive school culture that embraces variety, and fosters tolerance (Elhoweris and Efthymiou, 2020). Collaboration between teachers, families, and the community is emphasised in inclusive education in the UAE as

schools should collaborate with parents and other stakeholders to support the holistic development of diverse students. In order to promote inclusive education, the UAE needs to prepare teachers to meet the needs of their students. For inclusive classrooms, teachers must have access to ongoing training. To help all students, the inclusive education system in the UAE is constantly evolving (Elhoweris and Efthymiou, 2020). The UAE can create an inclusive society that values diversity and provides equal opportunity for all students by recognizing and appreciating each individual's special talents and abilities.

The role and efficacy of teachers are essential to the UAE's ability to implement inclusive education successfully. All students, including those with ASD, must be accommodated in inclusive and supportive learning environments created by teachers. It all starts with the diversity and inclusion philosophies of the teachers. Positive teachers show a greater appreciation for diversity (Elhoweris and Efthymiou, 2020). They are aware that every student has particular talents and faces disparate challenges, and they work to establish a setting that celebrates diversity and encourages a sense of belonging. Teachers' opinions demonstrate their comfort in instructing students of various abilities. Teachers must comprehend and embrace the various learning styles, make the necessary modifications, and differentiate instruction to meet the needs of all students as part of inclusive education. Confident teachers are more likely to help all students and employ inclusive teaching strategies. Teachers' perspectives shed light on issues in inclusive education. To address the needs of their students, some teachers require additional resources such as specialised training, assistive technology, or teaching assistants. Additionally, teachers may stress the value of ongoing professional development for enhancing inclusive classroom practices.

Teachers' perspectives may be influenced by their experiences working with other teachers, specialists, and school administrators. Inclusion involves teamwork and partnerships. Teachers are inspired to establish inclusive learning environments and stand up

for their students through positive interactions with coworkers and school leadership. Teachers' relationships with the families of impaired students may also influence how they interpret things (Fakih, 2019). Parents, teachers, and other stakeholders must collaborate and communicate for students to develop holistically. The inclusive education scene in the UAE is shown by teachers' perspectives, which also offer suggestions for improvement. By comprehending teachers' views, policymakers and educational leaders may improve inclusive education legislation, offer resources and support, and build successful professional development programmes that enable teachers to flourish as inclusive teachers. In the UAE, teachers will continue to direct and shape inclusive education as it develops.

Working with students who have ASD is one of many challenges and benefits faced by teachers in inclusive classrooms. Flexible and adaptable classrooms that accommodate students of diverse abilities, learning preferences, and backgrounds must be used. Individualized education is necessary for inclusive classrooms (Fakih, 2019). Teachers in inclusive classrooms must modify their teaching strategies and curriculum to fit each student's academic abilities and learning preferences. This could entail using a variety of instructional approaches, assisting students, and challenging others to reach their full potential. Teachers can help students feel a sense of community and belonging in inclusive classrooms. A welcoming and encouraging classroom environment is necessary to foster students' emotional health and promote solid social relationships. Teachers foster diversity, empathy, and understanding in the classroom, which in turn fosters a positive learning environment. However, inclusive classrooms can put teachers to the test (Fakih, 2019). Taking care of students' educational requirements is a big issue, especially for those with disabilities such as ASD. To help students achieve academically and socially, teachers must understand learning disabilities and be able to develop solutions.

The management of analysis presents another difficulty in inclusive classrooms. Students with ASD may behave differently from other students, necessitating consideration and efficient intervention. In order to deal with problematic behaviours, teachers must create a controlled and predictable learning environment. In inclusive classrooms, teachers collaborate with therapists, behaviour therapists and special education teachers (Fakih, 2019). Teachers can share knowledge and work together to solve various students' needs. Despite the difficulties, inclusive classrooms are advantageous for teachers in that watching challenged students develop and thrive may be incredibly fulfilling. Establishing an inclusive and caring learning environment is made more fulfilling when students without disabilities develop empathy, compassion, and acceptance for their peers with different abilities. Finally, working in inclusive classrooms involves both rewards and obstacles. Diversifying instruction, fostering community, addressing a variety of learning needs, controlling behaviours and working with other professionals are all characteristics of inclusive classrooms (Fakih, 2019). Despite the difficulties, inclusive classroom teachers influence students' educational experiences by celebrating diversity, encouraging academic and social advancement, and putting the students they teach in a position to thrive in a culture that values equality and inclusion.

The knowledge and experience of teachers is crucial for inclusion, especially for students with ASD. Teachers can assist and satisfy the needs of all students in an inclusive classroom thanks to their knowledge and training. To assist students, teachers must be knowledgeable about learning disabilities, including ASD (Fakih, 2019). In order to effectively support the learning and development of ASD students, teachers must be aware of the student's strengths and weaknesses. To use solutions supported by research, teachers need training in evidence-based practice. This could include analysing management tailored to students with ASD, communication and social skills training, and visual help. With the

proper preparation, teachers can create a welcoming learning atmosphere that maximizes academic and social achievement. Teachers of inclusive students also require training in tailored education. In order to meet the unique requirements of students with ASD and other disabilities, teachers must be skilled in adapting their techniques, materials, and evaluations. With differentiation, teachers may enrich those students who need it the most and offer scaffold learning for those who provide a challenge (Gaad, 2019). Teachers of inclusive education require ongoing training and professional development. Teaching professionals must stay up to date on educational research and best practices. The most recent information and efficient ASD support techniques can be provided through workshops, seminars, and collaborative learning. Teachers, therapists, and support staff specialising in special education can work together in inclusive classrooms. As a result, teamwork and collaboration skills should be taught in training. In order to meet the needs of varied learners, effective teamwork ensures that all team members are on the same page regarding their objectives and strategies (Gaad, 2019). Teachers with adequate training and knowledge will tend to be competent and at ease in inclusive classrooms. These are teachers who can give students individualized support that helps them grow intellectually, socially, and emotionally.

### **1.3 Statement of the Problem and Rationale of the Study**

The educational system in the UAE emphasises the inclusion in the classroom of students with ASD. Accordingly, the National Policy for ASD was released as a pillar and as a motivator to guarantee students with ASD the right to access the education system (Vision 2021).

Most recent studies focused on investigating teacher's and peers' perceptions towards students with ASD in mainstream schools and advised for further research to investigate this similar topic to evaluate various kinds of challenges which may emerge from different kinds

of settings. Previous studies suggest that different settings might have different issues related to the inclusion of students with ASD. Therefore, studying a range of variables such as teachers' perceptions in the form of sense of child centredness, self-efficacy, stigma of ASD on the part of peers, age of the teachers and peers, gender, years of teaching, and level of experience with students with ASD should be explored to determine the successful ways with regard to how to facilitate the inclusion of ASD students specifically (Forlin et al., 2015; Gaad, 2019; Alnahdi, Saloviita, and Elhadi, 2019; Salovitta, 2020; Zuki and Rahman, 2016). Thus, the teacher's perceptions with regard to the inclusion of students with ASD in mainstream schools, needs to be investigated further as the communities, the settings and other variables are still unclear and unresolved.

Abdelkarim (2019) investigated the perceptions of ASD-specialised teachers in ASD-specialised centres on inclusion in the UAE and concluded that there is a need to investigate the teachers' perception in mainstream schools and highlight the differences between teachers' perceptions in special needs centres and that of teachers involved in an inclusive education setting. Moreover, Alnahdi, Saloviita, and Elhadi (2019) and Zuki and Rahman (2016) conducted comparison studies on teachers' perceptions of inclusion of students with ASD and highly recommended the importance of undertaking research to obtain relative findings with experiments with regard to various populations. This focus would assist stakeholders to evaluate the position of the UAE within a global perspective, which could assist in evaluating enhancements in contrast with those of other populations.

Thus, the UAE educational system has adopted the concept of mainstreaming students with ASD, and the national ASD policy has published the pillars. Consequently, it is necessary to explore the factors affecting teachers' and peers' perceptions and practices, particularly given research demonstrating their long-lasting impact and critical role in assisting individuals with ASD in accessing school, and developing not only academically

but also socially (De Boer et al., 2011; Gaad, 2015; Alnahdi, Saloviita, and Elhadi, 2019; Markez et al., 2019; Opoku et al., 2019; Opoku et al., 2021; Saggars, 2015; Salovitta, 2020; Zuki and Rahman, 2016).

This proposed study aims to bridge the gap in the literature, As an academic work on teachers' and peers' perceptions and practices with regard to students with ASD in Dubai, the study will focus on high schools, given that studies in UAE have tended to focus mainly on primary schools (Gaad, 2015). This research will also highlight what factors these paradigms represent to stakeholders, in addition to how they are identified, established and employed. This stakeholder stand with regard to the inclusion of students with ASD has not been presented in research until now, and this is a criterion for a wholistic educational structure that ascertains the opinions of those who form the front line in dealing with the inclusion of students with ASD. Finally, there is no framework or model that defines the National Policy for Autism in Dubai and support the 2021 Vision for students with ASD.

#### **1.4 Significance of Study**

Research has underlined that positive teachers' perceptions towards the inclusion of students with ASD can lead to a more positive inclusive experience, sense of achievement and confidence in dealing with challenging behaviours (Yada and Savolainen, 2017; Yoshitoshi, 2014). On the other hand, Saggars (2015) conducted a study on students with ASD in secondary schools, and the results indicated that successful inclusion does not rely on academic aspects only. In fact, some factors hindering the full positive experience were highlighted, including peers' relationships with students with ASD. Students with ASD discussed relationships at school as a crucial vital enabler. In particular, friendships and peer groups made them feel safer, an aspect which is considered a key player in the inclusion experience. Studies in the UAE emphasised that teachers' perceptions and practices towards inclusion of SEN students was also linked to many other factors including teacher training,

management and government support, the availability of resources and teachers' willingness (Gaad and Khan, 2007). Moreover, Gaad (2015) investigated peer perception with regard to the inclusion of students with SEN and concluded that knowledge and previous exposure are two of the most important indicators of successful inclusion.

Therefore, the current proposal originates from the fact that the 2021 Vision and National Policy for ASD requires ensuring that students with ASD are able to access schools which provide them with a positive experience and equity. Consequently, there is a need to deliberate on the different variables and their implications with regard to the implementation of the inclusion of students with ASD in high schools. Finally, this proposed study aims to provide a suitable ASD inclusion framework and to offer recommendations as to how to better develop the implementation of the National Policy for ASD.

As a result, the significance of the current proposal is reinforced by various reasons. First, Dubai's Mission 2020 has been named the city the most accessible and enabling city. Second, the National Policy 2021 for autism has launched 14 initiatives to support individuals with ASD and has focused on schools, human resources, healthcare, empowerment and awareness. Finally, major studies on the inclusion of students with ASD has focused on primary schools or special needs centres, and have not specifically investigated this topic with students with ASD in high schools in the UAE.

The findings of this study, which focus on teachers' experiences of implementing inclusive practices for students with ASD, may advance knowledge on inclusive education in general. This study can shed light on the UAE's inclusive educational concerns and promises for teachers, policymakers, academics, and stakeholders everywhere (Locke and Harker, 2017). The UAE's dedication to inclusive education and ASD-friendly classrooms can be a model for other countries. Inclusion and equality are promoted by UAE educational policy (Sharif et al., 2016). By highlighting the UAE's experiences and best practices, this

study can encourage other countries to support inclusive education and provide more inviting learning environments for students with diverse abilities. This study can contribute to discussions about inclusive education teacher preparation worldwide. All across the world, teachers work hard to guide and encourage students (Locke and Harker, 2017). The views and experiences of UAE teachers might influence initiatives for international teacher training and professional development.

Stakeholder engagement and communication research with regard to the inclusive education system in the UAE is transferable to other contexts. Collaboration between teachers, school administrators, families, and the community is necessary for inclusion. The UAE's ways of cooperation and communication can be applied to other cultures (Locke and Harker, 2017). The study's findings with regard to resource allocation and inclusive education aid might also shed light on the challenges faced by resource-poor nations. Understanding how the UAE allocates resources and supports inclusive education might help other countries to optimise the use their resources to build inclusive learning settings that cater for the requirements of students with ASD (Locke and Harker, 2017). The UAE's inclusive educational philosophy could support worldwide efforts to promote diversity and inclusion. Overcoming myths and preconceptions regarding students with ASD and other SEN students is necessary for a more tolerant and open society. The findings can help efforts for the encouragement of inclusive families, communities, and schools. Policymaking for inclusive education can be aided by the study's findings on policy implementation and monitoring (Locke and Harker, 2017). Planning, observing, and evaluating policy goals is necessary and implementing the UAE strategy can aid nations in improving their inclusive education.

Assessing students' learning progress enables teachers to modify their teaching methods. Assessments and evaluations of ASD must follow the principles of inclusion,

egalitarianism, and utility in the context of inclusive education. It may be easier for students with ASD to learn when testing and evaluation procedures are improved. Comprehensive testing and evaluation are required for adolescents with ASD. Conventional methods might only work for students with same abilities, claim Locke and Harker (2017). Diverse learning, communication, and sensory qualities are accommodated via inclusive evaluation. Students with ASD can demonstrate their comprehension in visual or performance-based tests. The idea of inclusive assessment strongly emphasises using formative tests as a way to track and assess students' development. This strategy helps teachers identify learning gaps and provide targeted support to individuals with ASD. Discussions, quizzes, and classroom observations can be used to inform instruction. For those with ASD, implementing self-assessment and goal-setting techniques is beneficial during the developmental years. For teenagers with ASD it is crucial to conduct objective assessments sensitive to cultural differences (Locke and Harker, 2017). Culturally-sensitive evaluations consider the linguistic and cultural viewpoints of the students, and do away with biases that might harm performance.

Individualised education plans (IEPs) support academic goals and modifications for students with ASD. Evaluation is improved by analysing IEP goals and modifications. According to Locke and Harker (2017), ASD students require functional, low-stress testing. High-stakes testing worsens performance by causing increased anxiety and sensory issues. Schools can accommodate students who require additional time, breaks, or flexible seating during testing. By placing their faith in their teachers, ASD students can be inspired to succeed. To conduct an inclusive evaluation, teachers must be optimistic and highlight the talents of the student. Assessment is improved by recognizing and fostering the skills and capabilities of students with ASD (Madani, 2019). In order to understand how students are learning, assessment and evaluation must involve carers. Improvement in inclusive classroom assessment and evaluation results from teacher training. Based on such training,

teachers can test more equitably and inclusively using inclusive assessment techniques, awareness of ASD diversity, and data interpretation training.

The development of inclusive and welcoming cultures is necessary for the establishment of inclusive schools. Educational institutions that are inclusive, diverse, and compassionate encourage and help all students, including those who have been identified as having ASD. A supportive school environment fosters community, promotes teamwork, and supports academic success. The development of a sense of student belonging is necessary for the creation of a welcoming school environment. According to Madani (2019), individuals with ASD may have trouble establishing and maintaining interpersonal bonds. As a result, educational institutions must aggressively promote inclusion for all students. Inclusive educational institutions support students' academic progress by encouraging the growth of peer relationships, collaboration and by encouraging a sense of teamwork. The general well-being of students with ASD is improved by this sense of belonging, which also generates a pleasant school climate. Institutions that value inclusivity place a high priority on fostering empathy and respect for difference. Maintaining the values of respect for students' abilities, backgrounds, and cultures is essential. Sharif et al. (2016) suggest that differentiated curricula and educational activities aid in students' social and emotional growth. Students become more sympathetic and helpful when they are aware of the challenges and talents of others, which results in a more relaxed and tolerant learning atmosphere. Growth among students and teachers is promoted by a positive school culture (Madani, 2019). In inclusive classrooms, all students can learn. Students may overcome obstacles, learn from their mistakes, and persevere with this growth mindset. Students with ASD can overcome academic and social challenges with the help of self-efficacy and resilience.

Including Social and Emotional Learning (SEL) in the curriculum is a top priority for inclusive educational institutions. Programmes for SEL are designed to teach individuals self-awareness, self-control, and social competence, and are advantageous for students with ASD. Teachers actively promote the development of school spirit. Two essential elements make up a positive school culture: inclusive instruction and continual teacher professional development. According to Madani (2019), teachers can create a welcoming and supportive learning environment if they feel prepared and competent to help different students. Teachers can better satisfy the various requirements of their students when they have access to good pedagogical practices which are being widely shared. An encouraging learning atmosphere is fostered by recognising students' achievements. Praise, commendations, and public acknowledgment can highlight students' successes. The aptitudes and successes of students with ASD are a testament to the uniqueness and value of every child. Collaboration between local communities and educational institutions can potentially help families dealing with ASD. Madani (2019) asserts that empowering parents helps create a friendly and collaborative learning environment for students with ASD. According to Sharif et al. (2016), informed parents are better able to speak up for their children, make wise decisions, and actively participate in their child's education. In the end, the students' outcomes improve as a result of this empowerment. Parents can learn about their child's academic achievements, problems, and advancements through regular and meaningful participation. Such a platform enables teachers to communicate with parents about their child's scholastic development while facilitating the sharing of educational resources among teachers. Collaboration between parents and teachers in support of students is made easier through two-way communication. According to Madani (2019), inclusive education involves individualised instruction for each student. Together with the parents, teachers can create a comprehensive plan.

To enable inclusive education, it is essential to educate and train parents. This could involve providing support with homework, analysing management, and engaging in teacher-parent communication. Madani (2019) asserts that workshops, training sessions, and materials on ASD and inclusion can provide parents with the skills they need to effectively support and work with educational institutions on behalf of their children. Parental empowerment can come about through peer networks and support. Connecting makes it easier for parents of students with ASD to learn, share ideas, and help. Parents have a voice in adopting inclusive educational practices through their participation on school committees and advisory boards. According to Sharif et al. (2016), teachers and parents may improve policies, programmes, and initiatives for students with ASD. Institutions of learning can welcome parents with open arms. Certainly, inclusive educational establishments invite parents to participate. Mansoor et al. (2018) claim that openness and accessibility in learning environments promote trust and inclusion among parents with regard to their child's education.

The distribution of resources determines student inclusion initiatives for ASD and other needs. Resources, both financial and non-financial, are required to support and accommodate every student's intellectual and social need. To prioritize and optimize resource distribution, legislators, school administrators, teachers, and others must work together (Mansoor et al., 2018). Money is required for inclusive education. Specialised services, assistive technology, professional development, and support personnel are typically required for inclusion. All students must receive a high-quality education, and policymakers must promote inclusive educational initiatives. Teachers and advocacy groups can promote ASD students' needs and seek funds for inclusive education. Students with ASD require adaptable resources (Mansoor et al., 2018). Different students have different support needs. Instead of employing a one-size-fits-all approach, schools should cater for the needs of their

students. Resource allocation may be based on a student's level of severity, intervention response, and progress. Schools can address students' needs by flexibly distributing resources. Recruiting and retaining qualified teachers, particularly those with experience working with students of different abilities, should be prioritized when allocating resources. To create inclusive classrooms and to support students with ASD, teachers must pursue professional development. There are not enough special education teachers to meet the needs of schools that accommodate ASD students.

When it comes to helping students with ASD, assistive technology is invaluable. This form of technology helps students learn more, improves communication skills, and fosters social connections. Learning is improved when assistive technology is used supported by thorough training for teachers and students. According to Mansoor et al. (2018), students with ASD enrolled in inclusive classes need financial and non-financial support. Academic achievement and student well-being have been improved using appropriate instructional resources, flexible curricula, and helpful tools. Educational institutions must ensure that teachers have access to, and training in, non-financial resources. Educational institutions also require a variety of resources. Inclusive facilities must include adjustments for students with a range of abilities. Accessible restrooms, ramps, elevators, and sensory-friendly environments are just a few of the infrastructure adjustments that make navigating educational facilities easier for students with physical and sensory issues. Students with ASD must be prioritized when it comes to allocating resources. An inclusive, well-balanced education can be successful (Mansoor et al., 2018). Teachers, school administrators, legislators, and community members need to work together to allocate resources in a knowledgeable, fair, and inclusive manner. Data are needed for resource allocation in order to pinpoint needs, monitor student progress, and assess the need for support and intervention. Data can assist schools in funding plans for student progress.

### **1.5 Purpose of the Study**

This study examines UAE teachers' and students' experiences, attitudes, and challenges in implementing inclusive education strategies for students with ASD. The study investigates what makes ASD adolescents successful in normal classrooms, and what hinders inclusive education. This study examines teacher preparation and training to teach students with ASD in inclusive settings. It also examines teachers' knowledge, skills, and confidence in supporting students with ASD to identify areas for professional development. To improve inclusive education, teachers must know ways in which to analyse the different requirements of ASD students. This study also examines the UAE's inclusive education resource availability, as inclusion requires resources such as assistive technology, customized instructional materials, and support staff. The study examines resource sufficiency and allocation difficulties in order to improve assistance for ASD students and their teachers. Moreover, the study examines how teachers, school officials, peers, and the community can work together to promote inclusive education. Collaboration dynamics can help stakeholders find ways to cooperate in such a way as to create a supportive and inclusive educational environment.

The study also investigates teachers' perspectives regarding inclusive education and ASD. Creating a congenial and supportive educational setting for every student necessitates fostering affirmative dispositions toward diversity and inclusivity. By examining teachers' perspectives, this study aims to uncover potential concepts and misunderstandings, and offer strategies for cultivating the analysis of attitudes and fostering inclusive mindsets. The study also examines how policy implementation and monitoring affect the UAE's inclusive education programmes. Sustainable and equitable inclusive education requires effective policy creation and execution. The study examines policy implementation issues and triumphs in order to inform policy formation and inclusive education practices. Finally, this

study aims to advance inclusive education and ASD research as a means of encouraging teachers, policymakers, academics, and stakeholders globally by sharing the UAE's inclusive education experiences and insights. The study seeks to inform global efforts to make education more inclusive, equitable, and supportive for students with various abilities.

### **1.6 Research Questions**

1. What are the teachers' perceptions on pre- and post-training in facilitating the inclusion of students with autism in private high schools in Dubai?
2. What are the teachers' perceptions on inclusion policy and management support in facilitating the inclusion of students with autism in private high schools in Dubai?
3. What are the students' perceptions on the inclusion of students with autism in private high schools in Dubai?
4. What is the status of the availability of resources to facilitate inclusive education for students with autism in private high schools in Dubai?

### **1.7 Structure of the Thesis**

The study is divided into five chapters. This chapter includes background information on inclusion in the UAE, the problem description and justification, the study's goal and importance, and the research questions. Two components make up the second chapter: a review of the literature and the theoretical framework make up the first section. The methodology and research technique, as well as the sites and participants involved in data collection, ethical considerations, and the validity and trustworthiness of the findings, are all explained in the third chapter. The study's results are presented, and the research questions are addressed, in the fourth chapter. The fifth chapter includes the study's ramifications, debate, and conclusions.

## **Chapter 2: Literature Review and Theoretical Framework**

This chapter is divided into two main sections: the literature review and the theoretical framework of the study.

The first section is devoted to reviewing the literature and consists of three major themes. Firstly, it will provide an overview of ASD and will identify the factors related to teacher self-efficacy, pre-service training, in-service training, and demographic and physical environmental factors. Secondly, it will outline the key studies that identify the factors associated with stigma and peer relationships. Finally, it will address the status and reform of ASD in the UAE.

The second section consists of the theoretical framework which is divided into two subsections: Theory of Planned Behaviour and Bronfenbrenner's Ecological Model.

### ***2.1 Literature Review***

A crucial component of educational research is the literature review, which discusses earlier studies and makes use of the knowledge that results. In so doing, it elucidates and identifies ideas and theories related to the topic under consideration. Additionally, it aids the researcher in choosing the best procedures to advance the study toward its goals. Lastly, it gives the researcher a better comprehension of the results obtained as well as the capacity to analyse and interpret them (Ary et al., 2013).

#### ***2.1.1 History and Characteristics of Autism Spectrum Disorder***

To understand the challenges behind the inclusion of students with ASD in schools, it is essential to understand the history of ASD and what are the disorder's characteristics. Autism Spectrum Disorder (ASD), was diagnosed for the first time by Kanner (1943), followed by sweeping progress in its definition over the last century in both sociological and medical terms. The American Psychiatric Association (2013) defined ASD as a lifelong neurodevelopmental condition characterized by impairments in reciprocal social

communication, social interactions, and accompanying behaviours. Subsequently, scientists from a variety of disciplines have attempted to shed light on the unknown aspects of autism, and to help those who are affected. According to a survey by the Centre for Disease Control and Prevention, 2016, ASD prevalence has increased from one in 150 per 1000 children in 2001 to one in 54 in 2016 to the most recent summary released on December 3, 2021, which showed that ASD affects approximately one in every 44 children in the United States. Moreover, ASD affects boys on a rate of 1 in 42 children compared to 1 in 189 for girls (Christensen et al., 2016). However, the cause of ASD is still unknown to researchers. The only official data on the prevalence of ASD in the UAE was conducted in 2007 by Eapen et al. who stated that ASD prevalence was 1 in 146 children.

As the prevalence of ASD increases, the challenges related to the inclusion of individuals with ASD in schools started to attract international attention and led to a major paradigm shift from isolated groups and segregated classrooms, to the emergence of a new movement called inclusion which supports the right of special needs students to access schools in an equitable fashion (Foreman and Arthur-Kelly, 2008). Studies have recently started to support the view that the inclusion of students with ASD is affected hugely by teachers' and peers' perceptions and practices (Ahmmed et al., 2014; Salovitta, 2020; Wang et al., 2021). For instance, teachers' perceptions are impacted by acquiring both knowledge and skills through in-service and pre-service preparations which varies greatly. Consequently, successful inclusive education requires adequate teacher preparation to accommodate students with SEN (Sosu, Mtika, and ColucciGray, 2010).

Similarly, teachers' self-efficacy, and child centredness are considered the most crucial indicators of positive perceptions and the positive inclusion of students with ASD. Therefore, recent studies have investigated these indicators in depth and recommended strategies for improvement (Salovitta, 2020; Ahmmed et al., 2014). Moreover, pre-service

teachers reported a sense of anxiety in terms of being unequipped to teach students with SEN, and reported that they had gained the necessary knowledge but not the skills (Forlin et al., 2015). Furthermore, teachers' practices were highly impacted by the lack of adequate instructional materials, physical environment, and financial resources, all of which are major requirements for inclusive education (Forlin et al., 2015).

Peers' perceptions and practices were reported by students with ASD in high school and higher education colleges and indicated that such relationships with students with ASD were the key indicators for successful inclusion (De Boer et al., 2011; Gaad, 2015; Markez et al., 2019; Opoku et al., 2019; Opoku et al., 2021; Saggars, 2015).

Consequently, governments throughout the world have recently stressed the significance of inclusion for individuals with ASD and have started to highlight the need to remove the boundaries and enhance the degree of equity at schools for all students with special needs.

The United States provided an example of this paradigm shift by legislating the Individuals with Disabilities Education Act (1975) (US) (IDEA) to eliminate discrimination against people with disabilities, and to promote community acceptance. The UAE's example of commitment in developing an inclusive educational system that is founded on the need for equitable education and learner support (Gaad, 2019) is evident in the country's educational policies which emphasise the importance of students with a range of educational needs participating actively in the teaching and learning processes that prepare them for a future of achievement (KHDA, 2017; KHDA, 2019b; Ministry of Education, n.d.a.). Policies and legislation pertaining to inclusive education have been established with the goal of providing equal educational opportunities and a positive educational experience for all students (Gaad, 2019). Federal Law 29/2006, the Ministry of Education's School for All initiative (n.d.a.), the KHDA's inclusive education framework (KHDA, 2017) and its

supplementary guide (KHDA, 2019b) all include pillars of inclusion, particularly in terms of stakeholder responsibilities, student rights, and support schemes for students with special educational needs and disabilities (SEND).

In April 2021 the National Policy for ASD was released to support and empower individuals with ASD and their families through the provision of high-quality services and education. To translate this vision into reality, the policy has five pillars, one of which is to provide students with ASD the right to access the education system, and to provide qualified teachers, supportive technologies and learning materials to prepare them for the vocational and work markets (Vision 2021). The National Policy for Autism 2021 indicated that the total number of people of determination in the UAE is 27,000, with ASD students forming 12% of the total. However, the policy document indicated that only 898 students with ASD were enrolled in schools.

### ***2.1.2 The Root Causes of ASD***

Many hypotheses have been put forward as to what triggers ASD. A theory that autism was caused by emotionally-distant parenting was debunked in the 1940s. Genetic predispositions, prenatal difficulties, and neurological/structural abnormalities in the brain are all examples of biological factors that are increasingly being investigated. Science has uncovered a strong genetic component to autism. People with ASD ancestry have a higher risk of developing autism themselves, and they also have a higher risk of developing speech delay, learning difficulties, and other cognitive impairments (Alansari, 2018). An elevated risk of prenatal and immunological problems is also seen in students who are subsequently diagnosed with autism.

Several structural abnormalities in individuals with ASD have been discovered. Some have a larger than average brain size, problems with the temporal lobe on the left

side, difficulties with the dominant cerebral hemisphere, and alterations in neurotransmitter levels.

To better understand how the autistic brains function, many researchers have hypothesized that autism is related to “stimulus over selectivity”, that is the tendency to focus on only one aspect of stimuli. The idea’s proponents think it explains why certain individuals with ASD have such an exceptional memory for specifics, and tend to focus on a single topic to the exclusion of all others. It has also been suggested that this idea can explain the emergence of savant syndrome (Alansari, 2018). Theorists have proposed that individuals with ASD might have “mind-blindness”, an inability to mindread or put oneself in another’s shoes, to account for their apparent difficulties in reading social cues. According to proponents of the “theory of mind” idea, this difficulty explains why individuals with ASD have a hard time “reading” faces and predicting the reactions of others.

### ***2.1.3 Students with ASD and Education***

Individuals with ASD may have difficulty communicating and behaving in social situations, which may affect the type of education that works best for them. Autism, with its related language and social impairments, has been dubbed the ultimate learning disability (Jones and Frederickson, 2010). Some students with ASD have unusual learning traits, such as a lack of the drive to learn, unusual reactions to rewards, or an obsession with irrelevant information. On average, students with ASD have higher non-verbal than verbal IQs and test within the moderately retarded range. However, care must be taken when interpreting these results because these students might be challenging to test. In addition, 9.8% of the people with ASD in a well-known study sample had what are called savant abilities (Jones and Frederickson, 2010). It has been observed throughout disciplines, with cases reported in anything from extraordinary musical, technical, creative,

or mathematical abilities, to the person's overall level of functioning. Often, parents of students with ASD have no idea where or how their offspring may have learned this skill.

Once Lovaas (1978) showed that children even with severe ASD could learn using highly structured versions of the same procedures employed by regular children, only then did people start to see children with ASD as being teachable. Several methods of instruction subsequently evolved. The ABA (Applied Behaviour Analysis) method, which is based on Skinner's behaviourism approach, has been the standard therapeutic strategy for the past two decades (Jones and Frederickson, 2010). The goal of this method is to use highly-structured instructions and obvious reinforcers to encourage socially acceptable conduct and discourage undesirable compulsions and behaviour.

In 1987, Lovaas released research demonstrating significant IQ gains for youngsters with ASD taught using this approach. The Picture Exchange Communication System (PECS) is used by many teachers who themselves have ASD to aid their students who are non-verbal to communicate more effectively. Dr. Temple Grandin (an assistant professor with ASD at Colorado State University) was educated using ABA methods. Her "brain connected to the world" through this practice, she says. Skills learned in this setting, however, can be difficult for students with ASD to generalize (Jones and Frederickson, 2010). Greenspan's DIR technique (developmental, individual-difference, relationship-based) is starting to gain traction in the education community, despite ABA therapy's continued dominance. This strategy, grounded in early attachment theory, entails coaching teachers and caregivers to tap into the emotional worlds of students with ASD and decode their behaviour.

#### ***2.1.4 Inclusive Education: Its Origins and Evolution***

Inclusive education aligns with students' right to an education as established in the UN Convention on the Rights of the Child dating back to 1980. This principle is further

supported by the UNESCO Salamanca Declaration of 1994, which speaks of ‘education for all’. The implication of this argument lies in providing equal curricular and extracurricular opportunities to all students, including those with special needs and developmental disabilities. An approach of this nature necessitates considerable policy reforms that attempt to achieve a learning environment that accepts every child, irrespective of his or her specific abilities.

Another primary justification for inclusive education is its ability to accommodate various learners. For instance, Wagner’s 2009 citation of the Warnock Committee Report is significant in this context. It highlights the need to include students with special needs in regular classrooms alongside their typically developing peers. This approach, known as “integration”, supports a structural change in pedagogical practices so that education is moulded according to the learner’s needs and learning patterns. Thus, inclusive education not only complies with international norms, but also improves the quality of teaching by fulfilling the specific learning needs of every individual student.

According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO), “inclusive education” refers to successful teaching and learning to all students regardless of their skills. It is claimed that the phrase “inclusive education” has gained popularity since 1994 when legislation was enacted to ensure that all students have access to a curriculum of adequate quality. Equal protection under the law is often cited as a fundamental human right and a cornerstone of social justice (Wagner, 2009). Although there have been numerous debates over the meaning, difficulties, and efficacy of this phrase, it does bring up the idea of equity as opposed to equality when assessing the quality of education in any given situation. Gordon (2017) questioned whether or not all students should have access to quality education free from discrimination. According to his argument, inclusive education has progressed through four stages: denial, where students

with disabilities were socially excluded; acceptance, where they were receiving an education but were segregated; understanding, where students with impairments were integrated with special education support; and inclusion, where knowledge and education were provided to all in a common setting. Little (2017) argued that inclusive education should serve as a model of social justice and equality. All students benefit from these enhancements in terms of their academic performance, sense of self-worth, and interpersonal and communicative competence. It also led to more constructive interactions between students with special needs and their typically developing classmates.

Gaad and Khan (2007) argue that social inclusion is just as crucial as academic integration for students with impairments. One possible interpretation of inclusive education is as a reaction against special education. It is the primary objective of any educational system to invest in general education to improve the learning, socialisation, and maturation of all students. One study included youngsters with an ASD in a three-year longitudinal research. Students with ASD who received the same intervention in special residential facilities fared worse than those who received the same intervention while living in a more natural, inclusive environment (Little, 2017). Scientists found no contradiction between special education and inclusive education. They complement one another when utilized together, as a school's ineffectiveness may be gauged by the number of students who are having problems adapting to the curriculum. Gaad and Khan (2007), argue that for inclusive education to be successful, students with disabilities should be taught alongside their typically developing classmates in normal classrooms, where teachers from a variety of backgrounds work together to fulfill the needs of all students.

A contemporary classroom should contain differentiated teaching and active learning, both of which may be achieved by adapting to students' varying levels of knowledge and aptitude. Little (2017) argued that good teachers help students of diverse

backgrounds overcome obstacles to learning. Through the practice of inclusion, students of varying abilities may participate in, and benefit from, classroom instruction. Instead of focusing on identifying special education needs, which can lead to labeling students and lowering their expectations, they argue that inclusion can make schools more supportive and stimulating settings for both students and teachers by improving the learning environment and social conditions. Such labeling diverts attention from the challenges that students who are not classified face. Sustainable solutions to increase learning for all students should be prioritised by reducing obstacles to education in curriculum, culture, methods, physical surroundings, and legislation, and enhancing the involvement of all learners.

### ***2.1.5 Students with ASD and Inclusive Education***

In 1971, Kozoloff had already showed that students with ASD may do well in regular classrooms with the right kind of support from their teachers, curriculum, and other elements of the learning environment. Some research conducted in the 1980s and 1990s found that mainstreaming youngsters with ASD was beneficial. There was, on the other hand, research that provided fewer compelling results. Locke and Harker (2017) discovered that by the end of their study on the inclusion of students with autism, intellectual disabilities, and behavioural issues, the students were not performing at grade level, and had trouble interacting socially and maintaining behavioural control. The number of participants with a negative outlook on inclusion tripled from one to three. It was determined by the study's authors that students with moderate disabilities did well in general education settings, while those with more severe learning difficulties did better in special education settings. According to the research that was analysed, some students with ASD nevertheless do better in very regimented classrooms (Locke and Harker, 2017).

### ***2.1.6 School Professionals and Teachers***

As numerous previous studies have highlighted the various roles that teachers play in facilitating the learning and inclusion of students with ASD, Locke and Harker (2017) highlighted how to achieve beneficial results for both teachers and their students by demonstrating the need for teacher training for the successful inclusion of students with ASD, and in so doing lent credence to this idea.

Participants in a recent study concluded that teachers who are firm but flexible are the most effective with students with ASD. They also stressed the importance of teachers getting to know each student with ASD individually, without making assumptions about the child based on the child's disability (Locke and Harker, 2017).

Research has underlined that positive teachers' perceptions and practices towards the inclusion of students with ASD can lead to a more positive inclusion experience, sense of achievement and confidence in dealing with challenging behaviours (Yada and Savolainen 2017; Yoshitoshi 2014). On the other hand, Saggars (2015) conducted a study on students with ASD at secondary schools, and the outcomes indicated that successful inclusion does not rely on academic results only. In fact, some factors hindering the full positive experience were highlighted, including peers' relationships with students with ASD. Students with ASD discussed relationships at school as being a crucial vital enabler, especially friendships and peer groups which make them feel safer and is considered a key factor in the inclusion experience. Studies in the UAE emphasised that teachers' perceptions and practices with regard to the inclusion of SEN students was also linked to many other factors including teacher training, management and government support, the availability of resources, and teachers' willingness to engage (Gaad and Khan, 2007). Moreover, Gaad (2015) investigated peer perception on the inclusion of students with SEN, and concluded that knowledge and previous exposure are two of the most important indicators of successful inclusion.

Teachers' enthusiasm and outlook should also be considered. Research conducted in the form of the case study entitled "Where there's a will, there's a way" found that a teacher's dedication to accommodating her six-year-old pupil with ASD was a key factor in his successful integration into a regular classroom (Summers, 2014).

Teachers with both special education and general education backgrounds who have worked with students with ASD report feeling more comfortable with the integration process. The vast majority of conventional respondents however, were skeptical that it would be effective (Summers, 2014). This research emphasised the importance of education and experience in altering one's outlook and drive. This was further demonstrated by Reber's research, which found that student teachers who took part in a practicum had more favourable opinions regarding inclusion in general, than those who had completed a self-study programme.

Shadow teachers or SLAs help many students with ASD. Robertson et al. (2003) stated that the SLA's job is to help the student stay on task, make any required adjustments to the learning environment, learn more, feel less social and/or academic dissatisfaction, have fewer behavioural issues, and work effectively in small groups (Summers, 2014).

The educational system in the UAE emphasises the inclusion of students with ASD in the classroom. Accordingly, the National Policy for ASD was released as a pillar and a motivator to guarantee students with ASD the right to access the education system (Vision 2021).

Most recent studies have focused on investigating teachers' and peers' perceptions with regard to students with ASD in mainstream schools, and have advised the need for further research to investigate similar topics to evaluate the various kinds of challenges which may emerge from different kinds of settings. Previous studies have suggested that different settings might have different issues related to the inclusion of students with ASD.

Therefore, studying many variables such as teachers' perceptions in the form of sense of child centredness, self-efficacy, stigma of ASD among peers, age of the teachers and peers, gender, years of teaching, and level of experience with students with ASD should be explored to determine how best to facilitate the specific inclusion of ASD students (Forlin et al., 2015; Gaad, 2019; Alnahdi, Saloviita, and Elhadi, 2019; Salovitta, 2020; Zuki and Rahman, 2016). Thus, the teachers' perception with regard to students with ASD inclusion in mainstream schools needs to be investigated further, as the communities, the settings and other variables are still unclear and unresolved.

Abdelkarim (2019) investigated ASD-specialised teachers in ASD specialised centres in terms of their perceptions on inclusion in the UAE and concluded that there is a need to investigate the perceptions of teachers in mainstream schools, in order to highlight the differences between teachers' perceptions in special needs centres and of those in inclusive education. Moreover, Alnahdi, Saloviita, and Elhadi (2019) and Zuki and Rahman (2016) conducted comparison studies on teachers' perceptions of inclusion of students with ASD and highly recommended that researchers perform relative comparisons with regard to various populations. Such research would will assist stakeholders to evaluate the situation in the UAE within a global perspective, which could assist in evaluating enhancements in contrast with these other populations.

The UAE educational system has introduced the concept of mainstreaming students with ASD, and the National Policy for ASD has published the pillars. Consequently, it is necessary to explore the factors affecting teachers' and peers' perceptions and practices, particularly given research demonstrating their long-lasting impact and critical role in assisting individuals with ASD in accessing school and developing, not only academically, but also socially (De Boer et al., 2011; Gaad, 2015; Alnahdi, Saloviita, and Elhadi, 2019;

Markez et al., 2019; Opoku et al. 2019; Opoku et al., 2021; Saggers, 2015; Salovitta, 2020; Zuki and Rahman, 2016).

### ***2.1.7 Cultural Variables***

Behaviours such as spitting, biting, striking, throwing things, and self-harm are all examples of the difficulties that students with ASD might present in a classroom setting. Negative student behaviour may have a significant impact on the classroom environment. Consequently, teachers may use a range of strategies to address the issue. Methods have often centred on using punishment to discourage or eradicate undesirable behaviour (e.g., time-outs). It is argued that although this strategy may be successful in reducing disruptive behaviour, it does not teach the student any exemplary alternatives. Positive behaviour support is an option proposed by Boer (2009). The focus of this method is on helping the individual acquire useful abilities and on establishing settings where undesirable actions are rendered futile. The students' strengths and needs are if teachers design a set of strategies that will allow the student to express himself or herself in a socially acceptable way (e.g. showing a picture, speaking out) rather than becoming disruptive.

The authors stress that problematic conduct happens in a social environment that is both dynamic and reciprocal, and that it frequently serves a purpose for the individual expressing it. Therefore, effective interventions with regard to challenging behaviours should target the underlying cause of the issue (as determined by a functional assessment), encompass the full range of problematic actions, be adaptable to a variety of contexts, employ multiple techniques, and be in line with the practitioner's values, interests, and resources (Boer, 2009). Having a greater incidence of behaviour issues in students with ASD does decrease the quality of the teacher/student interaction, according to research by Robertson et al. (2003), hence it is crucial that teachers effectively address this issue. This

research also demonstrates that students with ASD are more likely to behave well when their teachers develop favourable relationships with them.

Teachers of students with ASD from diverse cultural backgrounds may misinterpret certain behaviours as being symptomatic rather than cultural, as pointed out by Wilder et al. (2004). Teachers working with such students should prepare themselves with a cultural framework that includes an understanding of family norms and expectations (Boer, 2009). Teachers constructing curricula for these students need to consider students' native languages, cultural backgrounds, cognitive styles (which are often shaped by the prevailing culture), and the resources used.

#### ***2.1.8 Status and reform of ASD in the UAE***

Internationally, the implementation of inclusive education appears to focus on policies and theories that outpace practice. On the other hand, although inclusive education policy in Canada guarantees access to mainstream schools, McCrimmon (2015) argues that the major obstacle for successful implementation is the lack of adequate training for pre-service teachers.

Likewise, in the Middle East, special needs students have limited access to mainstream schools despite the inclusive policy. Wehbi (2006) emphasises that parents' and teachers' perceptions and lack of awareness are the main reasons behind the poor implementation of the policy. Similarly, policy and practice are clearly out of sync with each other in GCC countries because, according to Battal (2016), students with special needs are still separated from their peers and are taught in segregated classrooms. However, Opoku et al. (2020) examined teachers' perceptions with regard to inclusion and revealed a positive relationship between policy and leaders' support for practicing inclusion. Clearly the two study outcomes contradict one another. Therefore, other variables should be taken into consideration including stigma and cultural awareness.

The Dubai Inclusive Education Policy Framework demonstrates that the UAE shares many of the same views on educational equity as other countries. However, unfortunately in reality Abdelkarim (2019) concluded that the inclusive education policy in UAE is not supported with blueprints and actual implementation. Rather, the study revealed that students with SEN attend special needs classes in special needs centres rather than in mainstream schools.

The inclusive education policy is also influenced by teachers' perceptions (Forlin et al., 2015), which are affected by teachers' preparation, resources, adequate financial support, professional support, and administrative support. These aspects are still preventing the policy from being implemented. In addition, microsystem factors such as teachers' perceptions, years of experience, position, level of education and knowledge are also identified as barriers to the inclusion process (Laluvein, 2011).

The following is an overview of the five categories used to categorize students' need for extra help at school. At Level 1 the student is expected to participate fully without any special accommodation. Then there are four more progressively challenging levels, with Level 5 requiring the most specialised learning programmes and the most constant adaptability on the part of the student.

- **Considering contextual barriers:** These are the structural hurdles that must be overcome before a school can guarantee equal access to its curriculum for all of its students. The socioeconomic status of the student body as a whole, the school's culture with regard to the prevalence of particular stereotypes, the adaptability of the school's curricula and instructional programmes, and the ease of access to, and security within, the physical campus all play a role in establishing the scope of the school's support requirements.

- **District Based Assistance:** The decision makers' responsibility is to examine and confirm the institutional level content and processes needed to create and advise on the most suitable support programme to be delivered to the school and to the individual student.

As Salovitta (2020) concluded and emphasised as an outcome of investigating teachers' perceptions on inclusion, the legislation and policy implementation are negatively affected by teachers' perceptions and any negative climate which hinders the possibility of providing the necessary resources and support. In return, a lack of clear legislation and policies reduces the chances of changing teachers' negative perceptions towards inclusion, leading to a vicious circle. Moreover, Opoku et al. (2021) recommended that inclusive education policy lacks programmes that promote positive relationships amongst typically developing students and students with ASD, copying Marquez et al. (2019) who strongly recommended the need of specialised programmes for both typically developing students and students with ASD in any transitioning year to promote positive perceptions and quality contacts between the two parties.

### ***2.1.9 Teachers' Perceptions***

This section of the literature review will provide some insights into teachers' perceptions on the inclusion of students with ASD. The themes developed in this section will be discussed below:

**2.1.9.1 Factors Related to Teachers' Preparation.** Globally, teachers' preparation varies greatly. As a result, successful inclusive education involves teacher preparation to accommodate students with SEN (Sosu, Mtika, and Gray, 2010). A detailed analysis of the major factors found in the literature is given in the subsections below:

**2.1.9.1.1 Self-Efficacy.** Self-efficacy refers the individual's self confidence in engaging in a certain behaviour (Ahmmed et al., 2014). Previous studies have investigated self-efficacy and claimed that it is the most crucial indicator with regard to positive perceptions and positive inclusion (Salovitta, 2020). Moreover, Yada and Savolainen (2017) emphasised that positive teacher perception towards inclusion is affected by self-efficacy which is seen as the most crucial variable, and concluded that teachers' self-confidence and efficacy are generally low when dealing with students with challenging behaviours such as students with ASD, which in turn might be related to other factors such as training, preparation and stigma. Moreover, Yoshitoshi (2014) investigated high school teachers' self-efficacy with regard to inclusion, and the results agreed with Suzuki's (2011) study which investigated primary school teachers' self-efficacy and found a link between self-efficacy and mainstreaming students with disabilities. Other studies on teachers' perception including that of Savolainen et al. (2012) focused on the relationship between self-efficacy and successful inclusion and concluded that high self-efficacy was a major factor in accepting students with challenging behaviours in mainstream classrooms. Another study by Weisel and Dror (2006) agreed with previous studies and concluded that self-efficacy was the dominant factor in successful inclusion when teachers' perceptions with regard to inclusion were surveyed, followed by a study by Malinen et al. (2012) who emphasised that self-efficacy was the most crucial indicator of teachers' perceptions.

Teachers' self-efficacy in the UAE was also linked to many other factors including training, management and government support, the availability of resources and teachers'

willingness (Gaad and Khan, 2007). In summary, many factors mentioned above highlight that there are basic elements needed to support self-efficacy, such as knowledge, skills, and teacher perception.

**2.1.9.1.2 Pre-Service Teacher Preparation.** Pre-service teachers reported feeling anxious and unequipped to teach students with special education needs (SEN) (Forlin et al., 2015). Pre-service teachers felt they had gained the necessary knowledge but had not gained the necessary skills. Consequently, they lacked confidence in providing differentiating teaching for students. According to Forlin and Chambers (2011), this lack of training and practice prior to starting their careers led to low self-efficacy, stress, and an inability to work with students with SEN. Many studies found that pre-service training offered insufficient instruction, a deficiency which impacted inclusion perspectives, underscoring the need for comprehensive training. Furthermore, teachers' positive perceptions with regard to inclusion were investigated by Salovitta (2020) using the Theory of Planned Behaviour (TPB) to investigate the perceptions of subject teachers, special education teachers, and resource room teachers towards inclusion. The findings agreed with the outcomes of previous studies, and indicated that the association between positive perceptions and inclusion was related to teachers' knowledge and skills. On the other hand, Ahmmed, Sharma, and Deppeler (2014) investigated teachers' variables and argued that teachers' perceptions are not only related to a lack of knowledge but that the need to attend special needs training are evidently related to more positive perceptions.

In the case of the UAE, the education system's progress towards inclusive education is still slow. Pre-service teacher education programmes are relatively restricted, and do not cover all student needs (Gaad, 2015). As a result, earlier research showed that pre-service training is critical for improving teachers' knowledge, skills, and confidence in terms of providing inclusive education for students with diverse needs.

**2.1.9.1.3 In-service Teacher Training.** Many teachers are dissatisfied with the current training programmes in the Middle East. In Jordan, teachers have advocated for ongoing in-service training (Al-khateeb et al., 1996). Clough and Nutbrown (2004) agreed with the Jordanian study and found that after training, teachers' skills and knowledge in terms of inclusive practices improved significantly. However, elementary pre-school teachers stressed the need for more ongoing training. The pre- and post-inclusive training attitudes of 120 teachers were found to be long-term. In order to cover instructional techniques and modifications, most thought longer training programmes were required (Clough and Nutbrown, 2004). Another study by Moore (2015) conducted pre- and post-study on teachers' perceptions claimed that teachers' anxiety decreased as teachers' knowledge increased, and reflected on teachers' abilities in performing adaptations and engaging in instructional teaching in the long term. Similarly, in the UAE, Gaad and Khan (2007) claimed that teachers in Dubai indicated the need for ongoing specialised training in order to be involved in the education process for students with SEN.

In summary, greater involvement in training, both pre- and in-service, will play a crucial role in helping teachers to achieve successful inclusion by implementing the skills they have learned through training in adopting different strategies. Moreover, in-service training programmes have to be developed as a continuous long-term education process, aimed at supporting teachers in terms of gaining knowledge and skills in the different areas and domains of inclusive education.

**2.1.9.1.4 Resources.** Another sub-theme emerged from analysing the literature in the form of resources. Studies emphasised that adequate instructional materials, a conducive physical environment, and financial resources are all required for inclusive education (Forlin et al., 2015). These points will be discussed below.

**2.1.9.1.5 Teacher-expert Collaboration.** Salovitta (2020) concluded that teachers who indicated that they had obtained support from professionals in the field of SEN were more positive towards inclusion due to access to individualised education plans (IEPs) and support in dealing with particular scenarios. This is similar to the situation in the UAE, where mainstream classroom teachers tend to view SEN students as the responsibility of special education teachers (Gaad, 2007). However, SEN movement has improved teachers' perceptions, and more recent studies in the UAE (Gaad, 2011) have highlighted that mainstream teachers are more positive towards inclusion if they feel supported by experts in the field.

**2.1.9.1.6 Financial Resources and Physical Environment.** To achieve equity, all barriers should be removed and accessibility for schools should be achieved through catering to all students' needs. Therefore, investigating barriers and recommending facilitators can be the first step in achieving inclusion as per the National Framework in Dubai.

According to the literature, improving school facilities is critical for improving inclusive education, for individuals with behavior and physical challenges including students with ASD. Bērziņa (2010) concluded from an open-ended questionnaire that a lack of resources and an unsuitable physical environment was reported as a barrier by teachers. Such a lack of resources can affect the safety of students as well as preventing access to proper education using specific types of communication tools as has been observed in the case of students with ASD.

In light of the UAE's 2021 strategy for ASD, it is vital to analyse the elements that influenced the process of inclusion for students with ASD. The success with regard to inclusive education is predicted by policies, individual and cultural values, and resources.

**2.1.9.1.7 Disparity Between General and Special Education Teachers.** Special education teachers and those who teach in general education classrooms frequently are in dispute in the literature. There have been many studies showing the value of inclusion, but teachers in the United States and Australia still reject it (Charley, 2015; Cook, Semmel, and Gerber, 2018; Familia-Garcia, 2017; Forlin, 2017).

Researchers discovered that specialised and general teachers' perspectives on inclusive education differ (Familia-Garcia, 2017). While 80% of general education teachers said they would resign if it was adopted, just half of special education teachers supported the idea (Familia-Garcia, 2017). Responsibility, on the other hand, was a major issue affecting teachers' perceptions and practices (Familia-Garcia, 2017). Moreover, the UAE still has a divide between special and general education teachers (Tibi, 2012).

So, who is responsible for inclusive education, and why do we need to include SEN students in mainstream classes? A question developed from the synthesis, it may deepen the gap between general and special education teachers. Teachers must work together to create effective inclusive education strategies.

#### **2.1.10. Students' Perceptions and Practices.**

This part of the literature review will provide some background into typically developing students' perceptions and practices on the inclusion of students with ASD. The themes developed in this section are related to stigma and peer relationships.

**2.1.10.1 Stigma.** Opoku et al. (2021) examined the perceptions and practices of typically developing students toward mainstream classes with students with ASD. The results indicated that promoting inclusion and community awareness, with an emphasis on building self-confidence on the part of the typically developing students, will positively affect their perceptions and practices in terms of inclusiveness. This was certainly the case in Ghana, where individuals with ASD are viewed as “spirits” (Ametepée and Anastasiou, 2015). Furthermore, the stigma and the lack of community awareness on the part of the parents of typically developing students play a clear role in hindering the inclusion process given that they threaten to withdraw their students if they are enrolled in classes with students who have ASD. In a previous study De Boer et al. (2011) argued that building positive perceptions with regard to inclusion is the very first step in building an inclusive environment. Moreover, Wang et al. (2021) concluded that positive perceptions can develop positive practices in the form of relationships with students with ASD. Society factors in general and cultural awareness with regard to accepting inclusion plays a major role in affecting neurotypical students’ perception towards inclusion, as noted by Opoku et al. (2019).

The UAE, like other emerging countries, lags behind in normalizing special needs presence in the community (Crabtree, 2007). Therefore, this phenomenon requires more in-depth study to understand the factors that can reduce stigma and support inclusion.

**2.1.10.2 Peers' Relationships.** Saggars (2015) conducted a study on students with ASD in secondary schools and the outcomes indicated that successful inclusion is not dependent on academics only. In fact, some factors hindering the full positive experience were highlighted, including peers' relationships with students with ASD. Students with ASD discussed relationships at school and noted them as a crucial vital enabler, especially friendships and peer groups, which make them feel safer. However, half of the students with ASD described the time they spent at lunch time as being lonely and that playing sports was not enjoyable (Saggars, 2015).

The outcome of another study supports the previous studies about bullying in schools as being an inhibitor to learning (Humphrey and Lewis, 2008). In both studies students with ASD felt that only physical aggression and sexual harassment should be reported as they don't see any point in reporting other kinds of bullying, and they described that the teacher needed to have a good relationship with them in order for them to be able to open up such a topic.

Markez et al. (2019) conducted a study to investigate college students' perceptions towards students with ASD. The outcomes of studying the underlying reasons behind successful inclusion suggests that there is no relationship between knowledge and positive perceptions towards inclusion. However, the most predictable variable was the contact quality rather than the contact quantity. In the UAE, Gaad (2015) investigated the key factors that facilitate inclusion and concluded that peer relationships and positive perceptions are two of the most important indicators of successful inclusion.

The previous outcomes with regard to students' perceptions towards inclusion, emphasises the urgent need to consider the provision of more preparation for students with ASD in the transitioning phases, as well as a possible summer bridging programme for neurotypical students giving them the chance to experience an inclusive environment.

### ***2.1.11 International Perspective on Students with ASD***

South Africa's National Commission on Special Needs in Education and Training was established in 1996 to examine the state of special education and related support services, and to make policy suggestions. The report of this commission's findings was eventually made public. The panel found that only a small fraction of disabled students in the South African education system have received specialised instruction and support, and that much of this help was racially imbalanced (Wagner, 2002). This has led to the majority of disabled students being either ignored by the system or "mainstreamed by default". Therefore, the panel concluded that there were too many students dropping out of school, being forced to leave, or otherwise failing to succeed in the South African education system.

Based on the results, suggestions were made to broaden the scope of the South African education system to include all students. The major goal of the inclusion policy is to bring in over 280,000 students who are not already enrolled in school. The policy also seeks to ensure that all citizens of South Africa have equal access to necessary resources and assistance programmes.

The following is a direct quote from the Draft National Strategy on Screening, Identification, Assessment, and Support, which outlines the main points of the plan with regard to overhauling the current system:

- As a result of this shift in perspective, assistance is now understood to include not just remediation of identified needs, but also the examination of a school's own culture, rules, and procedures, as well as its approach to teaching and learning.
- Facilitating Access to Content Through Curriculum Alteration: There are many facets of the curricula that need to be considered and addressed, including but not limited to: content, language, medium of teaching, classroom management and

organization, learning style and pace, time frames for the completion of curricula, materials, equipment available, assessment methods and techniques.

Although there are a few dedicated special education facilities in South Africa, some mainstream schools have also created autistic-specific programmes for their students. Low-functioning students with ASD are taught at schools specializing in severe developmental abnormalities, whereas higher-functioning students with ASD have been integrated into general classes at several remedial schools (Jones and Frederickson, 2010). Some middle-class and upper-middle-class families with children with ASD choose to “home educate” their children using certified ABA facilitators, while others pay a paraprofessional to support their child in a generalized remedial setting.

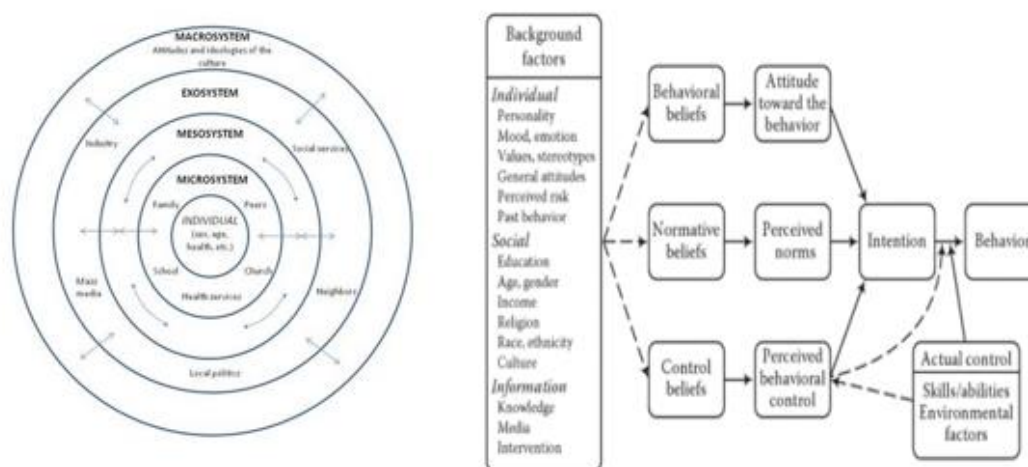
According to Al-Saleh (2019), teachers in Saudi Arabia had a negative perception of learners with autism, and this made them to fail to deliver the best possible services to these students. Inclusive education has been seen from another dimension that is not right, whereby educational inclusivity is resisted, and special schools have to be created in order to accommodate those students with special needs. Teachers in particular are responsible for ensuring that learners are all included in the curriculum, and in Middle East, teachers have shown a bit of resistance to adopting the changes that go with having all learners included in a classroom setup. This resistance has meant that the status quo remains. However, with policy makers trying to make Middle East conform with the rest of the world, Middle Eastern region teachers still remain and have a long way to go in accepting that inclusive education is worthwhile. It looked as if they were going to be forced to adopt it until private institutions were established in Dubai.

Learners who have had autism for a very long time have gone through a huge challenge given that they were not able to blend in like other students in the Middle East because they were constantly being bullied by others and therefore, not being given any

opportunity to be like others. According to Brown and Poulson (2008), discrimination against autistic students has gone a long way in ensuring fairness and equality in education in most parts of the world. The Middle East is one of the areas which is affected by this move, in which the learners are not able to mingle with others freely since the idea and concept of inclusivity in the region has not yet been accepted. As a result, there remains gaps and loopholes in policy making that only allows private institutions in Dubai to offer this inclusive education.

## **2.2 Theoretical Framework**

In this section we will discuss the theoretical underpinnings of the research with a highlight on the Theory of Planned Behaviour and Bronfenbrenner's Ecological Model. These are the theoretical frameworks for this research. Figure 1 illustrates the model and the theory. This study will employ the Theory of Planned Behaviour (TPB) constructs and hypothesis as the main pillar for explaining the teachers' and students' perceptions towards students with ASD. The Bronfenbrenner Ecological Model explores a child's growth and their interactions in connection to their surroundings (Bronfenbrenner, 1994). The model will investigate the factors that will not be captured by the TPB such as gender, teachers' years of experience, and policy implications. The model and the theory are discussed in detail below.

**Figure 1***Theoretical Framework of the Current Study***2.2.1. Theory of Planned Behaviour**

According to Fishbein and Ajzen (1975), the TPB's purpose is to discover how people's thoughts influence their behaviour. The TPB is made up of three primary parts: (1) Behavioural beliefs, (2) Normative beliefs consist of two different types of beliefs that explain an individual's assessment of the results connected with a given conduct, and the influence of social pressure on that individual and (3) Control Belief which refers to an individual's self-efficacy Ajzen(1991,2005).

A study by Büssing et al. (2019) and Wang et al. (2021) concluded that understanding the relationship between a social phenomenon and human behaviour relies heavily on perceptions. Because we are embedded in an interconnected network, our beliefs are shaped by our social environment. Therefore, according to Ajzen (1991), TPB will contribute hugely to capturing all of the key perceptions that explain why an individual wants to carry out a specific action.

TPB broadens the Theory of Reasoned Action (TRA) which considers normative and behaviour beliefs to be interconnected (Fishbein and Ajzen, 1975). Behavioural and

normative beliefs both pertain to behaviours individuals may control or choose to engage in. Beliefs and intentions to act are related by the logic of expectation value. Behavioural beliefs are established when a person is given the opportunity to perform a specific behaviour. The person analyses the situation by observing it and anticipating what will happen next. If a person's behaviours are viewed positively, they are more likely to display positive intent and conduct, while the opposite is expected if the individual is not satisfied with the behaviour outcomes.

Normative beliefs on the other hand are perceptions of how others in the individual's social circle support an analysis (Ajzen, 1991). If the social pressure is viewed positively, the individual will be more accepting of the analysis. A non-controllable element can, however, be a part of engaging in a particular analysis. Consequently, Ajzen (2011) proposed a third belief, the Control Belief, which will help people perform certain behaviours. Both Ajzen's and Bandura's theory of self-efficacy have a lot of overlap, (Ahmmed et al., 2014).

Like any other theory, TPB doesn't come without its limitations. There are some critics who question its usefulness or sufficiency. Several conceptual studies, including those produced by Morgan and Bachrach (2011) and Sommer (2012), have questioned the TPB's incapacity to account for historical events. For example, when measuring current events, TPB does not take into consideration what has occurred in the previous period. The focus of Ajzen's theory is only on the present and on projected effects of future actions, with little consideration being given to the impact of previous actions on one's current intentions. The social model refers to the relationship between the immediate environment and an individuals' development, taking into consideration past experiences and the implications of policy and legislation. Therefore, the Bronfenbrenner Ecological Model, which explains the child's development and interactions in connection to their surroundings, will supplement the TPB theory.

### ***2.2.2 The Bronfenbrenner Ecological Model***

A child's growth and interactions with their environment are studied using the Bronfenbrenner Ecological Model which was developed by Bronfenbrenner (Bronfenbrenner, 1994). The ecological model contains four subsystems: (1) The Microsystem which is the closest system to the child which has immediate interactions with him/her, such as family members, teachers and peers. These are all part of a "microsystem". (Bronfenbrenner, 1994). For example, a microsystem includes characteristics such as a teacher's strategies, student level, and common interaction approaches that have an impact on student growth; (2) The Mesosystem which is the connection within the microsystem (Härkönen, 2005) and is defined as special characteristics of the microsystems' components. Some examples are connections between teachers and parents, teachers' years of teaching, teachers' gender, and teachers' special and general education specialisations; (3) The Exosystem which does not actively include the individual. However, its occurrences do impact the student, for example the location of the school; (4) The Macrosystem which involves the legislation and policies that can influence the inclusion process. In addition, there is (5) The Chronosystem. This is not employed in this study because it is not longitudinal and only investigate teachers' and students' perceptions at a specific point in time. So, despite being mentioned, it is absent from the model.

Forlin, Kawai and Higuchi (2015) conducted a study using the implications of the Bronfenbrenner Ecological Model and contributed to providing a comprehensive framework in using this model with regard to inclusive education. Moreover, the Mesosystem was also identified as a gap where awareness and cultural beliefs were affecting the process of inclusion. Finally, the last barrier within the Macrosystem, emphasised the need for an inclusive education policy.

The Bronfenbrenner Ecological Model is still fairly new and is universally accepted in studying the relationship between humans and their environment. However, it has been criticized as it is still unclear when it comes to building a framework due to the various layers and the missing hierarchical importance of which layer influences development most strongly (Hintz et al., 2015). Thus, the elements of Bronfenbrenner Ecological Model combined with the TPB theory can look at the factors that could contribute to a better understanding of teachers' and students' perceptions, and explain the factors that can influence the inclusion of students with ASD in Dubai.

### **2.3 Literature Review Summary**

ASD has been characterized in this chapter as a complex, widespread developmental condition that may have far-reaching effects on a person's social, cognitive, and emotional development and functioning. This chapter discussed the evolution of effective autism education strategies and the dispute over what sort of classroom setting is ideal for students with ASD, highlighting the fact that students with ASD were formerly thought to be unteachable. Teachers' and paraprofessionals' responsibilities, as well as curricular and environmental changes, as well as students' and families' and communities' social, behavioural, multicultural, and emotional support, were discussed in detail as they relate to the integration of students with ASD into traditional classrooms.

Since studies suggest that when teachers and students are equipped with knowledge and skills, they can contribute to a better inclusion experience for students with ASD (De Boer et al., 2011; Gaad, 2015; Alnahdi, Saloviita, and Elhadi, 2019; Markez et al., 2019; Opoku et al., 2019; Opoku et al., 2021; Saggars, 2015; Salovitta, 2020; Zuki and Rahman, 2016). Key concepts to be interpreted are inclusion, educational policy, and its link with students with ASD, in addition to perceptions and practices on the part of teachers and students, and their link to successful inclusion.

The inclusive education movement has evolved in societies as a strategy for achieving a more democratic and fair community in the future that embraces diversity (Porter, 2008). It has become a model method in several countries as a means of preserving all students' rights to a better education. Dare and Nowicki (2018) emphasised that inclusive education guarantees the right for all students to access schools with equity, dignity, and happiness, where all their needs are met in a caring and comfortable environment. Moreover, Yada and Savolainen (2017) envisioned that shifting to inclusive societies requires commitment on the part of teachers, students, parents, and stakeholders. The Centre for Disease Control and Prevention (2021) reported a 10% increase in cases of ASD in the United States . Consequently, students with ASD in mainstream schools are a growing population that necessitates their inclusion. As a result, teachers' perceptions and practices have been investigated in previous studies and highlighted as playing a crucial role in maintaining a positive inclusive process (Forlin et al., 2015; Gaad, 2019; Alnahdi, Saloviita, and Elhadi, 2019; Salovitta, 2020; Zuki and Rahman, 2016).

Peers' perceptions and practices on the other hand, form a fundamental factor that leads to inclusion, particularly for students with ASD (De Boer et al., 2011; Gaad, 2015; Alnahdi, Saloviita, and Elhadi, 2019; Markez et al., 2019; Opoku et al., 2019; Opoku et al., 2021; Saggars, 2015; Salovitta, 2020; Zuki and Rahman, 2016). Moreover, Brede et al. (2017) and Young, Mannix McNamara and Coughlan (2017) investigated the facilitative factors to inclusive education and recommended the need to involve stakeholders and policy makers in developing a framework for inclusion specifically for students with ASD. Consequently, students with ASD present with a complex presentation, characterized by behaviour challenges, social challenges and possible intellectual and language barriers.

Students with ASD can present with social difficulties, intellectual challenges and challenging behaviours with heterogeneity of the complex presentation (American

Psychiatric Association, 2013). Consequently, students with ASD struggle with forming relationships with teachers and peers, face academic challenges and mental health issues (Skrzypiec et al., 2015). Therefore, in order such students to succeed academically and have a more positive academic, social and psychological experience at school, they need a comprehensive inclusive system including peer support, teacher support and stakeholder's commitment in supporting them with policy initiatives and implementation (Opoku et al., 2021; Salovitta, 2020).

Thus, the significance of studying the underling variables related to teachers, peers and legislation and how these link to the framework of inclusion can lead to a more positive inclusive experience (Saloviita and Elhadi, 2019).

The field of perceptual studies has a long and illustrious past. For schools and teachers to satisfy the different educational requirements of all students, previous research on inclusion reveals that they must alter and adapt their approaches (Yada and Savolainen, 2017). In order for teachers to successfully implement inclusive practices in their classrooms, they are expected to have a positive perception toward inclusive education and the requisite skills and expertise (Salovitta, 2020; Zuki and Rahman, 2016). As a result, previous studies have focused on the viewpoints of teachers with regard to inclusive education. According to Saloviita and Elhadi (2019) many factors affect teachers' positive perceptions in this respect, including the types of disabilities their students have, as well as the setting in which they work, the availability of support, and previous experiences and training.

In addition, previous studies have suggested that the anxiety associated with working with students with ASD related to behaviour challenges is reported by pre-service teachers, which leads to anxiety and low self-efficacy, leaving teachers with negative perceptions and a lack of proper practice (Forlin, 2013).

Students in the adolescence phase have a greater desire and opportunity for peer interaction than at any other point in their lives. Adolescents report that their closest friends have the greatest impact on their quality of life, and research demonstrates that having positive relationships with peers increases academic performance, social acceptance, and a sense of belonging (Helseth and Misvaer, 2010; Rubin et al., 2009; Wentzel et al., 2012). However, students with ASD in secondary schools have reported limited positive opportunities to interact with their peers in a pleasant social context (Wagner et al., 2004). Moreover, Bauminger et al. (2003), Humphrey and Symes (2010) and Wainscot et al. (2008) reported that students with ASD have limited experience of meeting peers outside school, which they report as a negative experience. Research suggests that this is related to peers' perceptions and previous experiences and practices that might in turn be related to their families or cultural beliefs, given that hence some societies even view students with ASD as spirits (Opoku et al., 2021).

While the Gauteng Department of Education in South Africa is not likely to have official data on mainstream schools that have integrated students with ASD, a percentage of students with varying degrees of autism are likely to have been mainstreamed by default in rural and disadvantaged regions. However, autism inclusion pilot programmes are currently being established at the Transvaal Memorial Institute in Johannesburg (Jones and Frederickson, 2010). As a result, we may look forward to what may be the first official study of its kind to examine how the inclusion policy is being put into practice with students with ASD in South Africa. This review has shown that ASD is a complicated disorder with a wide range of manifestations in terms of cognitive, social, and behavioural symptoms. Knowledge and comprehension of the situation is crucial for effective work with these students.

Presently, teachers are only given broad overviews of inclusion policy, rather than detailed instruction on how to handle the wide variety of situations they may encounter in the classroom (Jones and Frederickson, 2010). According to Scott's findings, "enough provision to assure achievement of an inclusive system has been established on paper, but this is not true at school and classroom level with severe ramifications for teachers and students." The author of this article hypothesizes, based on the available literature, that the success of mainstreaming autistic students will depend in part on teachers' confidence in their ability to work with ASD students, as well as their level of motivation, availability of resources, and the quality of training they receive.

To sum up, the present chapter concludes that the inclusion of students with special needs in learning institutions is an area that has attracted attention in Dubai over a long period of time. According to Usman (2019), experts in education matters, as well as policymakers, continue to call for solutions across schools in the city of Dubai, including those operating in the private sector. The research aimed at examining how the phenomenon of inclusion of learners, particularly those with special needs, is perceived, implemented and enforced across various private learning institutions in Dubai. Usman (2019) offers that in order to ensure that inclusion is more effective in the area, increasing teacher's education initiatives and reculturing, as opposed to restructuring, will be beneficial.

According to Madani (2019), a teacher's self-efficacy is essential for the effective implementation of inclusive practice. The research aimed at determining the influence of integrating observation programmes pertaining to inclusion programmes on the self-efficacy of teachers in terms of the teaching-learning procedures of working with learners with special needs in private institutions. Based on the results, self-efficacy in inclusive practices can be enhanced with teaching experience, training, as well as education levels.

In addition, the study indicated that self-efficacy is dependent upon expertise in learning assessment and the progress measurement

Therefore, according to Madani (2019), there is a need to improve self-efficacy on the part of teachers to enhance the teaching-learning process of learners with special needs. In addition, a study by Alborno (2022) suggests that most teachers identify the difficulties associated with authentic inclusion in their respective schools, as well as in society in general. The research examined the influence of joining direct instruction with structured field experience based on the perceptions and practices of the teachers involved in the investigation. Alborno (2020) indicates that although some teachers have concerns about inclusion, others become advocates, and support every child's right to an equitable education.

According to Cambridge-Johnson, Hunter-Johnson and Newton (2014), there has been a notable shift worldwide in relation to the adoption of inclusive education policies, as well as processes. However, the research highlights that teachers still have differing perceptions, opinions, and anxieties about the effective implementation of inclusive education practices in typical learning settings. The study sought to provide an informative examination of teachers' attitudes concerning inclusive education policies, as well as their application, potential factors that have an impact on such views, and possible measures for enhancing suitable practices in inclusive education. Cambridge-Johnson et al. (2014) indicated that, in general, teachers have a positive attitude regarding inclusion. However, findings from the research indicated certain factors such as a lack of sufficient funding, insufficient administrative support, and reduced opportunities pertaining to training, as well as development, were recognized as being influential negative aspects that have an impact on teachers' perception with regard to the inclusion of special needs students.

According to Younis (2020), learning institutions offer support to twice-exceptional learners in a proactive manner. The study provides that teachers, as well as policymakers, require further awareness in order to enhance the provision of services, especially to students with special needs, including those with autism in Dubai.

Inclusion in schools has been pointed out as a global phenomenon that emphasises the need to offer special education services to students with disabilities, also referred to as individuals of determination in Dubai. According to Fakihi (2019), the success of inclusion is considered a shared belief among scholars and teachers that is reliant on teachers' roles as well as attitudes, as indicated by various tentative pieces of research over time. Fakihi stated that teachers have a positive approach to inclusion and perceive the inclusion policy as a beneficial practice for all students in traditional learning settings. In contrast, some have adopted a negative and neutral perspective. Therefore, according to the research, effective inclusion is significantly reliant on essential factors such as training, resources and provisions and support from administrators and other stakeholders, in order to meet the needs of students with special needs.

Due to inclusion and inclusive education being a popular topic, particularly in the UAE, a substantial number of learners with special needs, including autism, undertake their studies in private as well as government institutions (Ganesh, 2017). This study aimed at carrying out an investigation to establish the attitude and perception of the parents of students studying in segregated learning settings. Such research is beneficial, since the views of parents may, in a way, influence the perceptions their students may have towards inclusion. According to the investigation, overall, parents were in support of the ideology pertaining to inclusion, although they had several reservations. These concerns include the lack of trained teachers as well as resources in regular schools as compared to provisions offered in special needs institutions.

According to Weber and City (2012), the terms inclusion, as well as inclusive education are used in various senses among policymakers and teachers in that the expressions may mean that all students should have access to educational settings, whether integrated or segregated. In addition, inclusive education and inclusion may point to the streaming of learners with special needs into the regular typical classrooms (Weber and City, 2012). According to the study, the UNESCO World Declaration pertaining to Education for All was a significant milestone in creating the ideological foundations of inclusive education.

Weber and City (2012) offer that such a declaration encourages the nurturing of equality as well as the full involvement of individuals with disabilities in day-to-day undertakings in all areas of life, including education. According to the research, the underpinning principle of inclusive institutions is that all students should learn together when possible, irrespective of any challenges or differences they may have. Furthermore, Haddad (2019) indicates that education is a constitutional right guaranteed by law to all people without discrimination in the UAE. As such, this right is assured to individuals with special needs such as autism.

Elhoweris and Efthymiou (2020) argue that the cultural diversity that characterizes the Middle Eastern Arab world leads to incompatible ideas pertaining to the descriptions of inclusion as well as inclusive education, and results in the complexity and multifaceted understanding of these terms.. Therefore, the study aimed to explore the issues about policies, legislative frameworks, attitudes, and practices, and how such factors may influence learners with special educational needs. The research offers ways to support students with special educational needs in mainstream learning environments with other students at all school levels with the goal of preventing marginalisation, social stigmatisation as well as labeling.

According to Elhoweris and Efthymiou (2020), an evaluation of the essential parameters necessary for the support of a learning environment for the benefit of all students in an inclusive mainstream classroom is vital. In addition, the study offers that an investigation of practices based on inclusion that can help dispel various misconceptions that consistently surround the process of teaching students with special needs, such as those with autism, in an inclusive learning environment. Consequently, Elhoweris and Efthymiou (2020) call for community-oriented sensitisation programmes, education campaigns, institution-based special needs awareness initiatives, as well as training for teachers in order to offer support and empower learners with special educational needs.

According to Soylu (2019), students with autism face various difficulties as well as challenges in education and social life, irrespective of their background. Therefore, the research calls for more investigations and examination of current situations, and the views of parents and other stakeholders. In addition, the study highlights gaps relating to training as well as educating teachers in order to ensure that the process of inclusion is effective, and to improve the services to ascertain the provision of adequate services for students with autism.

Jubran (2015) states that learners' views in relation to inclusive education are an essential component that helps in improving the delivery as well as enhancing the quality of education for students with special educational needs. The study argues that school systems and teachers can benefit from listening to the perceptions of such learners, and taking their opinions into consideration. According to the research, students possess invaluable knowledge and information pertaining to their education to share, as well as social experiences at institutions.

The influence of positive education and a general well-being culture on students with special needs, including autism, in inclusive institutions based in Dubai, has been an

active area of exploration. According to Keis (2020), positive education, as well as well-being values, enable inclusive education and also alleviate stigma. The research offers that inclusion, when inclusion is intellectualized as well as paralleled with positive education acts as a catalyst that necessitates that institutions adopt a positive perception towards all learners, including those with special needs. Furthermore, the study provides that such students may have further vulnerabilities as well as reduced levels of well-being in terms of their emotions, stemming from feeling inadequate as compared to typically developing peers. Keis (2020) suggests that several factors such as peer attitude and relationships, as well as teachers' perceptions, may affect the well-being of learners with special needs undertaking their studies in inclusive schools. Consequently, the study states that sociable peer approaches and positive perceptions on the part of teachers can aid in promoting and maintaining learners' well-being in inclusive schools. Therefore, the research indicates that institutions should incorporate positive education as well as introduce a well-being culture, in order to cultivate a positive and conducive environment for all students including those with special needs. Such measures would be helpful in enhancing and promoting the learners' well-being, and instilling a sense of belonging, in a healthy environment.

According to Abdulhameed (2019), most teachers are positive about the inclusion model. The study sought to examine teachers' perceptions towards including students with autism in regular classrooms while, at the same time, identifying existing preconceived ideas about autism. The research found that publicity with regard to the condition increased awareness, and led to a rise in the number of teachers who had undertaken training in relation to the condition. Consequently, such attention creates readiness and helps cultivate a positive perception on the part of teachers to the inclusion of students with autism in their classes (Abdulhameed, 2019). According to the study, however, teachers called for further support as well as training in order to improve the provision of inclusive education. In

addition, the research indicated that the assistance provided by Departments in Special Education in higher education institutions should match the expectations of teachers.

Calderon (2013) offers that having concerns regarding the requirements of students with special needs calls for responsibility as well as commitment from all members of society. Furthermore, the study suggests that a community depends on an education policy in order to grow to its maximum potential, together with ascertaining that students with special needs have access to quality inclusive education. Policymakers, as well as stakeholders, consider inclusion in schools as an important education concept owing to the acceptance and assistance that students with special needs get from other learners, and other members of their institution community (Calderon, 2013). The study by Calderon (2013), which aimed at enlightening the perceptions of administrators, teachers and parents, demonstrates that inclusion entails a restructuring of mainstream institutions in order to make crucial adjustments for every learner, irrespective of their abilities or disabilities.

Alkhateeb, Hadidi and Alkhateeb (2016) offer that despite the impact of inclusive education, particularly in Arab countries, there is relatively little research on the area. Therefore, they point out the need for further exploration of inclusion in order to conduct an analysis of inclusive education practices, as well as illustrate approaches for the successful implementation of inclusive education in such regions.

The administrators of private schools play a crucial role in determining the attitude that the students in those institutions will have towards students with special needs studying with them. According to Pandia and Purwanti (2019), private schools regularly prepare typically developing students to acknowledge as well as accept the presence of learners with special needs such as autism. Consequently, such a relationship creates a

positive perception and promotes a healthy learning environment (Pandia and Purwanti, 2019).

Furthermore, according to Alzyoudi, Opoku and Moustafa (2021), the concept of inclusive education is widely accredited as a helpful tool in enhancing the involvement of all learners. One of the primary goals involved in the implementation of inclusion entails upholding acceptance and peaceful co-existence, particularly between students with special needs and characteristically developing peers in the learning environment (Alzyoudi, Opoku and Moustafa, 2021). However, according to the research, the connection between typically developing students' perceived awareness pertaining to inclusive education, as well as their perception of their peers with special needs, is not adequately studied, especially in the context of the UAE.

Alzyoudi, Opoku and Moustafa (2021) suggest that in an inclusive investigation, approaches constitute three related concepts in the form of cognitive, affective and behavioural aspects. According to this research, mental construct relates to peoples' perceptions which can be changed through knowledge. Consequently, inclusive education puts more emphasis on progressing the education of learners with special needs, such as those with autism, in typical classrooms. As such, typically developing students must be aware of their capabilities and weaknesses, and be required to be able to support the learning of students with special needs (Alzyoudi, Opoku and Moustafa, 2021). In addition, according to the researchers, the affective concept relates to learners' feelings with regard to students with special needs.

At the same time, the behavioural construct entails how learners behave when peers with special conditions such as autism are present in the classroom. Therefore, according to Alzyoudi, Opoku and Moustafa (2021), the fundamental idea behind inclusive education encompasses the physical presence of learners with special needs in regular classroom

settings, as well as encouraging their effective involvement. In addition, the research indicates that the combination of cognitive, affective and behavioural constructs offers a broad picture of teachers' perceptions with regard to engaging in inclusive education.

According to Khaleel, Alhosani and Duyar (2021), based on teachers' perspective, there is a need for a systematic provision in relation to professional development, targeting the enhancement as well as improvement in terms of administrators' awareness of inclusion in schools and inclusive education.

In the world today, the state of affairs of various sectors, including education, is shaped by several factors due to the changing times. According to Al- Nawaiseh (2021), during the COVID 19 crisis, most learners, including those with special needs, were forced to undertake their studies using online applications. The research aimed at establishing the advantages as well as the disadvantages of online learning to enhance inclusion during the crisis in a private school in the city of Dubai. Findings from the study indicated that overall, learners with special educational needs as well as impairments showed mixed feelings towards online education, offering both positive and negative views. Furthermore, Al-Nawaiseh (2021) states that online learning may have some benefits and some drawbacks, especially for students with special needs. As such, it should be managed effectively in order to support inclusive education. In addition, the research provides that although such methods offer a safe and inclusive means of learning new techniques, learners with special needs may feel isolated due to the lack of face-to-face interaction with their peers as well as their teachers. Therefore, the study offers that teachers should be provided with additional teaching models and technologies to enable them to be ready in case of a future crisis that may affect the effectiveness of inclusive education. In addition, school leaders as well as policymakers in education matters, could address the difficulties associated with online learning technologies from a new perspective in order to find a

solution that accommodates all learners and their needs (Al- Nawaiseh, 2021). On the same note, Scorgie et al. (2022) offer that during the current times that are characterized by extreme health concerns, transitions in various sectors, including education, call for new engagements to ensure that inclusion is effective and beneficial to all students, including those with special educational needs.

In addition, a study by Siyam and Abdallah (2021) supported the use of technology and provides further insights on the use of online applications to enhance the perception as well as learning experiences of SEN students. The research aimed at examining the usage of mobile applications for the learning of students, particularly those with special educational needs, with particular focus being put on learners with autism. The study found that mobile applications have effective usability as well as generating a good perspective due to the use of technology for recording and sharing information. Therefore, Siyam and Abdallah (2021) offered an understanding of the techniques through which a coordination application could be incorporated for SEN students in order to create an optimistic perceptive on the part of the learners as well as enhancing inclusive education in private schools.

According to AL Herbawi (2018), teachers should be aware that students are acquiring knowledge and becoming capable of applying information effectively in the present as well as in the future. Therefore, the research suggests that teachers could employ brain exercises for students with autism in order to enhance the academic and behavioural attainments of SEN students, particularly in the current times of inclusive education in Dubai. Consequently, such measures would help create a positive perception of the learning experience on the part of the students, while also making them more focused on various activities involved in the learning environment.

Autism being a psychological disorder is constantly misunderstood by most people who see it as a total cognitive breakdown. According to Ramdoss et al. (2012), it is possible for students with autism to develop a normal life, both socially and educationally, and this is one of the things that most students and teachers have not wholly accepted. Ramdoss et al. (2012) assert that inclusive education, as well as use of computer applications, could be a way to help autistic learners catch up with the rest in class work.

According to Oktem (2010), the Middle East has not fully adopted and incorporated special needs education seriously. In Dubai, there are cultural and economic variations that allows educational institutions to be opened by both locals and foreigners, and it is through these doors that autistic learners are able to obtain the education they need. In his research, Mostafa (2011) asserted that the UAE is striving to meet global standards that comes with accepting learners with all manner of diversity, to study in class with one another, devoid of discrimination and ill perceptions that increase stigma, prejudice and stereotypes that would further deteriorate the conditions of autistic students since they need as much love and care as other students.

ASD is a developmental disability caused by having a difference in the brain from typically developing individuals. People who have autism have a number of social problems such as difficulty in terms of communication and interaction, and having restricted and repetitive behaviours. Similarly, children born with autism also have challenges to face when it comes to learning and moving, and also paying attention. Therefore, they need to have a special way of doing things such that they can do some of the activities for themselves. In the Middle East, for many years students with autism have been kept out of the school set up, as a result of which most of them have ended up losing out (Mostafa, 2011). Therefore, to avoid this, there has been the need to have autistic students receive an ideal education just like other learners.

In the Middle East, and specifically in Dubai, there are increasing numbers of private institutions in which the aim has always been to ensure that, being a metropolitan area, the diversity in the city is well represented in such institutions. According to Mostafa (2011), students with autism are some of those affected, due to lack of proper educational guidelines in public institutions in the Arab world. The idea of having private institutions take care of students with special needs such as autism, has given the education system in Dubai an enviable reputation in the rest of the world. In rural parts of Dubai, students with autism face other broader challenges in accessing healthcare services such as dental services.

While the inclusion of students with autism in private schools in Dubai has been warmly welcomed by many parents, there has also been negativity and skepticism. Therefore, with regard to the idea of the perception of these students, both teachers and typically developing students have seen and experienced different and varying opinions as to whether or not these students ought to be included in private institutions. According to Younis (2020), while the UAE has created a first-rate education system that offers equal opportunities to all students, the Ministry of Education does not recognize twice exceptional learners as a separate category of students who require education. According to Younis (2020) the Ministry does not consider this because of the fact that meeting these needs would be extremely complex.

In the Middle East, in the past students with cognitive disorders were left at home and were not given an opportunity to go to school and obtain the education that they need. However, with Dubai rising through the international ranks, there has been an establishment of private schools that offer autistic students an equal opportunity with other learners, and this has led to a different perception on the part of teachers, learners and parents (Younis, 2020). The complexity of the educational needs of students with autism

require identification that match and are in line with disability and giftedness. Therefore, according to Younis (2020), with regard to students with ASD, there are a number of things that need to be done in order to ensure that such students are considered and accepted in schools alongside others.

In another study by Abduelkareem et al. (2019), autistic teachers in the UAE display a varying perception of learners and this has had a number of effects on their service delivery. Equally, teachers having a negative perception with regard to their autistic learners has also proven to be a major challenge in ensuring that the teaching and learning process is completed impeccably and without any hitches or glitches. Moreover, in another research study by Sharif et al. (2016), university students recorded having a negative perception of their autistic childhood classmates . Autism being a neuro-development challenge that young people have to face, it can have adverse social effects on students. According to Sharif et al. (2016), it is important for students to know and recognize what it takes for students with autism to operate, in order for them not to develop a negative attitude and avoid constant provocations. One evident factor is that people do not fully understand autism and how it affects an individual, both socially and physically. Autistic students have a challenge to face in developing long-lasting relationships, and therefore they might be discriminated against by others in school. This could affect their personality and prevent them from achieving their rightful academic targets. While Sharif et al. (2016) found that the university students' perception of autism was good, it remains apparent that those in schools. and teachers themselves, have a huge challenge to overcome in terms of understanding.

This research proves to be ideal and transformative as it ensures that the policymakers and other concerned bodies give the people what they need. How these students are identified and how they are taken to school is also an important part of the

study. Similarly, the study also seeks to know the students' perceptions and those of teachers with regard to those with autism in private schools in Dubai. Strategies to ensure that these learners accomplish their learning goals are in place, and the international schools and private schools in Dubai have all offered autistic students a chance for them to achieve to the best of their ability.

Finally, Dubai is one of the leading connection hubs in the world. It has also become a technouhub and a business centre and therefore draws elites from all over the world. The UAE is aware of the great significance that Dubai plays, and therefore recognizes that there is a need to ensure that it offers inclusive education in line with global education standards and demands. Consequently, the private institutions need to ensure that they offer the right skills and sufficient sensitisation to ensure that students with ASD are seen as being just like other students and that they are not discriminated against, an aspect which has been one of the major issues facing learners with special needs, both in Dubai and in other parts of the world.

## **Chapter 3: Methodology**

### **3.1 Introduction**

This chapter provides an account of the research processes, ethical considerations, and limitations of the study in addition to justifying the methodology and research strategy design employed. According to Mertens and McLaughlin (1995), social and environmental factors such as inclusion movements, have impacted special education research, and have had a noticeable effect on study methods at different stages of the research process. In order to support the goal of the research project, which is to investigate teachers' and students' perceptions of inclusion provisions with regard to students with ASD in high schools in Dubai, a mixed-method research approach with an explanatory sequential design has been employed in this study. In social science, the use of mixed-method approaches—which combine quantitative and qualitative research methods—has grown dramatically in recent years (Bergman, 2008). There are major sections and subsections in this chapter. Following this introduction, a broad explanation of the methodology and design of the research project is presented, after which the site, participant selection, and sampling procedures are explained. Methods for gathering data are explained, and validity, dependability, and trustworthiness are covered in great detail. In addition, the chapter includes examples of data analysis techniques applied to both qualitative and quantitative data, as well as a section devoted to ethical considerations that were considered during the research project. This chapter's final section is devoted to discussing the study's limitations.

### **3.2 Research Approach and Design**

This study employed a mixed-methods approach to achieve a comprehensive understanding of teachers' and students' perceptions, and establish a framework for inclusion. This approach, as defined by Johnson and Christensen (2020), combines

qualitative and quantitative methods. By doing so, the researcher aimed to achieve a holistic understanding of the research topic, its themes, and its contributing factors (Creswell et al., 2014). Through mixed methods, this study aimed to enhance the research findings by combining techniques from both qualitative and quantitative research. According to Lund (2012), mixed-methods research is particularly practical when it comes to answering complicated questions accurately, as it helps create a full image of the material under consideration. Abel et al. (2015) observed that this approach aims to consider various perspectives, while recognising the strengths of both qualitative and quantitative methods. Creswell (2014) emphasised that a mixed-methods approach involves gathering and analysing both qualitative and quantitative data, thereby improving the completeness of the analysis.

Identifying three benefits, Agaliotis and Kalyva (2021) highlighted the advantages of combining quantitative and qualitative methodologies. Opening up new lines of inquiry, the integration addresses potential conflicts that may emerge from multiple data sources. Triangulation is enabled by validating and corroborating the findings, ensuring the thorough compilation and assessment of the data. Abel et al. (2015) emphasised that these distinctions can inspire further analysis, revision, and research, ultimately enhancing the results' accuracy and deepening our understanding of the data. Highlighting that each quantitative and qualitative method has strengths and weaknesses that complement and contribute to research findings, Alnahdi et al. (2019) further emphasised this point. For instance, qualitative techniques enable the exploration of participants' perspectives, recognizing the influence of individuals on their understanding of a given situation (Creswell, 2014). This type of research helps reveal contextual factors that impact the

participants' perceptions and experiences concerning the study's subject matter, yielding comprehensive and thorough outcomes (Abel et al., 2015).

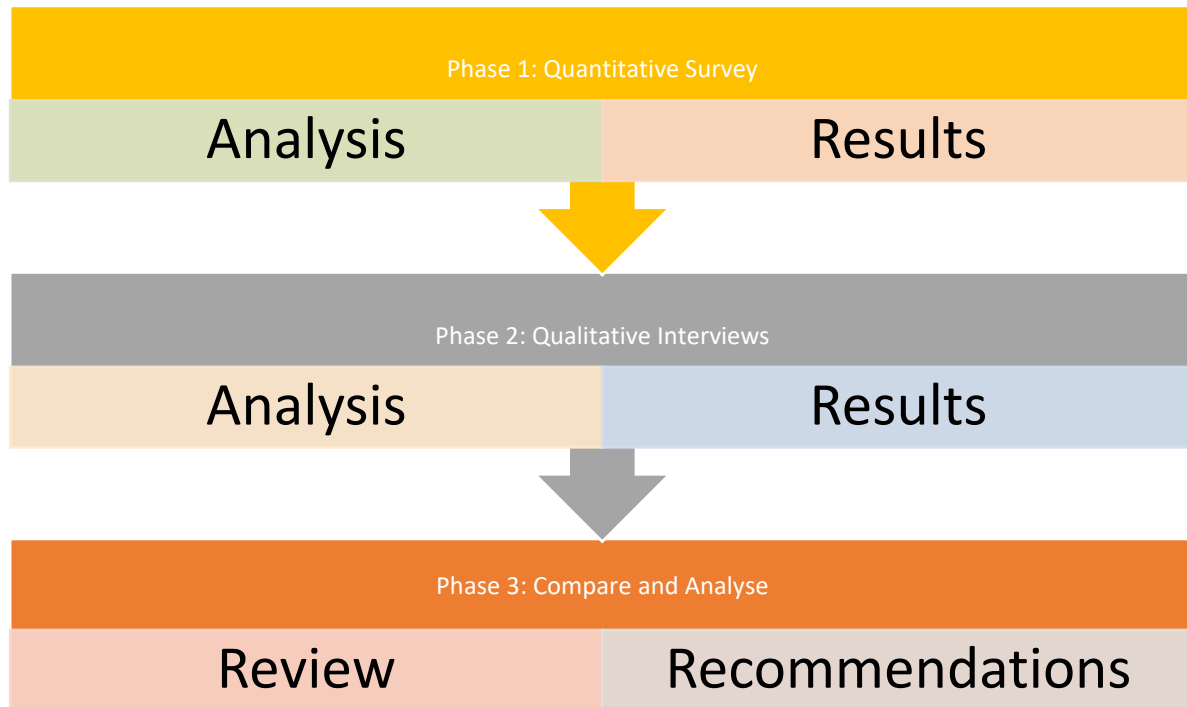
Adopting a positivist mindset, quantitative research generates knowledge through rigorous research and data analysis, making it ideal for hypothesis testing. Researchers can effectively leverage the strengths of both quantitative and qualitative methodologies through a mixed-methods approach, thereby mitigating their weaknesses. This unique approach enables the acquisition of diverse data sets using varied research approaches and procedures, resulting in a combination of strengths and mitigating weaknesses.

Almekhalfi and Tibi (2013) utilized the comparison of fishnet gaps to illustrate the idea of complementary talents, emphasizing that the overall sum is not equal to its parts. This concept highlights the significance of utilising different research methods to cross-reference data, acknowledging that each way presents unique pros and cons. As a result, the present study sought to strengthen its validity by incorporating multiple research techniques, each with advantages and disadvantages. This study aimed to enhance our understanding of how students with ASD are included in high school settings in Dubai. Various research methods were used to achieve this, acknowledging that a single approach would not suffice. Using a combination of quantitative and qualitative methods, we analyse the relationships between different variables, and gain a deeper insight into how they are interconnected. This process involves confirming and validating these relationships and comparing the results from both methods to ensure they arrived at the same conclusions. According to Fraenkel and Wallen (2019), such an approach allows us to interpret a phenomenological occurrence accurately. Overall, the mixed methods approach aligned

with the study's objectives, which aimed to comprehensively understand the factors contributing to including students with ASD in mainstream education.

Utilising an explanatory sequential model, the research commenced by employing quantitative methods to achieve a comprehensive grasp of the current perspectives of mainstream high school teachers and neurotypical students. Following this, qualitative techniques were utilized to further explore the results gathered from the quantitative analysis, thus enhancing our understanding of the topic (Abel et al., 2015). This comprehensive study had the benefit of delving deeply into the intricate connections between various factors. While the quantitative approach assisted in identifying crucial elements of inclusive education, the subsequent qualitative phase offered nuanced insights that either supported or fortified the initial observations.

To gather a comprehensive understanding of how teachers and students view the integration of students with ASD, a combination of surveys, questionnaires, and interviews was used. The surveys and questionnaires provided numerical data, giving an overview of their perceptions. This step was followed by interviews to gain more detailed insights into the participants' experiences, attitudes, and perspectives. The qualitative observations supported, validated, or further explored the quantitative findings, thereby enhancing the validity and depth of the study. The research aimed to maximize our understanding of high school teachers' and students' perceptions of students with ASD. This study obtained a well-rounded view of the phenomenon by adopting an explanatory sequential design and combining quantitative and qualitative approaches. The combination of methods enhanced the rigour and reliability of the findings. Figure 2 demonstrates the integration of the data collection methods and how they contributed to a comprehensive understanding of the topic.

**Figure 2***Explanatory Sequential Mixed Model*

In this particular study, the pragmatic approach took precedence. Agaliotis and Kalyva (2021) clarified that the practical researcher must effectively unite the diverse elements to tackle the research question. Additionally, the study's pragmatism placed great importance on the objectives as the primary motivator for the choice of instruments and analyses, while also considering the research problem, addressing research inquiries, and accounting for the contextual conditions (Johnson and Christensen, 2020). In the educational setting, and throughout a student's life, the researcher demonstrated the relevance of using a pragmatic philosophy in perceptual research. This pragmatic approach offered a holistic and inclusive model for students with ASD, aiming to change current perceptions and practices.

### 3.3 Site and Population

The study took place in private schools in Dubai, UAE. Dubai is known for its reputable education system overseen by the Knowledge and Human Development Authority (KHDA). The KHDA has embraced an inclusion policy that allows students with ASD to enrol in several private schools. Recognizing the invaluable research opportunities, these private institutions were selected as the ideal setting. Dubai's private schools boast an impressive diversity, catering for the unique needs of its student body with a remarkable selection of 17 different curricula. Dubai has various curricular options, with the UK, US, Indian, and International Baccalaureate (IB) programmes being the top choices. The IB programme ranks fifth most popular (KHDA, 2021). This study's primary focus was on schools offering the UK curriculum. The researcher had established connections with the heads of Special Educational Needs and Disabilities (SEND) at these schools, making access easier. This focus on schools delivering the UK curriculum provides a careful exploration of teachers' and students' perceptions and practices.

As of 2021, the KHDA's database boasted 215 private schools, of which 82 adhered to the British curriculum. To keep things tidy, convenience sampling was implemented to cherry-pick five schools from the pool of British curriculum schools. These selections were influenced by findings from the literature review that conveyed how teachers' categories, gender, experience, educational level, and training engrave their outlook on inclusion (Alnahdi et al., 2019). By factoring in these ramifying elements during the selection process, the researcher sought to encompass many outlooks within the sample. Consequently, it is crucial to incorporate the points of view of both teachers and students to understand the inclusion practices and experiences of high school students with ASD. Previous studies have emphasised the favourable effect of inclusive environments on learners with ASD, specifically focusing on their acquisition of socially-appropriate

conduct and the attainment of improved academic results compared to their counterparts (Agaliotis and Kalyva, 2021).

### **3.4 Sampling and Participant Selection**

The inclusion of students with an ASD in high schools was investigated by collecting responses from a sample size of 200 participants (100 teachers and 100 students). The participant selection process involved multiple stages, and convenience sampling was used. Initially, the KHDA database provided a list of private schools in Dubai that offered the UK curriculum. For practical reasons, the researcher selected six schools from the list. These schools were chosen based on their willingness to participate in the study and their accessibility. This convenience sampling approach allowed for efficient data collection from a targeted population given the constraints of time and resources.

Among the selected schools, a deliberate effort was made to gather diverse perspectives from the participants. The group included both teachers and students. To choose the teachers for the study, various factors such as education level, experience, gender, and training were considered, based on information from the literature review conducted by Abel et al.(2015). This purposeful sampling approach aimed to encompass a broad spectrum of experience and viewpoints on the part of the teachers. The study included a diverse representation of the population of students in the high schools. A mix of genders, ages, and levels of academic functioning were selected for participation. To be included in the study, students had to meet specific criteria: (1) they had to be currently enrolled in high school, and (2) they had to express willingness to participate.

### **3.5 Data Collection Methods, Instruments, and Procedure**

#### ***3.5.1 Phase 1 Design: Survey***

As stated by Battal (2016), using a survey to gather data on the emotions and actions of subjects within a study is an essential aspect of sociological analysis. To study

the different variables associated with the teachers' and students' perceptions towards the inclusion of students with ASD, the study employed a survey research method to quantify various variables. Although Creswell (2014) acknowledges the survey as a valuable tool for summarizing a great deal of information, Alnahdi et al. (2019) argue that using quantitative methodologies allows for data that can be applied to a larger population. By distributing surveys to a significant portion of the target community, the researcher can efficiently gather information from numerous individuals, in contrast to qualitative techniques which typically involves smaller numbers (Creswell et al., 2014).

Researchers can gain insight into different aspects of a situation and uncover overlooked characteristics by conducting surveys (Almekhalafi and Tibi, 2013). However, there are some drawbacks to the quantitative approach. For instance, if respondents ignore specific questions, valuable information may be lost, leading to data reduction (Bossaer and Petry, 2013). Additionally, once a survey has begun, it cannot be changed due to the inflexible nature of the research procedure. There is also the possibility that a quantitative technique may not accurately evaluate teachers' perceptions, as it may not gather enough information, and the impersonal study setting could alienate teachers or cause a misinterpretation of questions (Alnahdi et al., 2019).

Battal (2016) maintains that this survey design primarily aims to establish correlations between variables in order to detect disparities in the attitudes of different teacher and student groups regarding inclusive education. This design includes comparing many different variables within many groups. As a result, this survey method is ideal for establishing connections between pertinent factors such as inclusive education policies, teacher training, resources, stigma, students' previous experiences in studying alongside special needs students, teachers' and students' attitudes, and teacher knowledge. It also assists in detecting disparities among teacher groups and student groups, ultimately aiding

in assessing specific variables or factors that have a particularly significant influence. Based on the lack of an existing survey, the researcher created a unique instrument to measure the variables being studied. This approach allowed for comparing teachers' responses and students' responses based on various demographics and analysing their perspectives on factors that could affect inclusive education.

The degree to which the items that comprise a measurement scale "hang together" is implied by Pallant (2020) when referring to internal consistency. "Are they all measuring the same underlying construct?" (Pallant, 2020, p.101). A statistical metric entitled Cronbach's alpha is frequently used to investigate internal consistency. It calculates the percentage of data variance that cannot be attributed to measurement error. A high degree of internal consistency and the possibility that the test's items measure the same underlying construct are indicated by a high Cronbach's alpha rating. According to DeVellis (2012), a scale's Cronbach's alpha coefficient should ideally be more than 0.7, therefore the internal consistency of the measurements was assessed using Cronbach's alpha coefficient, given the aforementioned. The teachers survey scale is divided into section such as "Knowledge of Policy" variable was computed using questions 10 to 19 (i.e., Q10, Q11, Q12, Q13, Q14, Q15, Q16, Q17, Q18 & Q19) forming a total score of 50. "Teacher Preparation"/ "Teacher Perception" variable was computed using questions 25 to 36 (i.e., Q25, Q26, Q27, Q28, Q29, Q30, Q31, Q32, Q33, Q34, Q35 & Q36) forming a total score of 60. "Resources" variable was computed using questions 39 to 45 (i.e., Q39, Q40, Q41, Q42, Q43, Q44 & Q45) forming a total score of 49. "Teacher Attitudes" variable was computed using questions 47 to 52 (i.e., Q47, Q48, Q49, Q50, Q51 & Q52) forming a total score of 42.

The students survey scale is divided into section such as "Resources for ASD" variable was computed using questions 7 and 8 (i.e., Q7 & Q8) forming a total score of 14.

“Inclusivity of ASD” variable was computed using questions 10, 11, 12, 14 and 15 (i.e., Q10, Q11, Q12, Q14 and Q15) forming a total score of 25.

### ***3.5.2 Implementation of Phase 1: Survey***

Conducting quantitative surveys was part of Phase 1 of the study, where data was gathered from 100 teachers and 100 students to determine their perspectives on including high school students with ASD. Of all the participants in the teachers’ survey, 54 individuals (54%) identified as male, while 45 (45%) identified as female, and 1 individual (1%) identified as not reported. In the case of the students, 58% were male while 42% were female. In terms of the age of the teachers, 15% were between 22 and 29 years, 63% between 30 and 39, 20% were between 40 and 50, while 2% were 50 or more. In terms of the students’ age, 48% were between 14 and 16 years, while 52% were between 17 and 18 years. When it came to teaching experience in special education, 35%, 28%, 33% and 4% had 1-5, 6-10, 11-15, and 16-20 years of experience respectively. More of these demographic characteristics are shown in Tables 1 and 2 below.

**Table 1**

*Demographic Information for Teachers*

| <b>Demographic<br/>Characteristic</b> | <b>Count</b> | <b>Percentage</b> |
|---------------------------------------|--------------|-------------------|
| <b>Gender</b>                         |              |                   |
| Male                                  | 54           | 54                |
| Female                                | 45           | 45                |
| Not reported                          | 1            | 1                 |
| Prefer not to say                     | 0            | 0                 |
| <b>Teaching Experience</b>            |              |                   |

|                                   |    |    |
|-----------------------------------|----|----|
| 1-5                               | 35 | 35 |
| 6-10                              | 28 | 28 |
| 11-15                             | 33 | 33 |
| 16-20                             | 4  | 4  |
| <b>Age Group</b>                  |    |    |
| 22-29                             | 15 | 15 |
| 30-39                             | 63 | 63 |
| 40-49                             | 20 | 20 |
| 50 or more                        | 2  | 2  |
| <b>Special Education Training</b> |    |    |
| Yes                               | 49 | 49 |
| No                                | 43 | 43 |
| Don't remember                    | 8  | 8  |

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**Table 2***Demographic Information for Students*

| Demographic Characteristic | Count | Percentage |
|----------------------------|-------|------------|
| <b>Gender</b>              |       |            |
| Male                       | 58    | 58         |
| Female                     | 42    | 42         |
| <b>Age Group</b>           |       |            |
| 14-16                      | 48    | 48         |
| 16-18                      | 52    | 52         |

These various demographic traits reveal insights regarding the makeup of the study sample. The gender breakdown demonstrates a slight overrepresentation of male participants, who comprise 54% and 58% for teachers and students respectively. Teaching experience is spread evenly across various levels, though few participants fall within the 16-20 years category. Age distribution reflects a diverse pool of participants across different age groups. A more comprehensive interpretation of the study's findings and their generalisability to similar populations is possible by understanding these demographic characteristics. Special education training was reported by 49% of the participants, indicating that a large portion of the sample possess qualifications and knowledge in inclusive education.

The initial phase of the study used a custom-made survey for teachers that focused on five different areas of interest. This survey used a mix of questions in the form of open-ended inquiries, Likert-scale items, and categorical responses. Participants had to set aside around 9-10 minutes to complete the survey. The survey was divided into six sections, each addressing various aspects of including students with ASD in high schools. The participating teachers were asked nine questions in the "Demographic Information" section dealing with their careers. These questions aimed to collect background information about the teachers and covered a range of variables, including gender, age, type of school, special education qualifications, highest educational attainment, educational background, recent area of work, teaching experience, and number of students with disabilities taught.

In the "Policy" section, the researcher wanted to investigate what teachers knew about Dubai's inclusive education policies. Through a series of questions, the researcher aimed to gauge their understanding of the policy's key components. Moving on to the "Teacher Preparation" section, the participants were asked about their readiness to include students with disabilities in their classrooms. Specifically, the researcher wanted to know if

they felt their university education courses had adequately prepared them for this task. The aim was to assess whether or not they had the necessary skills and knowledge to support students with ASD. Within the school context, the fourth section, referred to as "Resources", concentrated on gathering information about resource availability. Its goal was to collect the teachers' viewpoints on their requirements for funding, professional collaboration, special programmes, and equipment, necessary to efficiently facilitate the integration of students with ASD.

To understand the impact of students with various disabilities on the perceptions of special education and general education teachers, the study included a section titled "Teacher Attitudes". This section explored teachers' attitudes toward inclusive education through a series of questions. The subsequent section, entitled "Teacher Knowledge" encompassed questions to determine the teachers' confidence in their capacity to educate students with disabilities—specifically, this section concentrated on gauging their level of knowledge and assurance in terms of supporting students with ASD.

Another custom-made survey was developed for the students respondents that focused on four different areas of interest. This survey used a mix of questions in the form of open-ended inquiries, Likert-scale items, and categorical responses. Participants had to set aside around 5-6 minutes to complete the survey. It was divided into five sections, each addressing various aspects of including students with ASD in high schools. Participating students were asked three questions in the "Demographic Information" section. These questions aimed to collect background information about the students and covered a range of variables including gender, age, and if they have studied next to a student with special needs previously, and what type of special needs the student had. Within the school context, the second section, referred to as "Resources" concentrated on gathering information about resource availability. Its goal was to collect the students' viewpoints on

their requirements for bridging programmes, training, and the availability of equipment such as technological aids to facilitate the efficient integration of students with ASD.

To understand the impact of students with various disabilities on the perceptions of peers, the study included a section entitled "Perceptions". This section explored students' attitudes toward inclusive education through a series of questions. The subsequent section, entitled "Knowledge", consisted of questions to determine the students' knowledge and training about ASD.

The comparative analysis of different factors was made possible by using ranking scales to gather the participating teachers' and students' demographic information. A range of response options was provided using a Likert scale for the questions about inclusive education. The Likert scale consisted of five possibilities, ranging from "1- Strongly Disagree" to "5- Strongly Agree." A numerical system was used to code the responses to the questions, aligning with the nature of the questions (Almekhalafi and Tibi, 2013). Phase 1 of the study involved using this survey methodology to collect comprehensive data on high school teachers' and students' perspectives on including students with ASD in the classroom. In subsequent phases, integrating quantitative and qualitative data collection methods would offer a deeper understanding of this complex research topic.

Using the Qualtrics platform, an online survey was conducted. First, a list of private schools in Dubai following the UK curriculum was obtained from the KHDA website. The researcher then reached out personally to the principals by telephone, explaining the purpose and background of the research. From the more extensive list of general education schools, a specific group of 7 was initially chosen. Almost all the principals agreed to participate, and the researcher then selected 5 schools to receive the survey links in a digital format. To facilitate well-informed active involvement, the research study provided comprehensive written information that clearly explained the purpose and essence of the

surveys. To guarantee privacy, the participating teachers were told not to disclose their identities or to provide any information that was easily traceable in the questionnaire.

According to Bock et al. (2016), the latest version of SPSS Statistics (version 24) is appropriate for all quantitative data analysis. Consequently, it was used. The participants' ratings were used to calculate the mean responses for each survey item. The cumulative total of all responses within the scale was computed to obtain the scale mean. The subsequent sections describe the various procedures used in the data analysis. All questions that involved continuous response scales were added to find descriptive statistics such as medians and interquartile ranges. Frequency counts and percentages were calculated for questions that elicited a nominal or ordinal response format.

Delving into the statistical analyses, the study sought fresh perspectives on the distribution and patterns found in the participants' responses. By using these analytical methods, the aim was to develop a comprehensive understanding of the quantitative data. With these approaches, the dataset could be examined to pinpoint noteworthy trends and traits, thus providing valuable information allowing the researcher to address the research goals effectively.

### ***3.5.3 Phase 2 Design: Semi-structured Interviews***

Battal (2016) implemented a qualitative approach to analyse how teachers perceive inclusive education for students with special needs. The factors influencing these perspectives were explored. Various methods in the form of questionnaires and interviews, were used to evaluate teachers' attitudes toward inclusive education (Bossaert and Petry, 2013). In Phase 2, a conversational, semi-structured interview format was employed to uncover broader concepts and issues not captured by the surveys. Qualitative research commonly utilises interviews to collect data through structured, semi-structured, or unstructured approaches (Creswell, 2013). Choosing the semi-structured interview format

was driven by the desire to avoid irrelevant topics and to reduce the potential for digression (Greene et al., 2015). This format enables conversation around predefined questions that supports the exploration of pertinent themes (Bock et al., 2016). It also serves the secondary aim of uncovering underlying issues tied to the research problem. Structured interviews resemble surveys but do not provide the same flexibility for discussion (Bock et al., 2016). Conversely, unstructured interviews were considered unsuitable due to their propensity for allowing the respondent to stray off-topic (Greene et al., 2015).

To delve more deeply into the topic, this research went beyond just looking at perceptions and investigated practices. It involved conducting in-depth interviews with participants to explore various factors. Following the advice of Johnson and Christensen (2017), the interview questions were formulated beforehand, giving participants the flexibility to expand on these predetermined queries. The researcher obtained consent from the participants and recorded the interviews to allow the creation of accurate transcriptions for thematic analysis. The study aimed to comprehensively understand teachers' and students' perspectives and practices regarding the inclusive education of students with ASD in a regular classroom setting. By integrating prompting questions and utilizing qualitative methods, specifically semi-structured interviews, control was maintained throughout the discussions.

Maintaining the integrity and credibility of qualitative research, especially when examining how teachers and students feel about the inclusion of students in private high schools in Dubai, depends heavily on the validity and reliability of the interview data. To evaluate the validity and trustworthiness of this data, a thorough analysis was carried out.

The study's internal validity was strengthened by using an organized interview technique that guaranteed uniformity in the questions posed to each participant. As a validation technique, member checking was used to enable participants to examine and

validate the correctness of their answers, enhancing the results' internal validity. To improve the study's generalisability outside of its local environment, a deliberately heterogeneous sample of teachers and students was chosen in order to address external validity. Consistency in the interpretation of themes and results was guaranteed by analysing the transcripts and comparing the themes with thematic results from NVIVO. The meticulous and transparent coding procedure further enhanced the dependability of the data analysis by giving precise definitions for topics and categories.

The examination of the interview material shows a strong dedication to dependability and validity. The research used methodical techniques for gathering and evaluating data, mitigating any possible partialities and guaranteeing uniformity throughout. The comprehensive methodology employed to establish both internal and external validity, in conjunction with efforts to improve code generation, provides a robust basis upon which to draw significant and reliable inferences regarding the attitudes of teachers and learners with regard to the integration of autistic students in Dubai's private high schools.

### ***3.5.4 Implementation of Phase 2: Interviews***

The researcher developed 7 semi-structured interview questions for Phase 2 of the study based on the understanding derived from the literature review. These questions aimed to explore teachers' and students' perceptions of inclusive education. Teachers' semi-structured interviews were conducted to facilitate the discussion, on topics such as inclusive education policy, teacher preparation, resources, teacher attitudes, and knowledge. Another set of semi-structured interview questions were developed for students to explore their understanding and perceptions of stigma, relationships, resources and training, and the custom-made questions served as a guide (Creswell et al., 2014). A non-probability sampling technique was then employed within the schools to obtain the sample

of participants. In the case of the teachers, the researcher requested the schools to facilitate interviews with 10 general and special education teachers, with a range of years of experiences and from different age groups. For the students participating in the interviews, the researchers asked to interview 10 students with ages ranging from 14 to 18 of mixed gender and from different backgrounds.

The researcher held two phone conversations before the interviews took place. During the first conversation, the principals were given details about the study's goals, the researcher's identity and role, and how the findings would be utilised. Additionally, the principals were informed that the interviews would be recorded and would last around 20-30 minutes. Over the past decade, Dubai has placed a great deal of emphasis on inclusive education. It was important for the researcher to stress to each principal that participation was entirely voluntary, and that the responses would be kept confidential.

Two days later, a second call was made to confirm whether the teachers and students had agreed to participate in the study. A meeting was set up with each teacher and student at a time that worked for both them and the researcher to discuss the purpose of the interviews and give them the information sheet. The best places to record the interviews was also decided upon. Two teachers and two students decided to carry out the interview at school when it was convenient for them, while eight teachers and eight students preferred virtual interviews. The researcher carried out the semi-structured interviews in a comfortable environment to gain insights into teachers' and students' perceptions of inclusive education. Diverse representations of schools were achieved through a selected sampling technique that considered both special education and general education contexts. The interviews took place in settings tailored to the participant's preferences, facilitating open and candid discussions.

The researcher calculated that each interview would last an average of 15 minutes for both teachers and students. The researcher started each discussion with a casual chat to make the participants feel comfortable and obtain honest answers. The participants were given a code instead of using their names to keep things private. The researcher also stressed that participation was optional, anonymous, and confidential, and made sure to get their informed consent. Informed with integrity, the researcher ensured every teacher and students was privy to their participant rights. Specifically, they were informed that they could decline to participate without repercussions or monetary gain. Moreover, they were reassured that they were free to leave the interview process at any given moment, without the need for justification.

To ensure a comprehensive understanding of the consent process, the participants were asked to read the consent sheet before signing it voluntarily. To maintain confidentiality, the participants were assured that their names would not be used in the research document or stored in any files. Additionally, they were informed that the content of their interviews would be treated as confidential and only used for the current research, with reproduction limited solely to analysis. After completing the research process, the participants were made aware that they could request a copy of the research findings whenever they pleased. Additionally, the researcher provided a comprehensive list of contacts, such as her supervisor, in case any questions or concerns arose throughout or after the research process.

### **3.6. Quantitative Analysis**

SPSS software was used in this study to analyse variance (ANOVA). ANOVA was selected due to its ability to assess discrepancies among various conditions or groups, making it appropriate to study the research inquiries and the nature of the collected data. The quantitative data underwent extensive preparation before ANOVA analysis to ensure

accurate and meaningful results. Initially, the data went through an in-depth cleaning process. To improve the reliability and trustworthiness of the analysis, errors, inconsistencies, or inaccuracies in the dataset were identified and corrected. By eliminating these data artifacts, the subsequent analysis became more reliable (Bossaert and Petry, 2013). The data was then categorized, and variables were assigned numerical or categorical codes. This step involved giving codes to different responses or attributes in the dataset, making it easier to analyse the qualitative information quantitatively. Attention was given to handling missing values during the data preparation process. The validity of the analysis can be affected if there are any missing data points. To address this issue, missing values were first identified, and then suitable strategies were implemented. Different techniques such as deletion, imputation, or statistical estimation, were used based on the extent and pattern of missing data.

Outliers are exceptional values that differ significantly from the other data. Their presence was also investigated. It is critical to appropriately recognize and handle outliers as they can distort statistical analysis findings. Techniques for detecting outliers, such as inspecting boxplots, were used to detect potential outliers. Decisions were then made on addressing such outliers, such as potentially removing them, transforming them, or conducting further exploration.

The dataset's integrity and accuracy was ensured through the cleaning process, while coding transformed qualitative information into quantitative variables for ANOVA analysis, and enhancing validity and appropriateness involved addressing outliers, missing values, and transformations. The justification for using ANOVA as the statistical analysis technique was based on the research questions and the data's nature. As Greene et al. (2015) pointed out, ANOVA is a helpful tool for comparing means between various groups or conditions. It has proved valuable in examining contrasts in viewpoints and sentiments

among the different parties involved - teachers and students - in this study. The implementation of ANOVA has been particularly insightful in identifying significant deviations in the perception of students across various groups or conditions. This approach has also opened avenues to scrutinise the possible influence of certain factors such as grade level or years of teaching experience, on these perceptions and whether they interact.

The conduct of the ANOVA analysis addressed the research questions. It explored the perspectives and practices of integrating students with autism in private high schools in Dubai in the case of teachers and neurotypical students. It also Investigated teachers' perceptions (RQ1)1. What are the teachers' perceptions on pre- and post-training in facilitating the inclusion of students with autism in private high schools in Dubai? the ANOVA analysis explored differences in viewpoints among various groups. This examination considered factors such as grade level, years of teaching, and specialisation, treating them as independent variables with multiple levels. For this analysis, the dependent variable measured teachers' views on pre- and post-training with regard to including autistic students in Dubai's private high schools using a validated questionnaire or survey. Regarding RQ2, the ANOVA analysis explored differences in policy awareness and management, and teachers' viewpoints among various groups.

Regarding RQ3, ANOVA was utilised to examine potential differences in perceptions among typical students. This process involved investigating age, gender, and prior experience with individuals with autism as independent variables. The dependent variable was the perception of typical students towards including individuals with autism in their school. This was measured using a survey. Furthermore, RQ4 sought to explore the practices of both teachers and students in relation to the availability of resources in terms of including students with autism in private high schools in Dubai. To investigate possible distinctions in teaching practices, an ANOVA analysis was administered. This analysis

considered grade level, teaching experience, specialisation, students' grade level, gender, and previous interactions with autism.

The research questions did not focus on demographic characteristics such as age or cultural background. Still, covariates or control variables were added to the ANOVA analysis to consider any possible confounding factors or sources of variation that might have affected the perceptions and practices being studied. With the inclusion of these variables, the effects of the independent variables on the dependent variables could be isolated and controlled for. Using the SPSS software, the ANOVA analysis was conducted by applying the suitable ANOVA model to the data structure based on the research questions. Several statistical significance tests such as T-tests, were conducted to investigate if the observed differences in perceptions or practices among the different groups or conditions were statistically significant. By shedding light on the research questions and contributing to a deeper understanding of the inclusion of students with autism in private high schools in Dubai from the perspectives of teachers and students, the results of the ANOVA analysis offered insights into the variations and associations between the factors examined and the dependent variables.

In subsequent sections, the ANOVA analysis contains the reported results that offer a thorough grasp of the connections between the variables of interest. Various statistical measures were shared, including p-values, means, effect sizes, and standard deviations. The means represent the average scores of the dependent variable in different groups. Accompanying the means are standard deviations that provide insights into the dispersion of the scores within each group. These descriptive statistics assist readers in developing an understanding of the central tendencies and variabilities associated with the variables (Jury et al., 2021).

A significance level (e.g.,  $p < 0.05$ ) is used conventionally to evaluate statistical significance, derived from the ANOVA test and reported as a P-value. The P-value determines whether the observed differences among the groups are statistically significant or have occurred by chance and is associated with evaluating the significance (Hussein, 2019).

Drawing inferences about the practical implications and the significance and direction of the differences among groups is possible by analysing the reported results in the light of the research objectives. Based on the research questions and hypotheses, these findings allow for meaningful insights and conclusions. Acknowledging potential sources of bias and limitations, the study presents a comprehensive overview of the ANOVA analysis. By providing the means, standard deviations, F-values, and P-values, the reader understands the statistical significance, effect size, and interpretation of the findings in relation to the research questions and hypotheses.

### ***3.6.1 Thematic Analysis***

Using thematic analysis techniques, the data gathered from the interviews were analysed. Jones and Frederickson (2020) describe thematic analysis as identifying, analysing, and reporting patterns or themes within the data. It offers a comprehensive organisation and description of the dataset. Thematic analysis is a commonly-employed method in qualitative research, enabling researchers to uncover and investigate patterns and significance found throughout the data. In relation to their research questions, researchers can utilise descriptive analysis to manage and make sense of the unstructured information, in this case from teachers' responses (Lieber, 2019). This approach facilitates the identification of recurring ideas within the context, and ultimately contributes to developing insightful and meaningful conclusions (Kelle, 2016).

The analysis of themes within the participants' responses, achieved through thematic analysis, is of importance as it aids researchers in organising and studying their frequency. Moreover, it allows for a deeper understanding of the significance behind various aspects of these themes (Jones and Frederickson, 2020). Within this study, participants' responses were carefully analysed and compared to the research questions. The analysis commenced by transcribing each interview with utmost accuracy. To further the process, the researcher thoroughly read through all the transcripts, taking note of initial impressions and potential themes (O'Cathain and Thomas, 2016). Relevant words and phrases were labelled through coding after the transcripts were reread. The researcher categorized the common themes identified in the text into various research problem-related categories to address the research questions (Lieber, 2019).

After transcribing the interviews, the researcher carefully arranged and methodically compiled the text. The researcher reviewed the data multiple times, each reading increasing the knowledge and grasp of the content. The researcher fully immersed herself in the data, closely examining the participants' words, phrases, and ideas. This deep dive enabled a comprehensive understanding of the participants' viewpoints and encounters concerning integrating students with ASD in high school environments. While becoming familiar with the data, the researcher actively practiced reflection to ensure that she was mindful of her prejudices and preconceived notions. Reflexivity was crucial in maintaining objectivity by constantly reflecting on their perspectives and avoiding undue influence on data interpretation (Segall and Campbell, 2014). Enhancing the rigour and credibility of the thematic analysis, the researcher's self-awareness ensured that the emerging themes were grounded in the data, not solely shaped by her pre-existing beliefs.

While becoming familiar with the data, the researcher developed the first codes to capture the essential aspects. These codes were labels to summarise and condense the data

into meaningful units. The researcher assigned codes to specific parts of the interviews that shared similar ideas or experiences. This coding process helped organise the data and made it easier to subsequently identify themes. Continuing from the initial coding, the researcher analysed the data repeatedly to recognize recurring patterns and pieces throughout the dataset. Underlying patterns in the data were detected as the codes underwent a review, refinement, and regrouping process. These patterns formed overarching themes that reflected the participants' viewpoints with regard to integrating students with ASD. The researcher uncovered higher-order themes and sub-themes by examining the connections and relationships between codes. These themes provided valuable insight into the participants' shared experiences, challenges, and perspectives regarding inclusive education for high school students with ASD.

The thematic analysis process involved various stages, starting with the creation of a coding framework. An inductive coding approach allowed themes to emerge naturally (Steckler et al., 2022), ensuring that the analysis remained receptive to the participants' diverse and rich perspectives. Each line or segment of the qualitative data was closely examined and assigned a descriptive code during the initial coding phase. Qualitative data analysis software facilitated the efficient organization and retrieval of coded segments. This process involved labelling data with concise and meaningful tags that captured the essence of the conveyed information.

The coding process made it clear that specific codes had similarities and patterns. These shared codes were then organized into preliminary themes. These initial themes were the foundation for developing more detailed and extensive themes. Various methods were used to ensure that the identified themes were reliable and valid. Themes were identified and developed through a rigorous process of organising related codes. Similar codes capturing concepts or ideas were grouped to create broader themes. These newly-

formed themes were reviewed and refined to represent the participants' perspectives and experiences accurately. To complete this process, the codes' context, content, and frequency were reviewed, as well as their relevance to the research questions.

The relationship between themes and sub-themes was carefully examined during the theme development phase to ensure coherence and consistency in the overall thematic structure (Segall and Campbell, 2014). It allowed for a more nuanced understanding of the participants' perceptions, as sub-themes provided a finer level of detail. To enhance the trustworthiness of the themes, member checking was employed. To validate the accuracy and interpretation of the data, the participants were given the preliminary themes and sub-themes, and their input was sought. This process, known as member checking, helped ensure that the themes aligned with the participants' experiences and perspectives.

The aim during the analysis phase of the thematic investigation of teacher and student perceptions of students with ASD in high school was to uncover common patterns and meanings within the qualitative data. The identified themes regarding the research questions and objectives were meticulously examined to achieve a comprehensive understanding.

To bolster the identified themes, the researcher incorporated quotes and excerpts from the qualitative data. These quotes functioned as proof and examples of the viewpoints and experiences of the participants (Todd, 2014). As an illustration, while delving into the theme entitled "Inclusion Hurdles" the researcher included a quote from a teacher: "The researcher encountered difficulty in fulfilling the disparate needs of students with ASD in a regular classroom setting. Balancing their distinct demands and guaranteeing equal opportunities for all students was quite challenging" — the inclusion of quotes assisted in bolstering the findings by adding credibility and depth. Participants' quotes anchor the interpretations in the personal perspectives and first-hand experiences of the teachers and

learners. Through this method, the themes derived from the data could accurately encapsulate the research topic, offering a holistic comprehension.

Ensuring the reliability and thoroughness of the qualitative analysis involved several strategies. Validation from participants through feedback sessions was one such technique, which served to uphold the findings' credibility and accuracy. This collaborative process allowed participants to confirm or contribute different perspectives on the identified themes. Additionally, member checking helped further bolster the trustworthiness and rigour of the interpretation.

Throughout the analysis process, the researcher was conscious of her biases and assumptions. The constant reflection and self-awareness strengthened the analysis's dependability and confirmability, ensuring that it allowed a more objective interpretation of the data. The qualitative analysis showed the credibility and transferability of the findings, as they were based on the data, confirmed by participants, and supported by multiple sources of evidence. The thematic analysis was made trustworthy and robust through the use of reflexivity, maintaining its rigorous process.

### **3.7 Ethical Considerations**

Consistency with BUiD's ethical code ensured the utmost privacy, agreement, and transparency in investigating and utilising information while protecting participants. Before beginning the study, authorisation from the school principals was secured to access staff and students from the participating schools. Consent forms were then distributed to the schoolteachers and students, who were requested to sign them. The consent form (Appendix -A) accurately outlined the purpose of the study, and participants were made aware of their option to withdraw from the data collection process at any time (Von der Embse et al., 2017).

To protect the identity of the participants, the researcher followed Todd's (2014) suggestions by replacing real names with letters or numbers. Respondents' identities and any other identifying details were strictly confidential. The results of the surveys conducted with the school, students, and teachers were reported without revealing any personal information. This approach was implemented to safeguard the participants from harm, unease, or potential risk throughout the investigation.

To protect the participants, the researcher focused on privacy and safety. Data was stored securely and access limited to authorised individuals. The researcher followed regulations and guidelines for data protection. Additionally, she established a professional and respectful relationship with the participants who were fully informed about the purpose, procedures, and potential outcomes of the research, demonstrating the researcher's commitment to clear and honest communication. Any questions or concerns raised by the participants were promptly and transparently addressed, further protecting their rights and well-being. It is crucial to highlight that informed consent, voluntary participation, and the right to withdraw were consistently upheld throughout the research process. Participants were fully aware of the study's nature and had the freedom to decide on their participation. The study aimed to conduct responsible, respectful, and beneficial research for all involved parties by prioritising ethical considerations. The participants' involvement was based on their willingness and without any coercion.

### **3.8 Study Limitations**

During the study, various constraints arose with regard to the chosen research methods. It is crucial to recognize these limitations since they could influence the results' applicability, dependability, and legitimacy (Yardley and Bishop, 2017). A noteworthy limitation of the research methods was how participants were selected. Because of restrictions on time and resources, a convenience sampling approach was employed to

enlist individuals from a restricted pool of high schools. The findings of this study may not be fully generalizable to the broader population of high schools, as the selected schools may have unique characteristics that influence the perceptions of teachers and students regarding inclusion. This sampling method may have introduced bias, as the selected schools may not represent all high schools.

Recruiting a large number of participants was challenging, resulting in a small sample of only 100 participants. This limitation may hinder the analysis's statistical power and limit the precision of the findings. Potential differences in perceptions between subgroups, such as grade levels or subject areas, could have been explored with a larger sample. Therefore, caution should be exercised when applying the findings to other contexts or populations. The reliance on self-report measures such as surveys and interviews introduces the possibility of response bias. Socially-desirable responses or participants' perceptions and biases may have influenced the data collected and the interpretation of the findings (Yardley and Bishop, 2017). Efforts were made to address this limitation by establishing a rapport with the participants, emphasising the importance of honest and thoughtful responses, and ensuring anonymity and confidentiality. However, it is still possible that response bias was present despite these measures.

An important note to consider is the limitations of ANOVA in analysing quantitative data. It is worth mentioning that ANOVA is a widely-accepted statistical method, but it does rely on certain assumptions. Ensuring the normality of data, homogeneity of variances, and independence of observations are all necessary for accurate results and interpretations. The researcher attempted to address these assumptions, but violations may still exist. It would have been beneficial to explore alternative statistical methods and more advanced techniques to overcome these limitations and improve the analysis. There are limitations to the thematic analysis approach used in qualitative

research. Identifying and interpreting themes are subjective and depend on the researcher's knowledge and judgment (Von der Embse et al., 2017).

The findings of this study may not give a complete picture of the current perceptions on this topic because it relied on data collected within a specific time frame. The perceptions of teachers and students may change over time due to evolving policies, educational practices, or societal changes. To gain a more complete understanding of how perceptions change, it would have been helpful to conduct a longitudinal study or collect data at multiple points in time. Extrapolating the findings to other settings or cultural backgrounds should be done with caution because the study is conducted within a specific cultural and geographical context. It is essential to consider that educational practices, attitudes toward inclusion, and the experiences of students with ASD can vary across regions and cultures, which may influence the transferability of the findings. It is advised that caution be exercised when applying the results to contexts significantly different from that of the study setting.

## Chapter 4: Data Analysis and Results

### 4.1 Introduction

In this section, the study will analyse the data collected from the participants of the study through the use of questionnaires and interviews. The chapter will discuss the quantitative analysis with regard to both students and teachers. This section will consist of demographic information, descriptive statistics, and inferential statistics.

#### 4.1.1 Teachers Data Set

**Table 3**

*Teachers Demographic Characteristics*

| Demographic Characteristic                              | Count | Percentage |
|---------------------------------------------------------|-------|------------|
| <b>Gender</b>                                           |       |            |
| Male                                                    | 54    | 54         |
| Female                                                  | 45    | 45         |
| Missing                                                 | 1     | 1          |
| <b>Teaching Experience in Special Education (years)</b> |       |            |
| 1-5                                                     | 35    | 35         |
| 5-10                                                    | 28    | 28         |
| 11-15                                                   | 33    | 33         |
| 16-20                                                   | 4     | 4          |
| <b>Teaching Experience in General Education (years)</b> |       |            |
| 1-5                                                     | 27    | 27         |
| 5-10                                                    | 46    | 46         |
| 11-15                                                   | 22    | 22         |
| 16-20                                                   | 5     | 5          |
| <b>Age Group (years)</b>                                |       |            |
| 22-29                                                   | 15    | 15         |
| 30-39                                                   | 63    | 63         |
| 40-49                                                   | 20    | 20         |
| 50 or more                                              | 2     | 2          |
| <b>Formal Qualification in Special Education</b>        |       |            |

|                    |    |    |
|--------------------|----|----|
| Definitely not     | 18 | 18 |
| Probably not       | 19 | 19 |
| Might or might not | 21 | 21 |
| Probably yes       | 27 | 27 |
| Definitely yes     | 15 | 15 |

**4.1.1.1 Constructs Reliability Tests (Survey measure of reliability).** As this research created a unique instrument to measure the variables being studied (e.g., education policies, teacher preparation, resources, teacher attitudes, and teacher knowledge), it becomes imperative to explore the internal consistency – a measure of reliability – of these variables or constructs.

According to Pallant (2020), internal consistency of a measurement scale implies the degree to which the items that make up the scale “hang together”. In other words, “Are they all measuring the same underlying construct?” (Pallant, 2020, p.101). **Cronbach’s alpha** is a statistical measure that is often used to explore internal consistency. It estimates the proportion of variance in the data that is not attributable to measurement error. A high value of Cronbach’s alpha indicates a high degree of internal consistency and suggests that the items in the test are measuring the same underlying construct. Ideally, **Cronbach’s alpha coefficient** of a scale should be above 0.7 (DeVellis, 2012).

Based on the foregoing, *Cronbach’s alpha coefficient* was utilized to evaluate the internal consistency of the measurement scale for each section in the survey (i.e., each construct – “Knowledge of policy”; “Teacher perception”; “Availability of resources”; “Teacher Attitude” and “Teacher Knowledge”).

**4.1.1.2 Pilot Study.** The pilot study results in the image show that the Cochran's Q test is highly reliable for detecting differences in item difficulty. The Cronbach's alpha of .967 indicates that the items in the test are very internally consistent. The mean score of 3.1443 on the test is slightly above the midpoint of the scale, suggesting that the items are not too difficult or too easy for the participants. The standard deviation of 41.7581 is relatively large, suggesting that there is a wide range of ability levels among the participants.

**Table 4**

*Reliability Statistics*

| <b>Reliability Statistics</b> |            |
|-------------------------------|------------|
| Cronbach's Alpha              | N of Items |
| .967                          | 49         |

| <b>Scale Statistics</b> |          |                |            |
|-------------------------|----------|----------------|------------|
| Mean                    | Variance | Std. Deviation | N of Items |
| 154.0700                | 1743.743 | 41.75814       | 49         |

The ANOVA with Cochran's Test shows that the Cochran's Q statistic is highly significant ( $F(48, 4752) = 2639.571, p < .000$ ). This indicates that there are significant differences in item difficulty. The Cochran's Q statistic is a measure of the overall difference in item difficulty, and it is calculated by summing the squared differences between the item means. Overall, the pilot study results suggest that the Cochran's Q test is a reliable and valid measure of item difficulty. The test is likely to be useful for identifying items that are too difficult or too easy for participants, which can help to improve the quality of tests.

**Table 5***Cochran's Test*

| ANOVA with Cochran's Test |          |                   |      |             |                      |
|---------------------------|----------|-------------------|------|-------------|----------------------|
|                           |          | Sum of<br>Squares | df   | Mean Square | Cochran's Q      Sig |
| Between People            |          | 3523.072          | 99   | 35.587      |                      |
| Within                    | Between  | 6739.660          | 48   | 140.410     | 2639.571      .000   |
| People                    | Items    |                   |      |             |                      |
|                           | Residual | 5516.258          | 4752 | 1.161       |                      |
|                           | Total    | 12255.918         | 4800 | 2.553       |                      |
| Total                     |          | 15778.990         | 4899 | 3.221       |                      |
| Grand Mean = 3.1443       |          |                   |      |             |                      |

### Study Results

#### 4.1.1.3 Quantitative Results. Teachers' Perceptions on Pre- and Post-Training in Facilitating the Inclusion of Students with Autism

In this section the results of **RQ1** are presented. It aimed to explain the perceptions on pre- and post-training in facilitating the inclusion of students with autism

#### Descriptive Data

Exploring the Cronbach's Alpha coefficient for this variable, Tables 5 and 6 below show that 100 (100%) of the total cases were valid and used in the analysis. Based on twelve (12) items or questions that form the "Teacher Preparation" variable/construct, the scale has a Cronbach's Alpha rating of 0.977. Again, this coefficient score is high, which indicates that the scale is dependable and that the elements or question forming the variable/construct (i.e., scale) are consistently assessing the same fundamental idea.

**Table 6***Case Processing Summary for “Teacher Preparation” Cronbach's Alpha Analysis*

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 100 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 100 | 100.0 |

**Table 7***Reliability Statistics for “Teacher Preparation” Cronbach's Alpha Analysis:*

| Cronbach's Alpha | Cronbach's Alpha Based on |            |
|------------------|---------------------------|------------|
|                  | Standardized Items        | N of Items |
| 0.977            | 0.977                     | 12         |

**“Teacher Preparation”/ “Teacher Perception”**

“Teacher Preparation”/ “Teacher Perception” vs. “Years of Experience in Special Education.”

Results show that, on average, teachers with only 1 to 5 years of experience in special education have lower score in “Teacher Preparation”/ “Teacher Perception” as compared with those with greater number of years of experience. Nonetheless, the chart also indicates that there is not much difference between those with 5 to 10 or 10 to 15 or 15 to 20 years of experience.

Box Plot analysis shows that teachers with a different number of years of experience in general education do not have equal score on “Teacher Preparation”/ “Teacher Perception.” In fact, the box plot shows that the average score on “Teacher Preparation”/ “Teacher Perception” increases as the number of years of experience in

general education increases. In other words, as one transitions from the lower years of experience group to higher ones, the score on “Teacher Preparation”/ “Teacher Perception” increases.

Analysis on the distribution of “Teacher Preparation”/ “Teacher Perception” scale in terms of “Specialisation” of the teachers. Based on the box plot, the distribution of values across the three categories of “specialisation” indicates that the median value on the “Teacher Preparation”/ “Teacher Perception” scale for general education teachers is very different from that of “special education teacher” (either working directly with students with ASD or as a teacher in a support class in a general school). Nonetheless, the chart also shows that there is not much difference in the median value for “Special education teacher in a support class in a general school” and “Special education teacher working directly with students with ASD from general education classrooms”.

As regards gender, the box plot analysis shows that the distribution of “Teacher Preparation”/ “Teacher Perception” values across the categories of gender (i.e., Male or Female) is different. The female teachers on average have greater “Teacher Preparation”/ “Teacher Perception” values/score than male.

Formal education in special education analysis shows that, teachers who answered that they “probably” or “definitely” have formal qualification in special education, on average, have greater score in “Teacher Preparation”/ “Teacher Perception” than those who stated that they “definitely not”, “probably not” or “might or might not” have formal qualification in special education. Moreover, age groups analysis, shows that the different teachers’ age groups do not have equal scores in terms of “Teacher Preparation”/ “Teacher Perception.” In fact, the box plot shows that the average score on “Teacher Preparation”/ “Teacher Perception” increases as the age increases. In other words, as one transitions from

a lower age group to a higher one, the score with regard to “Teacher Preparation”/ “Teacher Perception” increases.

Finally experience analysis shows the distribution of “Teacher Preparation”/ “Teacher Perception” scale in terms of the teachers’ “Experience Teaching Students with Disability”. Based on the box plot, teachers with no experience teaching students with disability and those with only 1 to 5 years of experience have a lower average score in terms of “Teacher Preparation”/ “Teacher Perception” as compared with those with 5-10 or 10-15 years of experience. The chart also indicates that, on average, there is not much difference between those with no experience teaching students with disability and those with only 1 to 5 years of experience. In the same vein, the chart indicates that there is not much difference between teachers with 5 to 10 or 10 to 15 years of experience in terms of average “Teacher Preparation”/ “Teacher Perception”.

### **Inferential Statistical Analysis**

#### **“Teacher Preparation”/ “Teacher Perception” vs. “Years of Experience in Special Education”**

#### **ANOVA**

**Table 8**

*Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Years of Experience in Special Education*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 7139.401       | 3  | 2379.800    | 14.129 | <.001 |
| Within Groups  | 16170.159      | 96 | 168.439     |        |       |
| Total          | 23309.560      | 99 |             |        |       |

## Post Hoc Test

### Multiple Comparisons

**Table 9**

*Dependant Variable Bonferroni of the Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Years of Experience in Special Education*

| (J) Click to       |               | 95% Confidence |       |       |        |       |
|--------------------|---------------|----------------|-------|-------|--------|-------|
| (I) Click to years | years of      | Interval       |       |       |        |       |
| of experience in   | experience in | Mean           |       |       |        |       |
| Special            | Special       | Difference     | Std.  |       | Lower  | Upper |
| Education          | Education     | (I-J)          | Error | Sig.  | Bound  | Bound |
| 1-5                | 5-10          | -15.821*       | 3.291 | <.001 | -24.69 | -6.96 |
|                    | 10-15         | -16.610*       | 3.149 | <.001 | -25.09 | -8.13 |
|                    | 15-20         | -28.429*       | 6.850 | <.001 | -46.88 | -9.97 |
| 5-10               | 1-5           | 15.821*        | 3.291 | <.001 | 6.96   | 24.69 |
|                    | 10-15         | -.789          | 3.335 | 1.000 | -9.77  | 8.19  |
|                    | 15-20         | -12.607        | 6.937 | .434  | -31.30 | 6.08  |
| 10-15              | 1-5           | 16.610*        | 3.149 | <.001 | 8.13   | 25.09 |
|                    | 5-10          | .789           | 3.335 | 1.000 | -8.19  | 9.77  |
|                    | 15-20         | -11.818        | 6.871 | .532  | -30.33 | 6.69  |
| 15-20              | 1-5           | 28.429*        | 6.850 | <.001 | 9.97   | 46.88 |
|                    | 5-10          | 12.607         | 6.937 | .434  | -6.08  | 31.30 |
|                    | 10-15         | 11.818         | 6.871 | .532  | -6.69  | 30.33 |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in the number of “Years of Experience in Special Education” on

the level of “Teacher Preparation”/ “Teacher Perception” as regards inclusion of students with ASD in high school. Based on the number of years of experience in special education, teachers were divided into four groups (Group 1: 1 to 5 years; Group 2: 5 to 10 years; Group 3: 10 to 15 years; and Group 4: 15 to 20 years). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Teacher Preparation”/ “Teacher Perception” for the four groups:  $F(3, 96) = 14.129, p < 0.001$ . Despite the fact that there is statistical significance, the Post Hoc comparison using the Bonferroni test indicates that the mean score for Group 1 ( $M = 26.57, SD = 8.57$ ) is significantly different from the other groups (Group 2 [ $M = 42.39, SD = 15.17$ ]; Group 3 [ $M = 43.18, SD = 15.27$ ]; Group 4 [ $M = 55, SD = 0$ ]). However, there was no significant difference between the three other groups.

#### **“Teacher Preparation”/ “Teacher Perception” vs. “Years of experience in General Education”**

##### **ANOVA**

**Table 10**

*Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Years of Experience in General Education*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 7427.261       | 3  | 2475.754    | 14.965 | <.001 |
| Within Groups  | 15882.299      | 96 | 165.441     |        |       |
| Total          | 23309.560      | 99 |             |        |       |

## Post Hoc Test

### Multiple Comparisons

**Table 11**

*Dependant Variable Bonferroni of the Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Years of Experience in Special Education*

| (I) Years of<br>experience in<br>General<br>Education | (J) Years of<br>experience in<br>General<br>Education | 95% Confidence              |               |       |                |                |
|-------------------------------------------------------|-------------------------------------------------------|-----------------------------|---------------|-------|----------------|----------------|
|                                                       |                                                       | Mean<br>Difference<br>(I-J) | Std.<br>Error | Sig.  | Lower<br>Bound | Upper<br>Bound |
| 1-5                                                   | 5-10                                                  | -11.593*                    | 3.118         | .002  | -19.99         | -3.19          |
|                                                       | 10-15                                                 | -21.872*                    | 3.694         | <.001 | -31.82         | -11.92         |
|                                                       | 15-20                                                 | -28.763*                    | 6.262         | <.001 | -45.63         | -11.89         |
| 5-10                                                  | 1-5                                                   | 11.593*                     | 3.118         | .002  | 3.19           | 19.99          |
|                                                       | 10-15                                                 | -10.279*                    | 3.334         | .016  | -19.26         | -1.30          |
|                                                       | 15-20                                                 | -17.170*                    | 6.057         | .034  | -33.49         | -.85           |
| 10-15                                                 | 1-5                                                   | 21.872*                     | 3.694         | <.001 | 11.92          | 31.82          |
|                                                       | 5-10                                                  | 10.279*                     | 3.334         | .016  | 1.30           | 19.26          |
|                                                       | 15-20                                                 | -6.891                      | 6.372         | 1.000 | -24.06         | 10.28          |
| 15-20                                                 | 1-5                                                   | 28.763*                     | 6.262         | <.001 | 11.89          | 45.63          |
|                                                       | 5-10                                                  | 17.170*                     | 6.057         | .034  | .85            | 33.49          |
|                                                       | 10-15                                                 | 6.891                       | 6.372         | 1.000 | -10.28         | 24.06          |

\*. The mean difference is significant at the 0.05 level.

In terms of “Years of Experience in General Education”, a one-way between-group analysis of variance (ANOVA) was conducted to explore how the level of “Teacher

Preparation”/ “Teacher Perception” differs across the categories of teachers’ experience. Based on the number of years of experience in general education, teachers were divided into four groups (Group 1: 1-5 years; Group 2: 5 to 10 years; Group 3: 10 to 15 years; and Group 4: 15 to 20 years). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Teacher Preparation”/ “Teacher Perception” for the four groups:  $F(3, 96) = 14.965, p < 0.001$ . A Post Hoc comparison using the Bonferroni test was also conducted to identify where exactly the differences are. The result indicates that the mean scores for Group 1 ( $M = 26.04, SD = 8.52$ ) and Group 2 ( $M = 37.63, SD = 15.54$ ) are significantly different from the other groups (Group 3 [ $M = 47.91, SD = 12.21$ ]; Group 4 [ $M = 54.80, SD = 0.45$ ]). However, there was no significant difference between groups 3 and 4.

#### **“Teacher Preparation”/ “Teacher Perception” vs. “Specialisation”**

##### **ANOVA**

**Table 12**

*Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Specialisation*

|                | Sum of Squares | df | Mean Square | F       | Sig.  |
|----------------|----------------|----|-------------|---------|-------|
| Between Groups | 18995.578      | 2  | 9497.789    | 213.558 | <.001 |
| Within Groups  | 4313.982       | 97 | 44.474      |         |       |
| Total          | 23309.560      | 99 |             |         |       |

## Post Hoc Test

**Table 13**

*Dependant Variable Bonferroni of the Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Specialisation*

| (I) You work now as a                                                             | (J) You work now as a                                                             | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------|------------|-------|-------------------------|-------------|
|                                                                                   |                                                                                   |                       |            |       | Lower Bound             | Upper Bound |
| General Education teacher                                                         | Special Education teacher in a support class in a general school                  | -27.196*              | 1.544      | <.001 | -30.96                  | -23.44      |
|                                                                                   | Special Education teacher working directly with students with ASD from general... | -28.714*              | 1.890      | <.001 | -33.32                  | -24.11      |
| Special Education teacher in a support class in a general school                  | General Education teacher                                                         | 27.196*               | 1.544      | <.001 | 23.44                   | 30.96       |
|                                                                                   | Special Education teacher working directly with students with ASD from general... | -1.518                | 2.090      | 1.000 | -6.61                   | 3.57        |
| Special Education teacher working directly with students with ASD from general... | General Education teacher                                                         | 28.714*               | 1.890      | <.001 | 24.11                   | 33.32       |
|                                                                                   | Special Education teacher in a support class in a general school                  | 1.518                 | 2.090      | 1.000 | -3.57                   | 6.61        |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in teachers' "Specialisation" on the level of "Teacher Preparation"/ "Teacher Perception" as regards inclusion of students with ASD in high school. Based on "Specialisation", teachers were divided into three groups (Group 1:

“General Education teacher”; Group 2: “Special Education teacher in a support class in a general school”; and Group 3: “Special education teacher working directly with students with ASD from general education classrooms”). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Teacher Preparation”/ “Teacher Perception” for the three groups:  $F(2, 97) = 213.56, p < 0.001$ . Despite the fact that there is statistical significance, the Post Hoc comparison using the Bonferroni test indicates that the mean score for Group 1 ( $M = 25.41, SD = 8.10$ ) is significantly different from the other groups (Group 2 [ $M = 52.61, SD = 5.06$ ]; and Group 3 [ $M = 54.13, SD = 1.03$ ]). However, there was no significant difference between Groups 2 and 3.

#### **“Teacher Preparation”/ “Teacher Perception” vs. “Formal Qualification in Special Education”**

##### **ANOVA**

**Table 14**

*Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Formal Qualification in Special Education*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 15430.625      | 4  | 3857.656    | 46.514 | <.001 |
| Within Groups  | 7878.935       | 95 | 82.936      |        |       |
| Total          | 23309.560      | 99 |             |        |       |

## Post Hoc Test

### Multiple Comparisons

**Table 15**

*Dependant Variable Bonferroni of the Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Formal Qualification in Special Education Specialisation*

| (I) Do you have    | (J) Do you have    | 95% Confidence |       |       |        |        |
|--------------------|--------------------|----------------|-------|-------|--------|--------|
| a formal           | a formal           | Interval       |       |       |        |        |
| qualification in   | qualification in   | Mean           |       |       |        |        |
| Special            | Special            | Difference     | Std.  |       | Lower  | Upper  |
| Education?         | Education?         | (I-J)          | Error | Sig.  | Bound  | Bound  |
| Definitely not     | Probably not       | -1.383         | 2.995 | 1.000 | -9.99  | 7.23   |
|                    | Might or might not | -8.802*        | 2.925 | .034  | -17.21 | -.39   |
|                    | Probably yes       | -28.315*       | 2.771 | <.001 | -36.28 | -20.35 |
|                    | Definitely yes     | -27.611*       | 3.184 | <.001 | -36.76 | -18.46 |
| Probably not       | Definitely not     | 1.383          | 2.995 | 1.000 | -7.23  | 9.99   |
|                    | Might or might not | -7.419         | 2.883 | .116  | -15.71 | .87    |
|                    | Probably yes       | -26.932*       | 2.727 | <.001 | -34.77 | -19.09 |
|                    | Definitely yes     | -26.228*       | 3.145 | <.001 | -35.27 | -17.19 |
| Might or might not | Definitely not     | 8.802*         | 2.925 | .034  | .39    | 17.21  |
|                    | Probably not       | 7.419          | 2.883 | .116  | -.87   | 15.71  |
|                    | Probably yes       | -19.513*       | 2.650 | <.001 | -27.13 | -11.90 |
|                    | Definitely yes     | -18.810*       | 3.079 | <.001 | -27.66 | -9.96  |

|                |                    |         |       |       |       |       |
|----------------|--------------------|---------|-------|-------|-------|-------|
| Probably yes   | Definitely not     | 28.315* | 2.771 | <.001 | 20.35 | 36.28 |
|                | Probably not       | 26.932* | 2.727 | <.001 | 19.09 | 34.77 |
|                | Might or might not | 19.513* | 2.650 | <.001 | 11.90 | 27.13 |
|                | Definitely yes     | .704    | 2.933 | 1.000 | -7.73 | 9.13  |
| Definitely yes | Definitely not     | 27.611* | 3.184 | <.001 | 18.46 | 36.76 |
|                | Probably not       | 26.228* | 3.145 | <.001 | 17.19 | 35.27 |
|                | Might or might not | 18.810* | 3.079 | <.001 | 9.96  | 27.66 |
|                | Probably yes       | -.704   | 2.933 | 1.000 | -9.13 | 7.73  |

\*. The mean difference is significant at the 0.05 level.

In terms of “Formal Qualification in Special Education”, a one-way between-group analysis of variance (ANOVA) was conducted to explore how the level of “Teacher Preparation”/ “Teacher Perception” differs across the categories of teachers’ formal qualifications. Based on the reported statement about their “Formal Qualification in Special Education”, teachers were divided into five groups (Group 1: “definitely not have formal qualification in special education”; Group 2: “probably not have formal qualification in special education”; Group 3: “definitely not”, “might or might not have formal qualification in special education”; Group 4: “probably, yes, have formal qualification in special education”; Group 5: “definitely, yes, have formal qualification in special education”). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Teacher Preparation”/ “Teacher Perception” for the five groups:  $F(4, 95) = 46.514, p < 0.001$ . A Post Hoc comparison using the Bonferroni test was also conducted to identify where exactly the differences are. The result indicates that the mean scores for Group 1 ( $M = 23.72, SD = 8.14$ ), Group 2 ( $M = 25.11, SD = 7.31$ ), and Group 3 ( $M =$

32.52, SD = 13.98) are significantly different from the two other groups (Group 4 [M = 52.33, SD = 7.75]; Group 5 [M = 51.33, SD = 4.78]). However, there was no significant difference between Groups 4 and 5.

### **“Teacher Preparation”/ “Teacher Perception” vs. “Experience Teaching Students with Disability”**

#### **ANOVA**

**Table 16**

*Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Experience Teaching Students with Disability*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 16801.595      | 3  | 5600.532    | 82.614 | <.001 |
| Within Groups  | 6507.965       | 96 | 67.791      |        |       |
| Total          | 23309.560      | 99 |             |        |       |

#### **Post Hoc Test**

#### **Multiple Comparison**

**Table 17**

*Dependant Variable Bonferroni of the Teacher Preparation Construct, Teacher Preparation/ Teacher Perception vs. Experience Teaching Students with Disability*

| (I) How many students with disability have you taught in your career | (J) How many students with disability have you taught in your career | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Bound |             |
|----------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------|------------|------|-------------------------------|-------------|
|                                                                      |                                                                      |                       |            |      | Lower Bound                   | Upper Bound |

|       |       |          |       |       |        |        |
|-------|-------|----------|-------|-------|--------|--------|
| None  | 1-5   | -4.774   | 2.202 | .196  | -10.71 | 1.16   |
|       | 5-10  | -28.963* | 2.241 | <.001 | -35.00 | -22.93 |
|       | 10-15 | -27.281* | 2.549 | <.001 | -34.15 | -20.41 |
| 1-5   | None  | 4.774    | 2.202 | .196  | -1.16  | 10.71  |
|       | 5-10  | -24.189* | 2.202 | <.001 | -30.12 | -18.26 |
|       | 10-15 | -22.507* | 2.515 | <.001 | -29.28 | -15.73 |
| 5-10  | None  | 28.963*  | 2.241 | <.001 | 22.93  | 35.00  |
|       | 1-5   | 24.189*  | 2.202 | <.001 | 18.26  | 30.12  |
|       | 10-15 | 1.682    | 2.549 | 1.000 | -5.19  | 8.55   |
| 10-15 | None  | 27.281*  | 2.549 | <.001 | 20.41  | 34.15  |
|       | 1-5   | 22.507*  | 2.515 | <.001 | 15.73  | 29.28  |
|       | 5-10  | -1.682   | 2.549 | 1.000 | -8.55  | 5.19   |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in the number of years of “Experience Teaching Students with Disability” on the level of “Teacher Preparation”/ “Teacher Perception” as regards inclusion of students with ASD in high school. Based on the number of years of experience in teaching students with disability, teachers were divided into four groups (Group 1: none; Group 2: 1 to 5 years; Group 3: 5 to 10 years; and Group 4: 10 to 15 years). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Teacher Preparation”/ “Teacher Perception” for the four groups:  $F(3, 96) = 82.614, p < 0.001$ . Despite the fact that there is statistical significance, a Post Hoc comparison using the Bonferroni test was also performed to know exactly where the differences were. The result indicates that the mean scores for Group 1 ( $M = 23.78, SD = 4.85$ ) and Group 2 ( $M = 28.55, SD = 12.06$ ) are significantly different from the other groups (Group 3 [ $M = 52.74, SD = 5.22$ ]; Group 4 [ $M$

= 51.06, SD = 8.35]). However, there was no significant difference between the Groups 3 and 4.

### “Resources” vs. “Years of Experience in Special Education”

#### ANOVA

**Table 18**

*Resource Construct, Years of Experience in Special Education*

|                | Sum of Squares | df | Mean Square | F     | Sig.  |
|----------------|----------------|----|-------------|-------|-------|
| Between Groups | 3540.355       | 3  | 1180.118    | 8.303 | <.001 |
| Within Groups  | 13644.235      | 96 | 142.127     |       |       |
| Total          | 17184.590      | 99 |             |       |       |

#### Post Hoc Test

#### Multiple Comparisons

**Table 19**

*Dependant Variable Bonferroni of the Resource Construct, Years of Experience in Special Education.*

| (I) Click to<br>years of<br>experience in<br>Special<br>Education | (J) Click to<br>years of<br>experience in<br>Special<br>Education | Mean<br>Difference<br>(I-J) | Std.<br>Error | Sig.  | 95% Confidence Interval<br>Lower Bound Upper Bound |       |
|-------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------|---------------|-------|----------------------------------------------------|-------|
| 1-5                                                               | 5-10                                                              | -10.664*                    | 3.023         | .004  | -18.81                                             | -2.52 |
|                                                                   | 10-15                                                             | -11.494*                    | 2.893         | <.001 | -19.29                                             | -3.70 |
|                                                                   | 15-20                                                             | -21.343*                    | 6.292         | .006  | -38.29                                             | -4.39 |

|       |       |         |       |       |        |       |
|-------|-------|---------|-------|-------|--------|-------|
| 5-10  | 1-5   | 10.664* | 3.023 | .004  | 2.52   | 18.81 |
|       | 10-15 | -.830   | 3.063 | 1.000 | -9.08  | 7.42  |
|       | 15-20 | -10.679 | 6.372 | .582  | -27.85 | 6.49  |
| 10-15 | 1-5   | 11.494* | 2.893 | <.001 | 3.70   | 19.29 |
|       | 5-10  | .830    | 3.063 | 1.000 | -7.42  | 9.08  |
|       | 15-20 | -9.848  | 6.312 | .732  | -26.85 | 7.16  |
| 15-20 | 1-5   | 21.343* | 6.292 | .006  | 4.39   | 38.29 |
|       | 5-10  | 10.679  | 6.372 | .582  | -6.49  | 27.85 |
|       | 10-15 | 9.848   | 6.312 | .732  | -7.16  | 26.85 |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in the number of “Years of Experience in Special Education” on the teachers’ level on “Resources” scale as regards inclusion of students with ASD in high school. Based on the number of years of experience in special education, teachers were divided into four groups (Group 1: 1 to 5 years; Group 2: 5 to 10 years; Group 3: 10 to 15 years; and Group 4: 15 to 20 years). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Resources” scale for the four groups:  $F(3, 96) = 8.303, p < 0.001$ . Despite the fact that there is statistical significance, a Post Hoc comparison using the Bonferroni test was conducted. The result for the test indicates that the mean score for Group 1 ( $M = 20.66, SD = 9.27$ ) is significantly different from the other groups (Group 2 [ $M = 31.32, SD = 13.46$ ]; Group 3 [ $M = 32.15, SD = 13.50$ ]; Group 4 [ $M = 42, SD = 0$ ]). However, there was no significant difference between the three other groups. In this section the results of **RQ2** are presented. It aimed to explain the teachers’ perceptions on inclusion policy and management support in facilitating the inclusion of students with autism spectrum disorders.

## Descriptive Data

### Knowledge of Policy

Exploring the Cronbach's Alpha coefficient for this variable, Tables 3 and 4 below show that 100 (100%) of the total cases were valid and used in the analysis. Based on ten (10) items or questions that form the “Knowledge of Policy” variable/construct, the scale has a Cronbach's Alpha rating of 0.958. This coefficient score is quite high, which indicates that the scale is dependable and that the elements or question forming the variable/construct (i.e., scale) are consistently assessing the same fundamental idea.

**Table 20**

*Case Processing Summary for “Knowledge of Policy” Cronbach's Alpha analysis*

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 100 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 100 | 100.0 |

### Reliability Statistics

*Reliability Statistics for “Knowledge of Policy” Cronbach's Alpha Analysis*

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized |            |
|------------------|----------------------------------------|------------|
|                  | Items                                  | N of Items |
| 0.958            | 0.949                                  | 10         |

### Knowledge of Policy

#### Knowledge of Policy vs. Years of Experience in Special Education.

The analysis shows the distribution of “Knowledge of Policy” scale in terms of the years of experience the teachers have in special education. The plot indicates that the

median value on the “Knowledge of Policy” scale is different for the different groups of years of experience. The median value is lowest for teachers with only 1 to 5 years of experience in Special Education, while it is highest in those with 16 to 20 years of experience.

### **Knowledge of Policy vs. Years of Experience in General Education.**

The analysis shows the distribution of “Knowledge of Policy” scale in terms of the years of experience the teachers have in general education. Just as in the case of “Years of Experience in Special Education”, the plot indicates that the median value on the “Knowledge of Policy” scale is different for the different groups of years of experience in general education. The median value is lowest for teachers with only 1-5 years of experience in general education, while it is highest in those with 15-20 years of experience.

### **Knowledge of Policy vs. Specialisation.**

The box plot shows the distribution of “Knowledge of Policy” scale in terms of “Specialisation” of the teacher. Based on the plot, the distribution of values across the three categories of “specialisation” indicates that the median value on the “Knowledge of Policy” scale for general education teachers is very different from that of “special education teacher” (either working directly with students with ASD or as a teacher in a support class in a general school). Nonetheless, the chart also shows that there is not much difference in the median value for “Special education teacher in a support class in a general school” and “Special education teacher working directly with students with ASD from general education classrooms”.

### **Knowledge of Policy vs. Gender.**

As regards gender, the distribution of “Knowledge of Policy” values across the categories of gender (i.e., Male, Female & Non-binary/third gender) is different. The female teachers on average have greater “Knowledge of Policy” values/score than males.

### Knowledge of Policy vs. Formal Qualification in Special Education

The results show that teachers who answered that they “probably” or “definitely” have formal qualification in special education, on average, have greater score in “Knowledge of Policy” than those who stated that they “definitely not”, “probably not” or “might or might not” have formal qualification in special education

### **Knowledge of Policy vs. Age.**

The age analysis shows that the different teachers’ age groups do not have equal score on “Knowledge of Policy.” In fact, the box plot shows that the average score on “Knowledge of Policy” increases as the age increases. In other words, as one transitions from a lower age group to a higher one, the score on “Knowledge of Policy” increases.

### Knowledge of Policy vs. Experience Teaching Students with Disability.

The distribution of “Knowledge of Policy” scale in terms of the teachers’ “Experience Teaching Students with Disability”. Based on the box plot, teachers with no experience teaching students with disability and those with only 1 to 5 years of experience have a lower average score in terms of “Knowledge of Policy” as compared with those with 5 to 10 or 10 to 15 years of experience. The chart also indicates that, on average, there is not much difference between those with no experience teaching students with disability and those with only 1 to 5 years of experience. In the same vein, the chart also indicates that there is no much difference between teachers with 5 to 10 or 10 to 15 years of experience in terms of average “Knowledge of Policy”.

### **Inferential Statistical Analysis**

### **Knowledge of Policy vs. Years of Experience in Special Education**

#### **ANOVA**

**Table 21**

*Government Policy Construct, Knowledge of Policy vs. Years of Experience in Special Education*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 3910.724       | 3  | 1303.575    | 13.294 | <.001 |
| Within Groups  | 9413.636       | 96 | 98.059      |        |       |
| Total          | 13324.360      | 99 |             |        |       |

### Post Hoc Test

#### Multiple Comparison

**Table 22**

*Dependant Variable of the Government Policy construct*

| (I) Click to years of experience in special education | (J) Click to years of experience in special education | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |       |
|-------------------------------------------------------|-------------------------------------------------------|-----------------------|------------|-------|-------------------------|-------|
| 1-5                                                   | 5-10                                                  | -11.679*              | 2.511      | <.001 | -18.44                  | -4.91 |
|                                                       | 10-15                                                 | -12.208*              | 2.403      | <.001 | -18.68                  | -5.73 |
|                                                       | 15-20                                                 | -21.321*              | 5.227      | <.001 | -35.40                  | -7.24 |
| 5-10                                                  | 1-5                                                   | 11.679*               | 2.511      | <.001 | 4.91                    | 18.44 |
|                                                       | 10-15                                                 | -.529                 | 2.544      | 1.000 | -7.38                   | 6.33  |
|                                                       | 15-20                                                 | -9.643                | 5.293      | .430  | -23.90                  | 4.62  |
| 10-15                                                 | 1-5                                                   | 12.208*               | 2.403      | <.001 | 5.73                    | 18.68 |
|                                                       | 5-10                                                  | .529                  | 2.544      | 1.000 | -6.33                   | 7.38  |
|                                                       | 15-20                                                 | -9.114                | 5.243      | .512  | -23.24                  | 5.01  |
| 15-20                                                 | 1-5                                                   | 21.321*               | 5.227      | <.001 | 7.24                    | 35.40 |

|       |       |       |      |       |       |
|-------|-------|-------|------|-------|-------|
| 5-10  | 9.643 | 5.293 | .430 | -4.62 | 23.90 |
| 10-15 | 9.114 | 5.243 | .512 | -5.01 | 23.24 |

\*. The mean difference is significant at the 0.05 level.

The one-way between-group analysis of variance (ANOVA) was conducted to explore the impact of teachers' "Years of experience in Special Education" on their level of perception in terms of "Government Policy" as regards inclusion of students with ASD in high school. Based on the number of years of experience in special education, teachers were divided into four groups (Group 1: 1-5 years; Group 2: 5-10 years; Group 3: 10-15 years; and Group 4: 15-20 years). The results indicate a statistically significant difference at the  $p < 0.05$  level in "Knowledge of Policy" for the four groups:  $F(3, 96) = 13.294$ ,  $p < 0.001$ . Despite the fact that there is statistical significance, the Post Hoc comparison using the Bonferroni test indicate that the mean score for Group 1 ( $M = 24.43$ ,  $SD = 6.73$ ) was significantly different from the other groups (Group 2 [ $M = 36.11$ ,  $SD = 11.76$ ]; Group 3 [ $M = 36.64$ ,  $SD = 11.37$ ]; Group 4 [ $M = 45.75$ ,  $SD = 1.5$ ]). However, there was no significant difference between the three other groups.

### **"Knowledge of Policy" vs. "Years of Experience in General Education"**

#### **ANOVA**

**Table 23**

*Government Policy Construct, Knowledge of Policy vs. Years of Experience in General Education.*

|                | Sum of Squares | df | Mean Square | F      | Sig.            |
|----------------|----------------|----|-------------|--------|-----------------|
| Between Groups | 4217.332       | 3  | 1405.777    | 14.819 | <b>&lt;.001</b> |
| Within Groups  | 9107.028       | 96 | 94.865      |        |                 |
| Total          | 13324.360      | 99 |             |        |                 |

## Post Hoc Test

### Multiple Comparisons

**Table 24**

*Dependent variable of the Government Policy construct*

|                   |               | (J) Years of |       | 95% Confidence |          |       |
|-------------------|---------------|--------------|-------|----------------|----------|-------|
| (I) Years of      | Experience in | Mean         |       |                | Interval |       |
| Experience in     | General       | Difference   | Std.  |                | Lower    | Upper |
| General Education | Education     | (I-J)        | Error | Sig.           | Bound    | Bound |
| 1-5               | 5-10          | -8.757*      | 2.361 | .002           | -15.12   | -2.40 |
|                   | 10-15         | -16.375*     | 2.797 | <.001          | -23.91   | -8.84 |
|                   | 15-20         | -21.948*     | 4.742 | <.001          | -34.72   | -9.17 |
| 5-10              | 1-5           | 8.757*       | 2.361 | .002           | 2.40     | 15.12 |
|                   | 10-15         | -7.619*      | 2.525 | .020           | -14.42   | -.82  |
|                   | 15-20         | -13.191*     | 4.586 | .030           | -25.55   | -.84  |
| 10-15             | 1-5           | 16.375*      | 2.797 | <.001          | 8.84     | 23.91 |
|                   | 5-10          | 7.619*       | 2.525 | .020           | .82      | 14.42 |
|                   | 15-20         | -5.573       | 4.825 | 1.000          | -18.57   | 7.43  |
| 15-20             | 1-5           | 21.948*      | 4.742 | <.001          | 9.17     | 34.72 |
|                   | 5-10          | 13.191*      | 4.586 | .030           | .84      | 25.55 |
|                   | 10-15         | 5.573        | 4.825 | 1.000          | -7.43    | 18.57 |

\*. The mean difference is significant at the 0.05 level.

In terms of “Years of Experience in General Education”, a one-way between-group analysis of variance (ANOVA) was conducted to explore how perceptions in terms of “Knowledge of Policy” as regards inclusion of students with ASD in high school differs across the categories of teachers’ experience. Based on the number of years of experience

in general education, teachers were divided into four groups (Group 1: 1 to 5 years; Group 2: 5 to 10 years; Group 3: 10 to 15 years; and Group 4: 15 to 20 years). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Knowledge of Policy” for the four groups:  $F(3, 96) = 14.819, p < 0.001$ . A Post Hoc comparison using the Bonferroni test was also conducted to identify where exactly the differences are. The result indicates that the mean score for Group 1 ( $M = 23.85, SD = 6.61$ ) is significantly different from the other groups (Group 2 [ $M = 32.61, SD = 11.55$ ]; Group 3 [ $M = 47.91, SD = 12.21$ ]; and Group 4 [ $M = 54.80, SD = 0.45$ ]). However, there was a significant difference between groups 3 and 4.

#### “Knowledge of Policy” vs. “Specialisation”

##### ANOVA

**Table 25:**

*Government Policy Construct, Knowledge of Policy vs. Specialisation*

|                | Sum of Squares | df | Mean Square | F       | Sig.  |
|----------------|----------------|----|-------------|---------|-------|
| Between Groups | 10620.583      | 2  | 5310.292    | 190.511 | <.001 |
| Within Groups  | 2703.777       | 97 | 27.874      |         |       |
| Total          | 13324.360      | 99 |             |         |       |

## Post Hoc Test

### Multiple Comparisons

**Table 26**

*Dependant Variable Bonferroni of the Government Policy construct, Knowledge of Policy vs. Specialisation*

|                                                                                                  |                                                                                               | Mean<br>Difference<br>(I-J) | Std.<br>Error | Sig.  | 95% Confidence<br>Interval |                |
|--------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-----------------------------|---------------|-------|----------------------------|----------------|
| (I) You work now<br>as a                                                                         | (J) You work now as a                                                                         |                             |               |       | Lower<br>Bound             | Upper<br>Bound |
| general education<br>teacher                                                                     | special education<br>teacher in a support<br>class in a general school                        | -20.554*                    | 1.222         | <.001 | -23.53                     | -17.58         |
|                                                                                                  | Special education<br>teacher working<br>directly with students<br>with ASD from<br>general... | -21.116*                    | 1.497         | <.001 | -24.76                     | -17.47         |
| Special education<br>teacher in a<br>support class in a<br>general school                        | General education<br>teacher                                                                  | 20.554*                     | 1.222         | <.001 | 17.58                      | 23.53          |
|                                                                                                  | Special education<br>teacher working<br>directly with students<br>with ASD from<br>general... | -.562                       | 1.655         | 1.000 | -4.59                      | 3.47           |
| Special education<br>teacher working<br>directly with<br>students with<br>ASD from<br>general... | General education<br>teacher                                                                  | 21.116*                     | 1.497         | <.001 | 17.47                      | 24.76          |
|                                                                                                  | Special education<br>teacher in a support<br>class in a general school                        | .563                        | 1.655         | 1.000 | -3.47                      | 4.59           |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in teachers' "Specialisation" on their level of perception in terms

of “Knowledge of Policy” as regards inclusion of students with ASD in high School. Based on “Specialisation”, teachers were divided into three groups (Group 1: “General Education teacher”; Group 2: “Special Education teacher in a support class in a general school”; and Group 3: “Special education teacher working directly with students with ASD from general education classrooms”). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Knowledge of Policy” scale for the three groups:  $F(2, 97) = 190.51, p < 0.001$ . Despite the fact that there is statistical significance, a Post Hoc comparison using Bonferroni test indicates that the mean score for Group 1 ( $M = 23.45, SD = 6.40$ ) is significantly different from the other groups (Group 2 [ $M = 44.0, SD = 3.91$ ]; and Group 3 [ $M = 44.56, SD = 1.67$ ]). However, there was no significant difference between Groups 2 and 3.

#### **“Knowledge of Policy” vs. “Formal Qualification in Special Education”**

##### **ANOVA**

**Table 27**

*Government Policy Construct, Knowledge of Policy vs. Formal Qualification in Special Education*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 8482.743       | 4  | 2120.686    | 41.611 | <.001 |
| Within Groups  | 4841.617       | 95 | 50.964      |        |       |
| Total          | 13324.360      | 99 |             |        |       |

## Post Hoc Test

### Multiple Comparisons

**Table 28**

*Dependant Variable Bonferroni of the Government Policy construct, Knowledge of Policy vs. Formal Qualification in Special Education*

| (I) Do you         | (J) Do you have    | 95% Confidence Interval |       |       |        |        |
|--------------------|--------------------|-------------------------|-------|-------|--------|--------|
| have a formal      | a formal           |                         |       |       |        |        |
| qualification in   | qualification in   | Mean                    |       |       |        |        |
| Special            | Special            | Difference              | Std.  |       | Lower  | Upper  |
| Education?         | Education?         | (I-J)                   | Error | Sig.  | Bound  | Bound  |
| Definitely not     | Probably not       | -1.020                  | 2.348 | 1.000 | -7.77  | 5.73   |
|                    | Might or might not | -5.389                  | 2.293 | .208  | -11.98 | 1.20   |
|                    | Probably yes       | -20.796*                | 2.172 | <.001 | -27.04 | -14.55 |
|                    | Definitely yes     | -20.189*                | 2.496 | <.001 | -27.36 | -13.02 |
| Probably not       | Definitely not     | 1.020                   | 2.348 | 1.000 | -5.73  | 7.77   |
|                    | Might or might not | -4.368                  | 2.260 | .563  | -10.86 | 2.13   |
|                    | Probably yes       | -19.776*                | 2.138 | <.001 | -25.92 | -13.63 |
|                    | Definitely yes     | -19.168*                | 2.466 | <.001 | -26.26 | -12.08 |
| Might or might not | Definitely not     | 5.389                   | 2.293 | .208  | -1.20  | 11.98  |
|                    | Probably not       | 4.368                   | 2.260 | .563  | -2.13  | 10.86  |
|                    | Probably yes       | -15.407*                | 2.077 | <.001 | -21.38 | -9.44  |
|                    | Definitely yes     | -14.800*                | 2.413 | <.001 | -21.74 | -7.86  |
| Probably yes       | Definitely not     | 20.796*                 | 2.172 | <.001 | 14.55  | 27.04  |

|                |                    |         |       |       |       |       |
|----------------|--------------------|---------|-------|-------|-------|-------|
|                | Probably not       | 19.776* | 2.138 | <.001 | 13.63 | 25.92 |
|                | Might or might not | 15.407* | 2.077 | <.001 | 9.44  | 21.38 |
|                | Definitely yes     | .607    | 2.299 | 1.000 | -6.00 | 7.21  |
| Definitely yes | Definitely not     | 20.189* | 2.496 | <.001 | 13.02 | 27.36 |
|                | Probably not       | 19.168* | 2.466 | <.001 | 12.08 | 26.26 |
|                | Might or might not | 14.800* | 2.413 | <.001 | 7.86  | 21.74 |
|                | Probably yes       | -.607   | 2.299 | 1.000 | -7.21 | 6.00  |

---

\*. The mean difference is significant at the 0.05 level.

A one-way between-group analysis of variance (ANOVA) was conducted to explore how teachers' level of perception in terms of "Knowledge of Policy" as regards inclusion of students with ASD in high school differs across the categories of teachers' formal qualifications. Based on the reported statement about their "Formal Qualification in Special Education", teachers were divided into five groups (Group 1: "definitely not have formal qualification in special education"; Group 2: "probably not have formal qualification in special education"; Group 3: "definitely not", "might or might not have formal qualification in special education"; Group 4: "probably, yes, have formal qualification in special education"; Group 5: "definitely, yes, have formal qualification in special education"). The results indicate a statistically significant difference at the  $p < 0.05$  level in "Knowledge of Policy" scale for the five groups:  $F(4, 95) = 41.611, p < 0.001$ . A Post Hoc comparison using the Bonferroni test was also conducted to identify where exactly the differences are. The result indicates that the mean scores for Group 1 ( $M = 22.61, SD = 5.82$ ), Group 2 ( $M = 23.63, SD = 6.50$ ), and Group 3 ( $M = 28.00, SD = 10.89$ )

are significantly different from the two other groups (Group 4 [ $M = 43.41$ ,  $SD = 5.69$ ]; Group 5 [ $M = 42.80$ ,  $SD = 4.59$ ]). However, there was no significant difference between Groups 4 and 5.

### “Knowledge of Policy” vs. “Experience Teaching Students with Disability”

#### ANOVA

**Table 29**

*Government Policy Construct, Knowledge of Policy vs. Experience Teaching Students with Disability*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 9767.138       | 3  | 3255.713    | 87.863 | <.001 |
| Within Groups  | 3557.222       | 96 | 37.054      |        |       |
| Total          | 13324.360      | 99 |             |        |       |

#### Post Hoc Test

#### Multiple Comparisons

**Table 30**

*Dependant Variable Bonferroni of the Government Policy construct, Knowledge of Policy vs. Experience Teaching Students with Disability*

| (I) How many students with disability have you taught in your career? | (J) How many students with disability have you taught in your career? | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval |             |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------|-----------------------|------------|------|-------------------------|-------------|
|                                                                       |                                                                       |                       |            |      | Lower Bound             | Upper Bound |
| None                                                                  | 1-5                                                                   | -3.761                | 1.628      | .138 | -8.15                   | .62         |

|       |       |          |       |       |        |        |
|-------|-------|----------|-------|-------|--------|--------|
| 1-5   | 5-10  | -21.889* | 1.657 | <.001 | -26.35 | -17.43 |
|       | 10-15 | -21.272* | 1.885 | <.001 | -26.35 | -16.19 |
|       | None  | 3.761    | 1.628 | .138  | -.62   | 8.15   |
| 5-10  | 5-10  | -18.128* | 1.628 | <.001 | -22.51 | -13.74 |
|       | 10-15 | -17.511* | 1.859 | <.001 | -22.52 | -12.50 |
|       | None  | 21.889*  | 1.657 | <.001 | 17.43  | 26.35  |
| 10-15 | 1-5   | 18.128*  | 1.628 | <.001 | 13.74  | 22.51  |
|       | 10-15 | .617     | 1.885 | 1.000 | -4.46  | 5.69   |
|       | None  | 21.272*  | 1.885 | <.001 | 16.19  | 26.35  |
|       | 1-5   | 17.511*  | 1.859 | <.001 | 12.50  | 22.52  |
|       | 5-10  | -.617    | 1.885 | 1.000 | -5.69  | 4.46   |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in the number of years of “Experience Teaching Students with Disability” on teachers’ level of perception in terms of “Knowledge of Policy” as regards inclusion of students with ASD in high school. Based on the number of years of experience in teaching students with disability, teachers were divided into four groups (Group 1: none; Group 2: 1 to 5 years; Group 3: 5 to 10 years; and Group 4: 10 to 15 years). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Knowledge of Policy” scale for the four groups:  $F(3, 96) = 87.863, p < 0.001$ . Despite the fact that there is statistical significance, a Post Hoc comparison using the Bonferroni test was also performed to know exactly where the differences were. The result indicates that the mean scores for Group 1 ( $M = 21.96, SD = 2.90$ ) and Group 2 ( $M = 25.72, SD = 9.25$ ) are significantly different from the other groups (Group 3 [ $M = 43.85, SD = 4.15$ ]; Group 4 [ $M$

= 43.24, SD = 5.56]). However, there was no significant difference between Groups 3 and 4.

In this section the results of **RQ3** are presented. It aimed to explain the students' perceptions on the inclusion of students with autism.

### **Descriptive data**

**Table 31**

*Students Demographic Characteristics*

| <b>Demographic Characteristic</b> | <b>Count</b> | <b>Percentage</b> |
|-----------------------------------|--------------|-------------------|
| <b>Gender</b>                     |              |                   |
| Male                              | 58           | 58%               |
| Female                            | 42           | 42%               |
| <b>Age Group (years)</b>          |              |                   |
| 14-16                             | 48           | 48%               |
| 16-18                             | 52           | 52%               |

### **Constructs Reliability Tests (Survey measure of reliability)**

Just as in the case of the teachers' survey, this research created a unique instrument to measure certain variables pertaining to students (e.g., demographic variables, experience of studying with a number of students with disability/ASD, variables related to resources, inclusivity, knowledge of ASD, and supporting peers with ASD). Especially as regards the variables "resources" and "inclusivity", this research used the related variables to form constructs for "resources for ASD" and "inclusivity of ASD students". Therefore, it becomes imperative to explore the internal consistency – a measure of reliability – of these variables or constructs.

Based on the foregoing, *Cronbach's alpha coefficient* was utilized to evaluate the internal consistency of the measurement scale for each construct in the survey (i.e., “resources for ASD” and “Inclusivity of ASD students”).

### **Construct/Variable Number 1: “Resources for ASD”**

Exploring the Cronbach's Alpha coefficient for this variable, Tables 11 and 12 below show that 100 (100%) of the total cases were valid and used in the analysis. Based on two (2) items or questions that form the “resources for ASD” variable/construct, the scale has a Cronbach's Alpha rating of 0.842. This coefficient score is quite high, which indicates that the scale is dependable and that the elements or question forming the variable/construct (i.e., scale) are consistently assessing the same fundamental idea.

**Table 32**

*Case Processing Summary for “Resources for ASD” Cronbach's Alpha Analysis*

#### **Case Processing Summary**

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 100 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 100 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Table 33**

*Reliability Statistics for “resources for ASD” Cronbach's Alpha Analysis*

| <b>Reliability Statistics</b> |                                              |            |
|-------------------------------|----------------------------------------------|------------|
| Cronbach's Alpha              | Cronbach's Alpha Based on Standardized Items | N of Items |
| .842                          | .844                                         | 2          |

### Construct/Variable Number 2: “Inclusivity of ASD”

Exploring the Cronbach's Alpha coefficient for this variable, Tables 13 and 14 below show that 100 (100%) of the total cases were valid and used in the analysis. Based on five (5) items or questions that form the “Inclusivity of ASD” variable/construct, the scale has a Cronbach's Alpha rating of 0.723. This coefficient score is quite high, which indicates that the scale is dependable and that the elements or question forming the variable/construct (i.e., scale) are consistently assessing the same fundamental idea.

**Table 34**

*Case Processing Summary for “Inclusivity of ASD” Cronbach's Alpha Analysis*

#### Case Processing Summary

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 100 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 100 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

**Table 35**

*Reliability Statistics for “Inclusivity of ASD” Cronbach's Alpha Analysis*

#### Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on |            |
|------------------|---------------------------|------------|
|                  | Standardized Items        | N of Items |
| .723             | .720                      | 5          |

## **Descriptive Analysis**

### **Resources for ASD**

#### **Resources for ASD vs. Age.**

The analysis shows the distribution of “Resources for ASD” scale in terms of students’ age. The plot indicates that, on average, students within the age group of 14-16 years are more aware of the resources available to support ASD students than those in the 16-18 age group.

#### **Resources for ASD vs. Gender.**

As regards gender, the result indicates that male students, on average, are more aware of the resources available to support ASD students than females.

Resources for ASD vs. Number of students with physical disabilities the students have studied with.

The distribution of “Resources for ASD” scale in terms of “Number of students with physical disabilities the students have studied with”. The plot indicates that, on average, students who have studied with a greater number of students with physical disabilities are more aware of resources available to support disabled/ASD students.

#### **Resources for ASD vs. Number of students with intellectual disabilities the normally developed students have studied with.**

The distribution of “Resources for ASD” scale in terms of “Number of students with intellectual disabilities the students have studied with”. The plot indicates that, on average, students who have studied with a greater number of students with intellectual disabilities are more aware of resources available to disabled/ASD students.

#### **Resources for ASD vs. Number of students with behavioural conditions (e.g., autism) the normally developed students have studied with.**

The distribution of “Resources for ASD” scale in terms of “Number of students with behavioural conditions (e.g., autism) the students have studied with”. The plot indicates that, on average, students that have studied with at least 5 to 10 students with behavioral conditions (e.g., autism) are more aware of resources available to disabled/ASD students, as compared to other students. Those who have never studied with students with behavioral conditions (e.g., autism) have similar level of awareness to those who have only studied with 1 to 5 students.

**Resources for ASD vs. Number of students with sensory disabilities (e.g., Vision or Hearing Impairment) the normally developed students have studied with.**

The distribution of “Resources for ASD” scale in terms of “Number of students with sensory disabilities (e.g., vision or hearing impairment) the students have studied with”. The plot indicates that, on average, the greater the number of students with sensory disabilities (e.g., vision or hearing impairment) a student have studied with, the more aware they are of resources available to support disabled/ASD students.

**Resources for ASD vs. Knowledge of ASD.**

The distribution of “Resources for ASD” scale in terms of students’ overall “Knowledge of ASD”. The plot indicates that, on average, the higher the student is on the knowledgeability scale/rank, the more aware they are of resources for ASD. Nonetheless, those on the “3 to 6” and “6 to 10” scale tend to have similar level of awareness of the resource situation.

**Resources for ASD” vs. Support for Peers with ASD**

The analysis shows the distribution of “Resources for ASD” scale in terms of students’ “Support for Peers with ASD”. The plot indicates that, on average, students on the scale of “3 to 6” in terms of their struggle in supporting peers with ASD are more aware of resources for ASD compared with other scale groups (i.e., “0 to 3” and “6 to 10”).

Nonetheless, those on the “0 to 3” and the “6 to 10” scales tend to have similar level of awareness of the resource situation.

### **Construct/Variable Number 2: Inclusivity of ASD**

The result shows the distribution of “Inclusivity of ASD” scale in terms of students’ age. The plot indicates that, on average, students within the age group of 14-16 years are no different from those in the 16-18 age group in terms of their perspective on “Inclusivity of ASD”.

### **Inclusivity of ASD vs. Gender.**

The analysis shows the distribution of “Inclusivity of ASD” scale in terms of students’ gender. The plot indicates that, on average, male students are not very different from females in terms of their perspective on “Inclusivity of ASD”.

## Inferential Statistical Analysis and Test Assumptions

### “Resources for ASD” vs. “Age”

#### Unpaired *t*-test

**Table 36**

*Group Statistics*

|               | Age   | N  | Mean | Std. Deviation | Std. Error Mean |
|---------------|-------|----|------|----------------|-----------------|
| Resources for | 14-16 | 48 | 6.38 | 3.559          | .514            |
| ASD           | 16-18 | 52 | 5.27 | 3.230          | .448            |

**Table 37**

*Independent Sample Test*

| t-test for Equality of Means |                             |                                         |      |              |        |             |             |                 |                                           |       |       |
|------------------------------|-----------------------------|-----------------------------------------|------|--------------|--------|-------------|-------------|-----------------|-------------------------------------------|-------|-------|
|                              |                             | Levene's Test for Equality of Variances |      | Significance |        |             |             |                 | 95% Confidence Interval of the Difference |       |       |
|                              |                             | F                                       | Sig. | t            | df     | One-Sided p | Two-Sided p | Mean Difference | Std. Error Difference                     | Lower | Upper |
| Resources for ASD            | Equal variances assumed     | 4.121                                   | .045 | 1.629        | 98     | .053        | .107        | 1.106           | .679                                      | -.242 | 2.453 |
|                              | Equal variances not assumed |                                         |      | 1.622        | 95.025 | .054        | .108        | 1.106           | .682                                      | -.247 | 2.459 |

**Table 38***Independent Samples Effect Sizes*

|                   |                    |       | Point                     | 95% Confidence Interval |                  |
|-------------------|--------------------|-------|---------------------------|-------------------------|------------------|
|                   |                    |       | Standardizer <sup>a</sup> | Estimate                | Lower      Upper |
| Resources for ASD | Cohen's d          | 3.392 |                           | .326                    | -.070      .720  |
|                   | Hedges' correction | 3.418 |                           | .324                    | -.069      .715  |
|                   | Glass's delta      | 3.230 |                           | .342                    | -.057      .739  |

*Note.* a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

As the “Age” variable has two levels (i.e., categories) and the aim of the analysis is to explore whether there are differences in the level of awareness about “Resources for ASD” between the age groups, an unpaired (independent-samples) *t*-test was conducted. First, the assumption of homogeneity of variance was explored via the Levene’s test for equality of variances. The result indicates that the assumption was violated (Levene’s test  $p=0.045$ ). Therefore, necessary steps were taken to explore the *t*-test results from “a perspective that does not assumed equal variances”. The *t*-test result indicates that there is no significant difference between the two groups [14-16 ( $M = 6.38$ ,  $SD = 3.56$ ) and 16-18 ( $M = 5.27$ ,  $SD = 3.23$ );  $t(98) = 1.62$ ,  $p = 0.108$ , two-tailed]



**Table 41***Independent Samples Effect Sizes*

|                   |                    |                           | Point    | 95% Confidence Interval |       |
|-------------------|--------------------|---------------------------|----------|-------------------------|-------|
|                   |                    |                           | Estimate | Lower                   | Upper |
| Resources for ASD | Cohen's d          | Standardizer <sup>a</sup> | .115     | -.283                   | .512  |
|                   | Hedges' correction | 3.458                     | .114     | -.281                   | .508  |
|                   | Glass's delta      | 3.423                     | .115     | -.283                   | .512  |

*Note.* a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

As the “Gender” variable has two levels (i.e., male and female categories) and the aim of the analysis is to explore whether there are differences in the level of awareness about “Resources for ASD” between males and female, an unpaired (independent-samples) *t*-test was conducted. First, the assumption of homogeneity of variance was explored via the Levene’s test for equality of variances. The result indicates that the assumption was not violated (Levene’s test  $p=0.867$ ). Nonetheless, the *t*-test result indicates that there is no significant difference between the two groups [Male ( $M = 5.97$ ,  $SD = 3.44$ ) and Female ( $M = 5.77$ ,  $SD = 3.42$ );  $t(98) = 0.567$ ,  $p = 0.572$ , two-tailed].

**“Resources for ASD” vs. “Number of students with physical disabilities the students have studied with”.**

## ANOVA

**Table 42***Resources for ASD*

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 87.845         | 2  | 43.922      | 3.981 | .022 |
| Within Groups  | 1070.155       | 97 | 11.033      |       |      |
| Total          | 1158.000       | 99 |             |       |      |

**Post Hoc Test****Multiple Comparisons****Table 43***Dependent Variable: Resources for ASD*

Bonferroni

| (I) How many students with disability/ASD have you studied alongside in your school years?<br>Physical Disabilities |      | (J) How many students with disability/ASD have you studied alongside in your school years?<br>Physical Disabilities |            | 95% Confidence Interval |             |             |
|---------------------------------------------------------------------------------------------------------------------|------|---------------------------------------------------------------------------------------------------------------------|------------|-------------------------|-------------|-------------|
|                                                                                                                     |      | Mean Difference (I-J)                                                                                               | Std. Error | Sig.                    | Lower Bound | Upper Bound |
| 0                                                                                                                   | 1-5  | -.572                                                                                                               | .741       | 1.000                   | -2.38       | 1.23        |
|                                                                                                                     | 5-10 | -3.533*                                                                                                             | 1.262      | .019                    | -6.61       | -.46        |
| 1-5                                                                                                                 | 0    | .572                                                                                                                | .741       | 1.000                   | -1.23       | 2.38        |
|                                                                                                                     | 5-10 | -2.962*                                                                                                             | 1.186      | .043                    | -5.85       | -.07        |
| 5-10                                                                                                                | 0    | 3.533*                                                                                                              | 1.262      | .019                    | .46         | 6.61        |
|                                                                                                                     | 1-5  | 2.962*                                                                                                              | 1.186      | .043                    | .07         | 5.85        |

\*. The mean difference is significant at the 0.05 level.

The one-way between-group analysis of variance (ANOVA) was conducted to explore the impact “number of students with physical disabilities the students have studied

with” has on their level of awareness of “resources for ASD”. Based on “number of students with physical disabilities the students have studied alongside”, students were divided into three groups (Group 1: 0 student; Group 2: 1-5 students; and Group 3: 5-10 students). The results indicate a statistically significant difference at the  $p < 0.05$  level in awareness of “Resources for ASD” for the three groups:  $F(2, 97) = 3.981, p = 0.022$ .

Despite the fact that there is statistical significance, a Post Hoc comparison using the Bonferroni test was conducted. The results indicate that the mean score for Group 3 ( $M = 8.67, SD = 4.06$ ) was significantly different from the other groups (Group 1 [ $M = 5.13, SD = 3.52$ ]; Group 2 [ $M = 5.70, SD = 3.11$ ]). However, there was no significant difference between Groups 1 and 2.

#### **“Resources for ASD” vs. “Number of students with intellectual disabilities the students have studied alongside”**

#### **ANOVA**

**Table 44**

*Resources for ASD*

|                | Sum of Squares | df | Mean Square | F     | Sig.  |
|----------------|----------------|----|-------------|-------|-------|
| Between Groups | 194.360        | 2  | 97.180      | 9.782 | <.001 |
| Within Groups  | 963.640        | 97 | 9.934       |       |       |
| Total          | 1158.000       | 99 |             |       |       |

#### **Post Hoc Test**

#### **Multiple Comparisons**

**Table 45***Dependent Variable: Resources for ASD*

Bonferroni

| (I) How many students with disability/ASD have you studied alongside in your school years? Intellectual Disabilities | (J) How many students with disability/ASD have you studied alongside in your school years? Intellectual Disabilities | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval<br>Lower Bound Upper Bound |       |
|----------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------|-------|----------------------------------------------------|-------|
| 0                                                                                                                    | 1-5                                                                                                                  | -2.158*               | .725       | .011  | -3.92                                              | -.39  |
|                                                                                                                      | 5-10                                                                                                                 | -4.429*               | 1.032      | <.001 | -6.94                                              | -1.92 |
| 1-5                                                                                                                  | 0                                                                                                                    | 2.158*                | .725       | .011  | .39                                                | 3.92  |
|                                                                                                                      | 5-10                                                                                                                 | -2.271                | .939       | .052  | -4.56                                              | .02   |
| 5-10                                                                                                                 | 0                                                                                                                    | 4.429*                | 1.032      | <.001 | 1.92                                               | 6.94  |
|                                                                                                                      | 1-5                                                                                                                  | 2.271                 | .939       | .052  | -.02                                               | 4.56  |

\*. The mean difference is significant at the 0.05 level.

The one-way between-group analysis of variance (ANOVA) was conducted to explore the impact “number of students with intellectual disabilities the students have studied alongside” has on their level of awareness of “Resources for ASD”. Based on “number of students with intellectual disabilities the students have studied alongside”, students were divided into three groups (Group 1: 0 student; Group 2: 1-5 students; and Group 3: 5-10 students). The results indicate a statistically significant difference at the  $p < 0.05$  level in awareness of “Resources for ASD” for the three groups:  $F(2, 97) = 9.782$ ,  $p < 0.001$ . Despite the fact that there is statistical significance, a Post Hoc comparison using the Bonferroni test was conducted. The results indicate that the mean score for Group 1 ( $M = 3.93$ ,  $SD = 1.90$ ) was significantly different from the other groups (Group 2 [ $M =$

6.09,  $SD = 3.37$ ]; Group 3 [ $M = 8.36$ ,  $SD = 4.11$ ]). However, there was no significant difference between Groups 2 and 3.

**“Resources for ASD” vs. “Number of students with behavioural conditions (e.g., autism) the students have studied alongside”**

#### ANOVA

**Table 46**

*Resources for ASD*

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 44.754         | 2  | 22.377      | 1.950 | .148 |
| Within Groups  | 1113.246       | 97 | 11.477      |       |      |
| Total          | 1158.000       | 99 |             |       |      |

#### Post Hoc Test

#### Multiple Comparisons

**Table 47**

*Dependent Variable: Resources for ASD*

Bonferroni

| (I)                              | (J)                              | 95% Confidence Interval     |            |       |             |                |
|----------------------------------|----------------------------------|-----------------------------|------------|-------|-------------|----------------|
| Behavioural<br>(e.g.,<br>autism) | Behavioural<br>(e.g.,<br>autism) | Mean<br>Difference<br>(I-J) | Std. Error | Sig.  | Lower Bound | Upper<br>Bound |
| 0                                | 1-5                              | -.155                       | .887       | 1.000 | -2.32       | 2.00           |
|                                  | 5-10                             | -1.854                      | 1.114      | .298  | -4.57       | .86            |
| 1-5                              | 0                                | .155                        | .887       | 1.000 | -2.00       | 2.32           |
|                                  | 5-10                             | -1.698                      | .905       | .191  | -3.90       | .51            |
| 5-10                             | 0                                | 1.854                       | 1.114      | .298  | -.86        | 4.57           |
|                                  | 1-5                              | 1.698                       | .905       | .191  | -.51        | 3.90           |

The one-way between-group analysis of variance (ANOVA) was conducted to explore the impact “number of students with behavioural conditions (e.g., autism) the students have studied alongside” has on their level of awareness of “Resources for ASD”. Based on “Number of students with behavioral conditions (e.g., autism) the students have studied alongside”, students were divided into three groups (Group 1: 0 student; Group 2: 1-5 students; and Group 3: 5-10 students). The results indicate that there is no statistically significant difference at the  $p < 0.05$  level in awareness of “resources for ASD” for the three groups:  $F(2, 97) = 1.950, p = 0.148$ .

**“Resources for ASD” vs. “Number of students with Sensory Disabilities (e.g., Vision or Hearing Impairment) the students have studied alongside”.**

#### ANOVA

**Table 48**

*Resources for ASD*

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 121.000        | 2  | 60.500      | 5.659 | .005 |
| Within Groups  | 1037.000       | 97 | 10.691      |       |      |
| Total          | 1158.000       | 99 |             |       |      |

#### Post Hoc Test

#### Multiple Comparisons

**Table 49***Dependent Variable: Resources for ASD*

| (I) Sensory<br>(e.g., Vision<br>or Hearing<br>Impairment) | (J) Sensory<br>(e.g., Vision<br>or Hearing<br>Impairment) | Mean<br>Difference<br>(I-J) | Std.<br>Error | Sig.  | 95% Confidence Interval |                |
|-----------------------------------------------------------|-----------------------------------------------------------|-----------------------------|---------------|-------|-------------------------|----------------|
|                                                           |                                                           |                             |               |       | Lower<br>Bound          | Upper<br>Bound |
| 0                                                         | 1-5                                                       | -.250                       | .852          | 1.000 | -2.32                   | 1.82           |
|                                                           | 5-10                                                      | -2.750*                     | .990          | .020  | -5.16                   | -.34           |
| 1-5                                                       | 0                                                         | .250                        | .852          | 1.000 | -1.82                   | 2.32           |
|                                                           | 5-10                                                      | -2.500*                     | .798          | .007  | -4.44                   | -.56           |
| 5-10                                                      | 0                                                         | 2.750*                      | .990          | .020  | .34                     | 5.16           |
|                                                           | 1-5                                                       | 2.500*                      | .798          | .007  | .56                     | 4.44           |

\*. The mean difference is significant at the 0.05 level.

The one-way between-group analysis of variance (ANOVA) was conducted to explore the impact “number of students with sensory disabilities (e.g., vision or hearing impairment) the students have studied alongside” has on their level of awareness of “Resources for ASD”. Based on the “Number of students with sensory disabilities (e.g., vision or hearing impairment) the students have studied alongside”, students were divided into three groups (Group 1: 0 student; Group 2: 1-5 students; and Group 3: 5-10 students). The results indicate a statistically significant difference at the  $p < 0.05$  level in awareness of “Resources for ASD” for the three groups:  $F(2, 97) = 5.659, p = 0.005$ . Despite the fact that there is statistical significance, a Post Hoc comparison using the Bonferroni test was conducted. The results indicate that the mean score for Group 3 ( $M = 7.775, SD = 3.88$ ) was significantly different from the other groups (Group 1 [ $M = 5.00, SD = 3.34$ ]; Group 2 [ $M = 5.25, SD = 2.95$ ]). However, there was no significant difference between Groups 1 and 2.



**Table 52***Independent Samples Effect Sizes*

|                    |                    |  | 95% Confidence Interval   |                |       |       |
|--------------------|--------------------|--|---------------------------|----------------|-------|-------|
|                    |                    |  | Standardizer <sup>a</sup> | Point Estimate | Lower | Upper |
| Inclusivity of ASD | Cohen's d          |  | 4.529                     | .121           | -.272 | .513  |
|                    | Hedges' correction |  | 4.564                     | .120           | -.270 | .509  |
|                    | Glass's delta      |  | 4.403                     | .124           | -.269 | .517  |

*Note.* a. The denominator used in estimating the effect sizes.

Cohen's d uses the pooled standard deviation.

Hedges' correction uses the pooled standard deviation, plus a correction factor.

Glass's delta uses the sample standard deviation of the control (i.e., the second) group.

**“Inclusivity of ASD” vs. “Gender”****Unpaired *t*-test****Table 53***Group Statistics*

|                    |        | Gender | N  | Mean  | Std. Deviation | Std. Error Mean |
|--------------------|--------|--------|----|-------|----------------|-----------------|
| Inclusivity of ASD | Male   |        | 58 | 14.33 | 4.152          | .545            |
|                    | Female |        | 42 | 15.55 | 4.935          | .761            |

**Table 54***Independent Samples Test*

|                    |                             | Levene's Test for Equality of Variances |      |       |        | t-test for Equality of Means |                          |                 |                       | 95% Confidence Interval of the Difference |       |
|--------------------|-----------------------------|-----------------------------------------|------|-------|--------|------------------------------|--------------------------|-----------------|-----------------------|-------------------------------------------|-------|
|                    |                             | F                                       | Sig. | t     | df     | Significance One-Sided p     | Significance Two-Sided p | Mean Difference | Std. Error Difference | Lower                                     | Upper |
| Inclusivity of ASD | Equal variances assumed     | 2.270                                   | .135 | -     | 98     | .092                         | .184                     | -1.220          | .911                  | -                                         | .588  |
|                    |                             |                                         |      | 1.339 |        |                              |                          |                 |                       | 3.028                                     |       |
|                    | Equal variances not assumed |                                         |      | -     | 78.902 | .098                         | .196                     | -1.220          | .937                  | -                                         | .644  |
|                    |                             |                                         |      | 1.303 |        |                              |                          |                 |                       | 3.084                                     |       |

**“Inclusivity of ASD” vs. “Number of students with physical disabilities the students have studied alongside”**

**ANOVA****Table 55***Inclusivity of ASD*

|                | Sum of Squares | Df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 86.634         | 2  | 43.317      | 2.176 | .119 |
| Within Groups  | 1930.806       | 97 | 19.905      |       |      |
| Total          | 2017.440       | 99 |             |       |      |

**Post Hoc Test****Multiple Comparisons**

**Table 56***Dependent Variable: Inclusivity of ASD*

Bonferroni

| (I) How many students with disability/ASD have you studied alongside in your school years? Physical Disabilities | (J) How many students with disability/ASD have you studied alongside in your school years? Physical Disabilities | Mean Difference (I-J) | Std. Error | Sig. | 95% Confidence Interval Lower Bound | Upper Bound |
|------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------|------------|------|-------------------------------------|-------------|
| 0                                                                                                                | 1-5                                                                                                              | -1.498                | .995       | .406 | -3.92                               | .93         |
|                                                                                                                  | 5-10                                                                                                             | -3.256                | 1.696      | .173 | -7.39                               | .88         |
| 1-5                                                                                                              | 0                                                                                                                | 1.498                 | .995       | .406 | -.93                                | 3.92        |
|                                                                                                                  | 5-10                                                                                                             | -1.758                | 1.593      | .818 | -5.64                               | 2.12        |
| 5-10                                                                                                             | 0                                                                                                                | 3.256                 | 1.696      | .173 | -.88                                | 7.39        |
|                                                                                                                  | 1-5                                                                                                              | 1.758                 | 1.593      | .818 | -2.12                               | 5.64        |

**“Inclusivity of ASD” vs. “Number of students with intellectual disabilities the students have studied alongside”**

ANOVA

**Table 57***Inclusivity of ASD*

|                | Sum of Squares | df | Mean Square | F     | Sig.  |
|----------------|----------------|----|-------------|-------|-------|
| Between Groups | 148.596        | 2  | 74.298      | 3.856 | .024  |
| Within Groups  | 1868.844       | 97 | 19.266      | خلاصة | خلاصة |
| Total          | 2017.440       | 99 |             |       |       |

## Post Hoc Test

### Multiple Comparisons

**Table 58**

*Dependent Variable: Inclusivity of ASD*

Bonferroni

| (I) How many students with disability/ASD have you studied alongside in your school years? |                           | (J) How many students with disability/ASD have you studied alongside in your school years? | 95% Confidence Interval |       |             |             |
|--------------------------------------------------------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------|-------------------------|-------|-------------|-------------|
| Intellectual Disabilities                                                                  | Intellectual Disabilities | Mean Difference (I-J)                                                                      | Std. Error              | Sig.  | Lower Bound | Upper Bound |
| 0                                                                                          | 1-5                       | -.147                                                                                      | 1.010                   | 1.000 | -2.61       | 2.31        |
|                                                                                            | 5-10                      | -3.607*                                                                                    | 1.437                   | .041  | -7.11       | -.11        |
| 1-5                                                                                        | 0                         | .147                                                                                       | 1.010                   | 1.000 | -2.31       | 2.61        |
|                                                                                            | 5-10                      | -3.461*                                                                                    | 1.307                   | .028  | -6.64       | -.28        |
| 5-10                                                                                       | 0                         | 3.607*                                                                                     | 1.437                   | .041  | .11         | 7.11        |
|                                                                                            | 1-5                       | 3.461*                                                                                     | 1.307                   | .028  | .28         | 6.64        |

\*. The mean difference is significant at the 0.05 level.

**“Inclusivity of ASD” vs. “Number of students with behavioural conditions (e.g., autism) the students have studied alongside”**

## ANOVA

**Table 59***Inclusivity of ASD*

|                | Sum of Squares | Df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 150.048        | 2  | 75.024      | 3.897 | .024 |
| Within Groups  | 1867.392       | 97 | 19.251      |       |      |
| Total          | 2017.440       | 99 |             |       |      |

**Post Hoc Test****Multiple Comparisons****Table 60***Dependent Variable: Inclusivity of ASD*

Bonferroni

| (I)          | (J)          | Mean       | 95% Confidence Interval |       |       |       |
|--------------|--------------|------------|-------------------------|-------|-------|-------|
| Behavioural  | Behavioural  | Difference |                         |       | Lower | Upper |
| (e.g Autism) | (e.g Autism) | (I-J)      | Std. Error              | Sig.  | Bound | Bound |
| 0            | 1-5          | -.281      | 1.148                   | 1.000 | -3.08 | 2.52  |
|              | 5-10         | -3.392     | 1.443                   | .062  | -6.91 | .12   |
| 1-5          | 0            | .281       | 1.148                   | 1.000 | -2.52 | 3.08  |
|              | 5-10         | -3.111*    | 1.173                   | .028  | -5.97 | -.25  |
| 5-10         | 0            | 3.392      | 1.443                   | .062  | -.12  | 6.91  |
|              | 1-5          | 3.111*     | 1.173                   | .028  | .25   | 5.97  |

\*. The mean difference is significant at the 0.05 level.

**“Inclusivity of ASD” vs. “Number of students with sensory disabilities (e.g., vision or hearing impairment) the students have studied alongside”**

**ANOVA**

**Table 61***Inclusivity of ASD*

|                | Sum of Squares | df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 172.551        | 2  | 86.275      | 4.536 | .013 |
| Within Groups  | 1844.889       | 97 | 19.019      |       |      |
| Total          | 2017.440       | 99 |             |       |      |

**Post Hoc Test****Multiple Comparisons****Table 62***Dependent Variable: Inclusivity of ASD*

Bonferroni

| (i) Sensory (e.g. vision or hearing impairment) |      | (j) Sensory (e.g. vision or hearing impairment) |            | 95% Confidence Interval |             |             |
|-------------------------------------------------|------|-------------------------------------------------|------------|-------------------------|-------------|-------------|
|                                                 |      | Mean Difference (I-J)                           | Std. Error | Sig.                    | Lower Bound | Upper Bound |
| 0                                               | 1-5  | .721                                            | 1.136      | 1.000                   | -2.05       | 3.49        |
|                                                 | 5-10 | -2.475                                          | 1.320      | .192                    | -5.69       | .74         |
| 1-5                                             | 0    | -.721                                           | 1.136      | 1.000                   | -3.49       | 2.05        |
|                                                 | 5-10 | -3.196*                                         | 1.064      | .010                    | -5.79       | -.60        |
| 5-10                                            | 0    | 2.475                                           | 1.320      | .192                    | -.74        | 5.69        |
|                                                 | 1-5  | 3.196*                                          | 1.064      | .010                    | .60         | 5.79        |

\*. The mean difference is significant at the 0.05 level.

**“Inclusivity of ASD” vs. “Knowledge of ASD”****ANOVA**

**Table 63***Inclusivity of ASD*

|                | Sum of Squares | Df | Mean Square | F     | Sig.  |
|----------------|----------------|----|-------------|-------|-------|
| Between Groups | 297.911        | 2  | 148.955     | 8.403 | <.001 |
| Within Groups  | 1719.529       | 97 | 17.727      |       |       |
| Total          | 2017.440       | 99 |             |       |       |

**Post Hoc Test****Multiple Comparisons****Table 64***Dependent Variable: Inclusivity of ASD*

Bonferroni

| (I) Overall, I | (J) Overall, I | Mean       | 95% Confidence Interval |       |       |       |
|----------------|----------------|------------|-------------------------|-------|-------|-------|
| know what      | know what      | Difference | Std.                    |       | Lower | Upper |
| ASD is         | ASD is         | (I-J)      | Error                   | Sig.  | Bound | Bound |
| 0-3            | 3-6            | -2.066     | .981                    | .113  | -4.45 | .32   |
|                | 6-10           | -5.214*    | 1.272                   | <.001 | -8.31 | -2.12 |
| 3-6            | 0-3            | 2.066      | .981                    | .113  | -.32  | 4.45  |
|                | 6-10           | -3.148*    | 1.146                   | .021  | -5.94 | -.36  |
| 6-10           | 0-3            | 5.214*     | 1.272                   | <.001 | 2.12  | 8.31  |
|                | 3-6            | 3.148*     | 1.146                   | .021  | .36   | 5.94  |

\*. The mean difference is significant at the 0.05 level.

**“Inclusivity of ASD” vs. “Support for peers with ASD”****ANOVA**

**Table 65***Inclusivity of ASD*

|                | Sum of Squares | Df | Mean Square | F     | Sig. |
|----------------|----------------|----|-------------|-------|------|
| Between Groups | 59.817         | 2  | 29.908      | 1.482 | .232 |
| Within Groups  | 1957.623       | 97 | 20.182      |       |      |
| Total          | 2017.440       | 99 |             |       |      |

**Post Hoc Test****Multiple Comparisons****Table 66***Dependent Variable: Inclusivity of ASD*

Bonferroni

| (I) I struggle to support peers with ASD | (J) I struggle to support peers with ASD | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval |             |
|------------------------------------------|------------------------------------------|-----------------------|------------|-------|-------------------------|-------------|
|                                          |                                          |                       |            |       | Lower Bound             | Upper Bound |
| 0-3                                      | 3-6                                      | 1.403                 | 1.081      | .592  | -1.23                   | 4.04        |
|                                          | 6-10                                     | -.276                 | 1.247      | 1.000 | -3.31                   | 2.76        |
| 3-6                                      | 0-3                                      | -1.403                | 1.081      | .592  | -4.04                   | 1.23        |
|                                          | 6-10                                     | -1.678                | 1.108      | .399  | -4.38                   | 1.02        |
| 6-10                                     | 0-3                                      | .276                  | 1.247      | 1.000 | -2.76                   | 3.31        |
|                                          | 3-6                                      | 1.678                 | 1.108      | .399  | -1.02                   | 4.38        |

In this section the results of **RQ4** are presented. It aimed to explain the status of the availability of resources to facilitate inclusive education for students with autism.

**Descriptive data****Resources**

Exploring the Cronbach's Alpha coefficient for this variable, Tables 7 and 8 below show that 100 (100%) of the total cases were valid and used in the analysis. Based on seven (7) items or questions that form the “Resources” variable/construct, the scale has a Cronbach's Alpha rating of 0.969. This suggests a very good internal consistency reliability of the scale/construct. In other words, the high coefficient score indicates that the scale is dependable and that the elements or question forming the variable/ construct (i.e., scale) are consistently assessing the same fundamental idea.

**Table 67**

*Case Processing Summary for “Resources” Cronbach's Alpha Analysis*

|       |                       | N   | %     |
|-------|-----------------------|-----|-------|
| Cases | Valid                 | 100 | 100.0 |
|       | Excluded <sup>a</sup> | 0   | .0    |
|       | Total                 | 100 | 100.0 |

*Reliability Statistics for “Resources”*

| Cronbach's Alpha | Cronbach's Alpha Based on |            |
|------------------|---------------------------|------------|
|                  | Standardized Items        | N of Items |
| 0.969            | 0.969                     | 7          |

### **Resources” vs. “Years of Experience in Special Education”**

#### **ANOVA**

**Table 68**

*Resource Construct, Years of Experience in Special Education*

|                | Sum of Squares | df | Mean Square | F     | Sig.  |
|----------------|----------------|----|-------------|-------|-------|
| Between Groups | 3540.355       | 3  | 1180.118    | 8.303 | <.001 |
| Within Groups  | 13644.235      | 96 | 142.127     |       |       |
| Total          | 17184.590      | 99 |             |       |       |

## Post Hoc Test

### Multiple Comparisons

**Table 69**

*Dependant Variable Bonferroni of the Resource Construct, Years of Experience in Special Education.*

| (I) Click to<br>years of<br>experience in<br>Special<br>Education | (J) Click to<br>years of<br>experience in<br>Special<br>Education | Mean<br>Difference<br>(I-J) | Std.<br>Error | Sig.  | 95% Confidence Interval<br>Lower<br>Bound Upper<br>Bound |       |
|-------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------|---------------|-------|----------------------------------------------------------|-------|
| 1-5                                                               | 5-10                                                              | -10.664*                    | 3.023         | .004  | -18.81                                                   | -2.52 |
|                                                                   | 10-15                                                             | -11.494*                    | 2.893         | <.001 | -19.29                                                   | -3.70 |
|                                                                   | 15-20                                                             | -21.343*                    | 6.292         | .006  | -38.29                                                   | -4.39 |
| 5-10                                                              | 1-5                                                               | 10.664*                     | 3.023         | .004  | 2.52                                                     | 18.81 |
|                                                                   | 10-15                                                             | -.830                       | 3.063         | 1.000 | -9.08                                                    | 7.42  |
|                                                                   | 15-20                                                             | -10.679                     | 6.372         | .582  | -27.85                                                   | 6.49  |
| 10-15                                                             | 1-5                                                               | 11.494*                     | 2.893         | <.001 | 3.70                                                     | 19.29 |
|                                                                   | 5-10                                                              | .830                        | 3.063         | 1.000 | -7.42                                                    | 9.08  |
|                                                                   | 15-20                                                             | -9.848                      | 6.312         | .732  | -26.85                                                   | 7.16  |
| 15-20                                                             | 1-5                                                               | 21.343*                     | 6.292         | .006  | 4.39                                                     | 38.29 |
|                                                                   | 5-10                                                              | 10.679                      | 6.372         | .582  | -6.49                                                    | 27.85 |
|                                                                   | 10-15                                                             | 9.848                       | 6.312         | .732  | -7.16                                                    | 26.85 |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in the number of “Years of Experience in Special Education” on the teachers’ level on “Resources” scale as regards inclusion of students with ASD in high school. Based on the number of years of experience in special education, teachers were

divided into four groups (Group 1: 1 to 5 years; Group 2: 5 to 10 years; Group 3: 10 to 15 years; and Group 4: 15 to 20 years). The results indicate a statistically significant difference at the  $p < 0.05$  level in “Resources” scale for the four groups:  $F(3, 96) = 8.303$ ,  $p < 0.001$ . Despite the fact that there is statistical significance, a Post Hoc comparison using the Bonferroni test was conducted. The result for the test indicates that the mean score for Group 1 ( $M = 20.66$ ,  $SD = 9.27$ ) is significantly different from the other groups (Group 2 [ $M = 31.32$ ,  $SD = 13.46$ ]; Group 3 [ $M = 32.15$ ,  $SD = 13.50$ ]; Group 4 [ $M = 42$ ,  $SD = 0$ ]). However, there was no significant difference between the three other groups.

### “Resources” vs. “Years of Experience in General Education”

#### ANOVA

**Table 70**

*Resource Construct, Resources vs. Years of Experience in General Education.*

|                | Sum of Squares | df | Mean Square | F     | Sig.  |
|----------------|----------------|----|-------------|-------|-------|
| Between Groups | 3368.376       | 3  | 1122.792    | 7.802 | <.001 |
| Within Groups  | 13816.214      | 96 | 143.919     |       |       |
| Total          | 17184.590      | 99 |             |       |       |

#### Multiple Comparisons

**Table 71**

*Dependant Variable Bonferroni of the Resource Construct, Years of Experience in General Education*

**Post Hoc Test**

| (I) Years of<br>experience in<br>General<br>Education | (J) Years of<br>experience in<br>General<br>Education | 95% Confidence Interval     |               |       |                |                |
|-------------------------------------------------------|-------------------------------------------------------|-----------------------------|---------------|-------|----------------|----------------|
|                                                       |                                                       | Mean<br>Difference<br>(I-J) | Std.<br>Error | Sig.  | Lower<br>Bound | Upper<br>Bound |
| 1-5                                                   | 5-10                                                  | -6.349                      | 2.908         | .189  | -14.18         | 1.49           |
|                                                       | 10-15                                                 | -13.923*                    | 3.446         | <.001 | -23.21         | -4.64          |
|                                                       | 15-20                                                 | -20.941*                    | 5.841         | .003  | -36.68         | -5.21          |
| 5-10                                                  | 1-5                                                   | 6.349                       | 2.908         | .189  | -1.49          | 14.18          |
|                                                       | 10-15                                                 | -7.573                      | 3.110         | .100  | -15.95         | .80            |
|                                                       | 15-20                                                 | -14.591                     | 5.649         | .068  | -29.81         | .63            |
| 10-15                                                 | 1-5                                                   | 13.923*                     | 3.446         | <.001 | 4.64           | 23.21          |
|                                                       | 5-10                                                  | 7.573                       | 3.110         | .100  | -.80           | 15.95          |
|                                                       | 15-20                                                 | -7.018                      | 5.944         | 1.000 | -23.03         | 8.99           |
| 15-20                                                 | 1-5                                                   | 20.941*                     | 5.841         | .003  | 5.21           | 36.68          |
|                                                       | 5-10                                                  | 14.591                      | 5.649         | .068  | -.63           | 29.81          |
|                                                       | 10-15                                                 | 7.018                       | 5.944         | 1.000 | -8.99          | 23.03          |

\*. The mean difference is significant at the 0.05 level.

In terms of “Years of Experience in General Education”, a one-way between-group analysis of variance (ANOVA) was conducted to explore how the teachers’ level on “Resources” scale differs across the categories of teachers’ experience. Based on the number of years of experience in general education, teachers were divided into four groups (Group 1: 1 to 5 years; Group 2: 5 to 10 years; Group 3: 10 to 15 years; and Group 4: 15 to 20 years). The results indicate a statistically significant difference at the  $p < 0.05$  in the

teachers' level on "Resources" scale for the four groups:  $F(3, 96) = 7.802, p < 0.001$ . A Post Hoc comparison using the Bonferroni test was also conducted to identify where exactly the differences are. The result indicates that the mean scores for Group 1 ( $M = 21.26, SD = 10.49$ ) and Group 2 ( $M = 27.61, SD = 12.89$ ) are significantly different from the other groups (Group 3 [ $M = 35.18, SD = 12.86$ ]; Group 4 [ $M = 42.20, SD = 0.45$ ]). However, there was no significant difference between groups 3 and 4.

### "Resources" vs. "Specialisation"

#### ANOVA

**Table 72**

*Resource Construct, Resources vs specialisation.*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 10809.001      | 2  | 5404.500    | 82.226 | <.001 |
| Within Groups  | 6375.589       | 97 | 65.728      |        |       |
| Total          | 17184.590      | 99 |             |        |       |

#### Post Hoc Test

#### Multiple Comparisons

**Table 73**

*Dependant Variable Bonferroni of the Resource Construct, Resources vs Specialisation*

|                           |                                                                  | Mean             |            | 95% Confidence Interval |             |             |
|---------------------------|------------------------------------------------------------------|------------------|------------|-------------------------|-------------|-------------|
| (I) You work now as a     | (J) You work now as a                                            | Difference (I-J) | Std. Error | Sig.                    | Lower Bound | Upper Bound |
| General Education teacher | Special Education teacher in a support class in a general school | -19.589*         | 1.876      | <.001                   | -24.16      | -15.02      |

|                                                                  |                                                                                   |          |       |       |        |        |
|------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------|-------|-------|--------|--------|
| Special Education teacher in a support class in a general school | Special Education teacher working directly with students with ASD from general... | -23.000* | 2.298 | <.001 | -28.60 | -17.40 |
|                                                                  | General Education teacher                                                         | 19.589*  | 1.876 | <.001 | 15.02  | 24.16  |
|                                                                  | Special Education teacher working directly with students with ASD from general... | -3.411   | 2.541 | .548  | -9.60  | 2.78   |
|                                                                  | General Education teacher                                                         | 23.000*  | 2.298 | <.001 | 17.40  | 28.60  |
|                                                                  | Special Education teacher working directly with students with ASD from general... | 3.411    | 2.541 | .548  | -2.78  | 9.60   |
|                                                                  | General Education teacher                                                         |          |       |       |        |        |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in teachers' "Specialisation" on teachers' "Resources" scale level as regards inclusion of students with ASD in high school. Based on "Specialisation", teachers were divided into three groups (Group 1: "General Education teacher"; Group 2: "Special Education teacher in a support class in a general school"; and Group 3: "Special education teacher working directly with students with ASD from general education classrooms"). The results indicate a statistically significant difference at the  $p < 0.05$  in teachers' level on "Resources" scale for the three groups:  $F(2, 97) = 82.23, p < 0.001$ . Despite the fact that there is statistical significance, the Post Hoc comparison using

Bonferroni test indicates that the mean score for Group 1 ( $M = 19.13$ ,  $SD = 8.33$ ) is significantly different from the other groups (Group 2 [ $M = 38.71$ ,  $SD = 9.70$ ]; and Group 3 [ $M = 42.13$ ,  $SD = 1.09$ ]). However, there was no significant difference between Groups 2 and 3.

### “Resources” vs. “Formal Qualification in Special Education”

#### ANOVA

**Table 74**

*Resource Construct, Resources vs Formal Qualification in Special Education*

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 8273.834       | 4  | 2068.459    | 22.052 | <.001 |
| Within Groups  | 8910.756       | 95 | 93.797      |        |       |
| Total          | 17184.590      | 99 |             |        |       |

#### Post Hoc Test

#### Multiple Comparisons

**Table 75**

*Dependant Variable Bonferroni of the Resource Construct, Resources vs Formal Qualification in Special Education.*

| (I) Do you have a formal qualification in Special Education? | (J) Do you have a formal qualification in Special Education? | Mean Difference (I-J) | Std. Error | Sig.  | 95% Confidence Interval<br>Lower Bound Upper Bound |        |
|--------------------------------------------------------------|--------------------------------------------------------------|-----------------------|------------|-------|----------------------------------------------------|--------|
| Definitely not                                               | Probably not                                                 | -2.237                | 3.186      | 1.000 | -11.39                                             | 6.92   |
|                                                              | Might or might not                                           | -3.976                | 3.111      | 1.000 | -12.92                                             | 4.96   |
|                                                              | Probably yes                                                 | -21.500*              | 2.947      | <.001 | -29.97                                             | -13.03 |
|                                                              | Definitely yes                                               | -18.167*              | 3.386      | <.001 | -27.90                                             | -8.44  |

|                    |                    |          |       |       |        |        |
|--------------------|--------------------|----------|-------|-------|--------|--------|
| Probably not       | Definitely not     | 2.237    | 3.186 | 1.000 | -6.92  | 11.39  |
|                    | Might or might not | -1.739   | 3.066 | 1.000 | -10.55 | 7.07   |
|                    | Probably yes       | -19.263* | 2.900 | <.001 | -27.60 | -10.93 |
|                    | Definitely yes     | -15.930* | 3.345 | <.001 | -25.54 | -6.32  |
| Might or might not | Definitely not     | 3.976    | 3.111 | 1.000 | -4.96  | 12.92  |
|                    | Probably not       | 1.739    | 3.066 | 1.000 | -7.07  | 10.55  |
|                    | Probably yes       | -17.524* | 2.818 | <.001 | -25.62 | -9.42  |
|                    | Definitely yes     | -14.190* | 3.274 | <.001 | -23.60 | -4.78  |
| Probably yes       | Definitely not     | 21.500*  | 2.947 | <.001 | 13.03  | 29.97  |
|                    | Probably not       | 19.263*  | 2.900 | <.001 | 10.93  | 27.60  |
|                    | Might or might not | 17.524*  | 2.818 | <.001 | 9.42   | 25.62  |
|                    | Definitely yes     | 3.333    | 3.119 | 1.000 | -5.63  | 12.30  |
| Definitely yes     | Definitely not     | 18.167*  | 3.386 | <.001 | 8.44   | 27.90  |
|                    | Probably not       | 15.930*  | 3.345 | <.001 | 6.32   | 25.54  |
|                    | Might or might not | 14.190*  | 3.274 | <.001 | 4.78   | 23.60  |
|                    | Probably yes       | -3.333   | 3.119 | 1.000 | -12.30 | 5.63   |

\*. The mean difference is significant at the 0.05 level.

In terms of “Formal Qualification in Special Education”, a one-way between-group analysis of variance (ANOVA) was conducted to explore how teachers’ “Resources” scale level differs across the categories of teachers’ Formal Qualifications. Based on the reported statement about their “Formal Qualification in Special Education”, teachers were divided into five groups (Group 1: “definitely not have formal qualification in special education”; Group 2: “probably not have formal qualification in special education”; Group 3: “definitely not”, “might or might not have formal qualification in special education”; Group 4: “probably, yes, have formal qualification in special education”; Group 5: “definitely, yes, have formal qualification in special education”). The results indicate a statistically significant difference at the  $p < 0.05$  level in teachers’ “Resources” scale for the

five groups:  $F(4, 95) = 22.05, p < 0.001$ . A Post Hoc comparison using the Bonferroni test was also conducted to identify where exactly the differences are. The result indicates that the mean scores for Group 1 ( $M = 18.50, SD = 8.77$ ), Group 2 ( $M = 20.74, SD = 9.91$ ), and Group 3 ( $M = 22.48, SD = 11.46$ ) are significantly different from the two other groups (Group 4 [ $M = 40.0, SD = 8.27$ ]; Group 5 [ $M = 36.67, SD = 10.12$ ]). However, there was no significant difference between Groups 4 and 5.

### **“Resources” vs. “Experience Teaching Students with Disability”**

#### **ANOVA**

**Table 76**

*Resource Construct, Resources vs Experience Teaching Students with Disability.*

#### **ANOVA**

|                | Sum of Squares | df | Mean Square | F      | Sig.  |
|----------------|----------------|----|-------------|--------|-------|
| Between Groups | 8742.108       | 3  | 2914.036    | 33.136 | <.001 |
| Within Groups  | 8442.482       | 96 | 87.943      |        |       |
| Total          | 17184.590      | 99 |             |        |       |

#### **Post Hoc Test**

#### **Multiple Comparisons**

**Table 77**

*Dependant Variable Bonferroni of the Resource Construct, Resources vs Experience Teaching Students with Disability*

| (I) How many students with disability have you taught in your career? | (J) How many students with disability have you taught in your career? | 95% Confidence Interval |            |       |             |             |
|-----------------------------------------------------------------------|-----------------------------------------------------------------------|-------------------------|------------|-------|-------------|-------------|
|                                                                       |                                                                       | Mean Difference (I-J)   | Std. Error | Sig.  | Lower Bound | Upper Bound |
| None                                                                  | 1-5                                                                   | -1.642                  | 2.508      | 1.000 | -8.40       | 5.11        |
|                                                                       | 5-10                                                                  | -20.296*                | 2.552      | <.001 | -27.17      | -13.42      |
|                                                                       | 10-15                                                                 | -18.521*                | 2.903      | <.001 | -26.34      | -10.70      |
| 1-5                                                                   | None                                                                  | 1.642                   | 2.508      | 1.000 | -5.11       | 8.40        |
|                                                                       | 5-10                                                                  | -18.654*                | 2.508      | <.001 | -25.41      | -11.90      |
|                                                                       | 10-15                                                                 | -16.878*                | 2.865      | <.001 | -24.60      | -9.16       |
| 5-10                                                                  | None                                                                  | 20.296*                 | 2.552      | <.001 | 13.42       | 27.17       |
|                                                                       | 1-5                                                                   | 18.654*                 | 2.508      | <.001 | 11.90       | 25.41       |
|                                                                       | 10-15                                                                 | 1.776                   | 2.903      | 1.000 | -6.05       | 9.60        |
| 10-15                                                                 | None                                                                  | 18.521*                 | 2.903      | <.001 | 10.70       | 26.34       |
|                                                                       | 1-5                                                                   | 16.878*                 | 2.865      | <.001 | 9.16        | 24.60       |
|                                                                       | 5-10                                                                  | -1.776                  | 2.903      | 1.000 | -9.60       | 6.05        |

\*. The mean difference is significant at the 0.05 level.

One-way between-group analysis of variance (ANOVA) was conducted to explore the impact of differences in the number of years of “Experience Teaching Students with Disability” on teachers’ “Resources” scale level as regards inclusion of students with ASD in high school. Based on the number of years of experience in teaching students with disability, teachers were divided into four groups (Group 1: none; Group 2: 1 to 5 years; Group 3: 5 to 10 years; and Group 4: 10 to 15 years). The results indicate a statistically

significant difference at the  $p < 0.05$  level in teachers' "Resources" scale for the four groups:  $F(3, 96) = 33.14, p < 0.001$ . Despite the fact that there is statistical significance, a Post Hoc comparison using the Bonferroni test was also performed to know exactly where the differences were. The result indicates that the mean scores for Group 1 ( $M = 19.19, SD = 8.58$ ) and Group 2 ( $M = 20.83, SD = 10.35$ ) are significantly different from the other groups (Group 3 [ $M = 39.48, SD = 8.64$ ]; Group 4 [ $M = 37.71, SD = 9.96$ ]). However, there was no significant difference between Groups 3 and 4.

## 4.2 Qualitative Results

### *4.2.1 Teachers' and Students' Perceptions on the Inclusion of Students with Autism in Private High Schools in Dubai*

The table below shows all the themes that were derived from the NVIVO software that was used to analyse the interview data for the research.

**Table 78**

#### *Qualitative Themes*

| Theme                                                                                                                | Description                                                                                                                                                             |
|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Teachers' and Students' Perceptions on the Inclusion of Students with Autism in Private High Schools in Dubai</b> |                                                                                                                                                                         |
| Training and Professional Development                                                                                |                                                                                                                                                                         |
| Ongoing Trainings                                                                                                    | Possibilities for teachers to get ongoing training and professional development to improve their knowledge and abilities in helping autistic students in the classroom. |
| Attitudes and Beliefs                                                                                                | The opinions, convictions, and attitudes of teachers and learners about the integration of                                                                              |

|                                                                |                                                                                                                                                                                                              |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                | <p>students with autism, which impact the classroom environment and educational process as a whole.</p>                                                                                                      |
| Communication and Collaboration                                | <p>The degree of cooperation and communication between teachers, learners, and support personnel in order to guarantee efficient planning and execution of inclusive practices for students with autism.</p> |
| Social Dynamics and Relationships                              | <p>The character and quality of connections and social interactions between classmates and students with autism, which affects the general social dynamics in the classroom.</p>                             |
| Peers' Awareness and Understanding of ASD                      | <p>The degree of knowledge and comprehension of autism that teachers and students possess, which helps foster a more knowledgeable and compassionate school community.</p>                                   |
| Impact of Including Students with ASD on Classroom Environment | <p>The impact of including students with ASD on all aspects of the educational environment, including involvement, engagement, and the feeling of belonging that autistic child experiences.</p>             |

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**Students' Perceptions on the Inclusion of Students with Autism in Private High Schools in Dubai**

|                                          |                                                                                              |
|------------------------------------------|----------------------------------------------------------------------------------------------|
| Peer Relationships and Social Inclusion: | <p>The kind and quality of student connections, with an emphasis on the degree of social</p> |
|------------------------------------------|----------------------------------------------------------------------------------------------|

|                                          |                                                                                                                                                                                                                         |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                          | inclusion and the interactions between peers and students with autism.                                                                                                                                                  |
| Learning Environment and Academic Impact | The effects of inclusive techniques on the educational experiences of students with autism, with a focus on academic results, and the general learning environment .                                                    |
| Teacher Support and Interaction          | The degree of assistance that teachers provide and the quality of their interactions with students who have autism, examining the role that teachers play in creating a welcoming and encouraging learning environment. |

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### **Teachers' and Students' Practices on the Inclusion of Students with Autism in**

#### **Private High Schools in Dubai**

|                                     |                                                                                                                                                                                                                                                |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Differentiated Instruction          | Adapting instructional strategies and curriculum to different learning styles in order to meet the specific requirements of each student, including those who have autism.                                                                     |
| Collaborative Planning and Teamwork | The collaborative approach to improving the learning environment for students with autism is fostered by the coordinated efforts and cooperation of teachers and support workers in the development and implementation of inclusive solutions. |
| Peer Support and Collaboration      | Encouraging students to work together and actively help their classmates who have autism,                                                                                                                                                      |

|                                   |                                                                                                                                                                                             |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | building strong bonds and a feeling of community throughout the school group.                                                                                                               |
| Adaptive and Inclusive Activities | Creating and carrying out inclusive, flexible activities that guarantee the active involvement and engagement of autistic students in a range of school-related activities.                 |
| Communication and Understanding   | Creating efficient lines of communication and encouraging awareness amongst teachers, students, and support personnel about the special requirements and viewpoints of students with autism |

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#### **4.2.1.1 Teachers' Perceptions.**

**4.2.1.1.1 Training and Professional Development.** The views of teachers with regard to the integration of autistic students in private high schools in Dubai, especially concerning professional growth and training, paint a complex picture. When the topic of training opportunities' efficacy and adequacy was brought up, a lot of teachers expressed a desire for more focused and specialised sessions. "General training provides a foundation, but it often falls short in addressing the diverse needs of students with autism". (Appendix 1) said one teacher. More specialised training sessions with an emphasis on useful tactics are required".

A recurring issue among the teachers was the need for ongoing and updated training, with an emphasis on the need of being up to speed with the most recent advancements in autism teaching (Appendix 1) "The landscape of autism interventions is

constantly changing” said one teacher. “To properly serve our students, it is imperative that our training be up to date with the most recent research and approaches.”

**Figure 1**

*Teachers' Perspectives*

| Teachers' Perceptions                 |                             |                    |
|---------------------------------------|-----------------------------|--------------------|
| Training and Professional Development | Impact on Classro...        | Communication a... |
| Social Dynamics and Relationships     |                             |                    |
| Resource Accessibility                | Awareness and Understanding |                    |

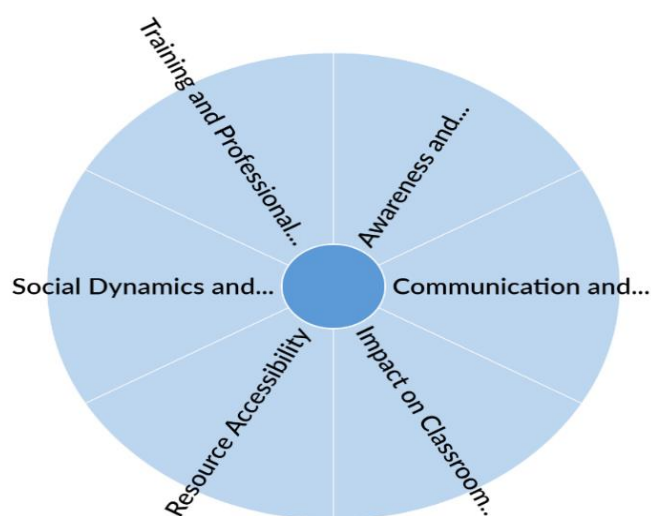
There were differing opinions among teachers on how continual training has affected their self-assurance and capacity to promote inclusive practices. While a number of teachers saw notable improvements such as more self-assurance and flexibility, others raised questions about how the training would really be implemented in actual classroom environments. "Although the training was beneficial, it is difficult to implement in a

dynamic classroom with a range of needs". said one teacher. "More hands-on training sessions or mentorship initiatives might close this gap."

Teachers expressed a range of opinions on collaboration, highlighting both successful outcomes and recognized difficulties. Several teachers conveyed their contentment with cooperative endeavours, highlighting their beneficial influence on the educational journey of autistic students. One educator said "Collaboration is key. Working together, exchanging ideas, and solving problems as a group improves the educational experience for autistic students." Time limits and the need for more organized collaboration platforms were noted as obstacles, however. Although most acknowledged the value of multidisciplinary cooperation, teachers expressed reservations regarding its implementation. One teacher said, "It might be difficult to find time set out for cooperation, even when it is recommended. For multidisciplinary cooperation to better meet each student's unique requirements, we need more organized opportunities."

**Figure 2**

*Teachers' Perspectives*



Diverse views existed among teachers on the support networks at their disposal. Although several teachers expressed gratitude for the special education coordinators and resource experts already in place, questions were raised about the effectiveness of these support systems, especially in schools with low funding. A teacher said, "It is important to have a support structure in place. Help is much appreciated when special education coordinators who are aware of the particular requirements of autistic students are available." Nonetheless, difficulties arising from the demand surpassing the resources available were called attention to. In order to provide a more inclusive learning environment, teachers emphasised the need for more investment in resources and support staff. "While we have some support, the demand often exceeds the available resources". said a teacher. "Increasing funding for resources and support staff would help create a more welcoming learning atmosphere."

**4.2.1.2 Resource Accessibility.** The quality of inclusive education is greatly influenced by teachers' opinions on the suitability and accessibility of resources, such as specialised materials and support personnel, for successfully integrating students with autism. Teachers had a variety of opinions on the tools that are available, but they all agreed that specialised materials and support staff are essential for promoting inclusive practices. One educator emphasised this point, "It is essential to have access to materials that are specifically designed to meet the needs of students with autism. It makes it possible for us to provide a more welcoming and inclusive learning environment."

Nevertheless, concerns were voiced on the sufficiency of the resources available since several teachers reported having trouble locating the equipment required for successful inclusion. One educator said, "Although we recognize the value of specialist resources, accessing them may be challenging. Sometimes our capacity to completely meet the different requirements of students with autism is hampered by limited availability."

One recurrent issue was the impact of resource accessibility on inclusive education quality. Teachers underscored the point that insufficient resources might impede their capacity to execute efficacious tactics and attend to the specific requirements of each student. One educator put it like this: "The foundation of inclusive education is resources. Giving autistic students the kind of specialised attention and care they need is difficult in the absence of sufficient resources and support personnel."

Teachers also mentioned how resource accessibility affects autistic students' overall learning experience. The availability of support workers was especially highlighted, as teachers acknowledged the beneficial impact of extra staff in fostering a welcoming and encouraging environment. As one educator put it, "Having support staff—whether it be a teaching assistant or a licensed counselor—greatly improves our capacity to offer individualised support. It completely transforms the kind of instruction we can provide." The impact that resource accessibility has on students' academic and socioemotional growth was underlined by teachers even more. Having access to specialist resources was thought to be essential to designing individualised learning experiences. As one teacher put it, "We can create activities that accommodate various learning styles if we have the appropriate resources. This improves everyone's experience in the classroom, not just the autistic students."

On the other hand, it became clear that a major issue influencing the quality of inclusive education is the lack of support personnel. Teachers emphasised that the benefits of having more staff members—such as teaching assistants or counselors—go beyond providing academic help. A teacher said, "Support staff members do more than just keep the classroom running smoothly; they also help students' emotional health. Having that additional assistance may have a profound impact on the social and emotional development of individuals with autism." Teachers also emphasised that for support workers to be as

successful as possible, they must get continual training. "Having support staff is important, but it is also important to make sure they receive training that addresses the special needs of students with autism". said one teacher. "It is about assembling a group that can function as a unit to provide the most assistance."

Teachers emphasised that resource accessibility has an influence on society outside of the classroom, acknowledging its wider reach. "When we talk about resource accessibility, it is not just about the materials in our hands" one teacher thought, "The message we want to convey to families and students with autism is that we are dedicated to giving them the help they need in order for them to succeed in an inclusive learning environment." Teachers also emphasised the possible advantages of teamwork in enhancing resource accessibility. "Sharing resources and ideas among teachers can be a powerful way to overcome individual limitations" said one teacher. "Within the school, exchanging tactics and resources fosters a more welcoming community." Some teachers saw improvements in resource accessibility over time, despite obstacles. A teacher said, "I've noticed improvements lately, as schools are realizing the value of allocating funds for inclusive education. I hope this trend continues because it is good."

**4.2.1.2.1 Attitudes and Beliefs.** The way that teachers see inclusion, and the advantages and difficulties of integrating autistic students into regular classes, are important determinants of the state of education. Teachers' opinions on inclusion were divided, ranging from outspoken support to reluctance. "Inclusion is not just about having students with autism in the same classroom; it is about creating an environment where everyone feels valued and included". said one teacher. "Both teachers and students benefit from this wonderful experience." Nonetheless, a few teachers admitted to being unsure or nervous about inclusion. "While I understand the importance of inclusion, there's a part of

me that worries about whether I can meet the diverse needs effectively". said another teacher. "We're all on a learning curve."

Teachers' perceptions of inclusion's advantages showed that they understood how it may help both neurotypical and autistic students. "Inclusion fosters a sense of empathy and understanding among all students". said one teacher. "They may benefit from one another's knowledge and gain valuable social skills." However, teachers also recognized the difficulties posed by inclusiveness. The need for more individualised care for students with autism was one prevalent worry. One teacher put it like this: "The difficulty is in striking a balance between the various demands of each pupil. It might be difficult to strike a balance when some people need more specialised help."

The way that teachers approached inclusion had a big impact on how they approached teaching and interacted with autistic students. Some teachers underlined the need for adaptability in terms of instructional strategies. As one educator put it, "It is important to be open to new ideas. Because what works for one kid may not work for another, inclusive learning requires us to modify our techniques accordingly." On the other hand, teachers who voiced hesitations often took a cautious approach to inclusion, making small adjustments to their methods over time. One teacher expressed reluctance, saying, "I've got to reconsider how I educate. To make sure that all students, including those with autism, can succeed in the classroom, it is a process of ongoing learning and adaptation."

Some teachers saw a gradual improvement in their views, which they attributed to chances for professional growth and first-hand knowledge. One teacher said, "I was apprehensive about inclusion at first, but as I went to seminars and accumulated more experience, my viewpoint changed. It is about appreciating the distinctive qualities that every kid offers to the classroom and accepting variety." Teaching professionals' perceptions of the advantages of inclusion were significantly shaped by professional

development. According to one teacher, "Misconceptions have been dispelled by professional growth in understanding research and success stories. It reaffirmed the notion that inclusive classrooms help all students and create a more understanding and caring community."

Teachers stated that the nature of their connections with autistic students was impacted by their opinions. Positivity was linked to a readiness to modify communication methods and provide more assistance. As one teacher put it, "Developing trust is essential. Positive learning relationships arise when students see that you have faith in their talents." Teachers who had misgivings, on the other hand, emphasised the need of constant communication and cooperation. One teacher said, "It is important to communicate honestly with parents, special education experts, and coworkers. It makes sure that everyone is on the same page when it comes to assisting the kid and helps close gaps." While acknowledging the difficulties in overcoming attitudinal barriers, teachers also highlighted approaches to overcome these obstacles. As one teacher put it, "Empathy and open communication are essential. Attitude barriers may be broken down by acknowledging that each person has particular talents and problems as well as by being receptive to learning from one another."

**4.2.1.2.2 Communication and Collaboration.** The viewpoints of teachers about the efficacy of communication and cooperation between teachers, administrators, and support staff in the execution of inclusive practices provide valuable insights into the workings of inclusive education at Dubai's private high schools. Teachers emphasised again and time again how crucial good communication and teamwork are to the success of inclusive practices. One teacher emphasised, "A successful inclusive classroom is built on communication. In order to recognize and address the various needs of students with autism, it is imperative that teachers, administrators, and support personnel have regular,

open communication." On the other hand, communication problems were also mentioned. A few teachers reported situations in which poor communication impeded the smooth use of inclusive practices. "We acknowledge the value of communication, but sometimes information doesn't flow as smoothly as it should". a teacher said. "This may affect our capacity to provide autistic students regular and well-coordinated care."

Teachers often emphasised how important teamwork is to overcoming obstacles in the way of inclusive education. Working together was thought to be a stimulus for knowledge sharing and group problem-solving. "When teachers and support staff collaborate, it creates a supportive network". said one educator. "By combining our resources and approaches, we can overcome obstacles more successfully." Furthermore, it was believed that cooperation was essential to developing a more comprehensive knowledge of the requirements of the students. One teacher noted that using a multidisciplinary approach had advantages: "Working together enables us to see the bigger picture. Together, we can recognize and handle social and emotional as well as intellectual difficulties, building a more complete support system."

Teachers conveyed a common opinion that cooperation is necessary to maximize the benefits of an inclusive learning environment. This attitude was shared by support personnel and administrators in addition to teachers. "Inclusive education is a team effort" a teacher said. "Collaboration has a good knock-on impact that helps teachers and students when administrators value and encourage it." Nonetheless, a few teachers also agreed that more organised forums for cooperation were required. They proposed that setting aside time for training sessions, seminars, and multidisciplinary cooperation might improve the efficacy of inclusive approaches. One teacher said, "While collaboration is encouraged, having structured opportunities, such as regular workshops or training sessions, would ensure that everyone is on the same page and working towards a common goal."

In the context of inclusive education, teachers emphasised a need for specific actions to improve teamwork and communication. Many recommended holding regular gatherings and forums with the express purpose of discussing the particular difficulties faced by students with autism. "It would be really helpful to have regular meetings where we can talk about each student's progress, share strategies, and brainstorm solutions". one teacher said. "It guarantees that everyone is cooperating to get the greatest results for our students and staying on the same page." Teachers also stressed how crucial it is to include parents in the communication process. "Parents are key stakeholders in the education of students with autism". said a teacher. "Incorporating them into routine updates and conversations promotes a comprehensive strategy, coordinating the endeavours of teachers and caregivers to enhance the child's growth."

Teachers also recognized the role administrators play in creating a culture of cooperation. "Administrators play a crucial role in setting the tone for collaboration". said one teacher. "A culture where everyone feels heard and appreciated is created when they actively support and encourage communication avenues." Teachers recognized that although teamwork was important, there were obstacles to putting it into practice. One prevalent obstacle was found to be time restrictions. "Finding time for collaboration can be challenging, especially with busy schedules". said one educator. "It would be a good idea to set aside time and resources specifically for cooperative activity."

Teachers did, however, also relate success examples in which autistic students benefited from successful teamwork. A teacher said, "I've personally seen how teamwork can turn obstacles into possibilities. Collaborative efforts among teachers, administrators, and support personnel have a profound effect on students. It is about using our combined power to achieve our goals." All teachers agreed that the quality of inclusive education is directly and significantly impacted by cooperation. One teacher put it as follows: "The

more we work together, the more effectively we can modify our methods to fit the requirements of each person. It is important to create an atmosphere where students feel encouraged and may develop socially and emotionally in addition to focusing on academics."

**4.2.1.2.3 Social Dynamics and Relationships.** Gaining knowledge of how teachers in a private high schools see social dynamics and interact with students with ASD and their classmates might help to better understand the inclusiveness and social cohesion of the school community. The way that teachers saw the social dynamics with their students with ASD and their classmates differed. Some teachers said that a few demonstrated comprehension and compassion, acknowledging the distinct advantages and difficulties faced by students with ASD peers. "It is about seeing beyond differences" said one teacher. "I believe that everyone of has something unique to offer, and that recognizing one another's advantages fosters a supportive social atmosphere".

But it was also clear that there were difficulties in comprehending and negotiating social interactions. A few teachers admitted to having seen hesitancies or moments of uneasiness. One teacher said, "It may be challenging to peers to know how to engage with others at times, particularly when they have diverse communication styles. However, I've discovered that some students being patient and honest helps a lot when establishing relationships." Teachers gave various accounts of their encounters in terms of peers connecting with their autistic classmates. Numerous individuals underscored the fulfilling aspect of these relationships, stressing the distinct viewpoints and attributes their colleagues contributed. "Getting to know their classmates with autism has been eye-opening". said one teacher. "Their contrasting perspectives have enhanced and deepened their relationships with one other."

Still, students understand the need to establish a welcoming atmosphere that encourages relationships. A few mentioned a need for more organized events to promote socialisation. One of the teachers said, "It would be wonderful to have more planned occasions or activities in which everyone could take part. It establishes a common area where relationships may develop more easily." Teachers saw how their students' interactions with students who have autism affect the school's culture as a whole. Positive encounters were considered to be part of what made the environment more welcoming and encouraging. "The entire school benefits when everyone feels included". one teacher said. "It fosters an accepting and understanding culture that extends beyond personal connections."

There were, however, some difficulties in creating a really inclusive atmosphere. A few teachers stressed the need for more knowledge and understanding regarding autism in order to remove any possible obstacles. "There's still a lot we can learn about each other". a teacher thought. "In order to dispel any misunderstandings and strengthen our bonds, we need to raise awareness and educate others about autism." Teachers understood that school activities and peers play a crucial role in fostering relationships and friendships. A teacher said, "Teachers have a significant position. Meaningful friendships are facilitated when an atmosphere is fostered in which mutual understanding and connection are promoted."

Teachers said that although making relationships with classmates who have autism is enjoyable, there are hurdles involved that help with personal development and encouragement to peers. "It is not always easy, but the challenges make us better people". said one teacher. They gain tolerance, compassion, and an appreciation for the wisdom of other viewpoints. We are all on a road of personal development." Teachers emphasised how inclusive activities and programmes help to build relationships. Collaborative initiatives and special events were seen as chances to generate shared experiences and

close gaps. "It is an opportunity for them to connect on a different level when they have projects or events that involve everyone" a teacher said. "It dismantles obstacles and enables them to perceive one another through labels."

The significance of transparent communication in clearing miscommunications and fostering connections was emphasised by the teachers. Mutual understanding is cultivated when an atmosphere is created where inquiries are welcomed and addressed. As one teacher put it, "Having students' talks and being willing to ask questions helps dispel any preconceptions. Instead of assuming anything about their peers, it allows them to recognize who they really are." Students' own viewpoints have been found to expand when they interact with classmates who have autism. Positive interactions were seen to be transforming, posing questions to preconceived beliefs and encouraging a more accepting outlook. One of the teachers thought, "It alters their viewpoint. They come to understand that each person is unique and that everyone has problems as well as talents. Their relationships with peers who have autism influence who they end up becoming."

Teachers acknowledged that it is their shared duty to provide a welcoming atmosphere where everyone is treated with respect. Behaving kindly and being inclusive were seen as vital elements in fostering a culture where relationships may grow. A teacher underlined this point, "Minimal gestures count. Including everyone in talks and asking them to participate in events helps create a friendly atmosphere where friendships may develop organically."

#### **4.2.1.3 Teachers' Perceptions on Peers' Awareness and Understanding of ASD.**

Teachers argued that students' attitudes and actions with regard to their classmates are greatly influenced by their knowledge and comprehension of autism, which in turn contributes to the inclusive and encouraging atmosphere of the school. Students' knowledge and comprehension of autism varied widely. While some teachers

acknowledged that some students have just a little comprehension, they reported that others had extensive expertise. "They knew a bit about autism, but since being in school, they have learned a lot more" said one teacher. It has improved their empathy and comprehension of their classmates." It was clear that attitudes toward peers with autism and awareness of them were correlated. Students who understood concepts better tended to behave in more sympathetic ways. "Knowing more about autism has definitely changed how they interact". a teacher said in clarification. "They try to be more tolerant and patient, realizing that each person has special talents."

Teachers said that those students who admitted to having little awareness, on the other hand, indicated a desire to learn more in order to enhance their relationships. "I think they could understand their classmates better if they knew more about autism". said one teacher. They want to learn more about it so that they may be a more encouraging person." Raising awareness has always been associated with fostering a more accepting and encouraging school climate. Teachers realised that understanding autism lessens stigma and strengthens ties to the community. "When we all have a better understanding, it creates an atmosphere of acceptance". said one teacher. "It is about valuing individuality and encouraging one another."

Teachers also admitted that peers' activities in making friendships with students with autism is influenced by their awareness. Kindness and inclusivity were emphasised as direct results of greater consciousness. "I make a conscious effort to include everyone". said one teacher. "It matters how you use your knowledge to improve our school and make it a better place for everyone, not simply what you know." Some teacher showed a great degree of awareness, while others expressed the need for further information and education on autism. "I think there's always more to learn" said one teacher. Organising seminars or

workshops on autism might be beneficial. It all comes down to establishing a space where people may feel encouraged."

There are difficulties in debunking rumours and false beliefs about autism. Teachers said that they were committed to using education to solve these issues. "There are still some myths out there" a teacher said. "I believe that if peers were more educated, we could remove these obstacles and build a more accepting society." The teachers realised that raising peers' understanding of autism helps them personally as well as it does their classmates. Gaining empathy and a more comprehensive viewpoint were considered beneficial results. One teacher said, "Knowing about autism has helped peers in my class to be more understanding and patient. It is a life skill that enables them to connect to others in many ways; it is not just about education."

Teachers often emphasised how well-informed attitudes resulting from increased knowledge have a beneficial knock-on impact on within the whole school community. "It sets the tone for a more positive and inclusive environment when we all understand and accept each other's differences" a teacher observed. "The goal is to create an environment where everyone is respected." A greater understanding of autism has often been linked to the growth of empathy, which manifests itself in concrete ways in day-to-day encounters. Teachers gave examples of times when they deliberately tried to get peers to comprehend and help their autistic friends. One teacher said, "Empathy has great power. It is important to put oneself in other people's shoes in addition to just knowing. That's how relationships are formed."

Teachers said that they were aware that there are myths and false beliefs around autism among students, and they wanted to dispel them via education. "There are still misconceptions out there". said one teacher. "It is possible that some peers are unaware of the special abilities and skills that persons with autism possess. We can debunk these

misconceptions and build a community that is more informed via education." Some teachers campaigned for school-wide instructional programmes that would increase knowledge and awareness of autism. They recommended class discussions, workshops, and visiting lecturers as useful strategies for fostering a culture of learning. One teacher said, "It would be beneficial for everyone if there were more educational initiatives regarding autism. We have the chance to develop and learn from each other."

Raising awareness was thought to be essential to creating a close-knit, encouraging school environment. The importance of understanding in building relationships and establishing a space where everyone feels welcome was stressed by the teachers. "It is not just about being aware; it is about building a community that supports each other". said one teacher. "Stronger bonds are formed when they are able to comprehend and accept one another." Teachers conveyed a shared awareness that learning about autism is an ongoing process. They admitted that their students' level of understanding was always changing and that they needed to continue learning in order to be informed. As one teacher put it, "We're all on a learning path. We can better help one another the more information we have. It is an ongoing process rather than an isolated event."

**4.2.1.4 Impact of Including Students with ASD on Classroom Environment.** A complex awareness of both good and problematic elements was indicated by the teachers' opinions with regard to the influence of incorporating students with autism in the overall classroom setting. A few teachers emphasised the beneficial contributions made by their autistic students. "Having students with autism in our class brings diversity". said one teacher. "Their distinct viewpoints and abilities enhance our educational setting." Teachers did recognize that there are difficulties in establishing an inclusive classroom, however. "It can be challenging initially, especially when there are communication differences". several

said in describing times of transition. "However, those difficulties diminish as we grow to know one another, and we discover methods to communicate."

The majority of teachers acknowledged how having students with ASD in the class improved the dynamics in general. A lot of teachers stressed the need to create a more welcoming and inclusive environment. "It enhances the richness of our classroom". said one teacher. "It goes beyond academics to include developing mutual tolerance and appreciation for one another in spite of our differences." Individuals also emphasised the special abilities and viewpoints that autistic individuals bring to the classroom. One of the teachers said, "Everyone can offer something worthwhile. Students on the autistic spectrum often possess extraordinary abilities or insights that enrich our conversations and assignments."

Teachers acknowledged the good contributions, but they were open about the difficulties in fostering a climate that is really inclusive. Disparities in communication were often mentioned as a barrier. As one teacher put it, "It may be difficult at times for people to comprehend one another. It is about making sure that everyone feels heard and figuring out efficient communication channels." Teachers also acknowledged that in order to overcome such prejudices and misconceptions, there is a need for more awareness and education. One teacher stated, "We're all still on a learning curve. Increasing awareness about autism will facilitate the removal of obstacles and foster a more compassionate atmosphere."

The impact of an inclusive atmosphere on students' individual learning experiences was discussed by the teachers. Positive relationships between peers and students who have autism were thought to promote learning and personal development. One teacher said, "Knowing from one another is equally as important as knowing academic material. Their interactions with peers who have autism have improved their patience, empathy, and open-

mindfulness." Teachers also acknowledged how important it is to gain essential life skills in an inclusive setting. "Peers learn more than just the curriculum in an inclusive classroom". a teacher underlined. "They gain knowledge of cooperation, empathy, and flexibility. These are lifelong abilities that transcend the classroom."

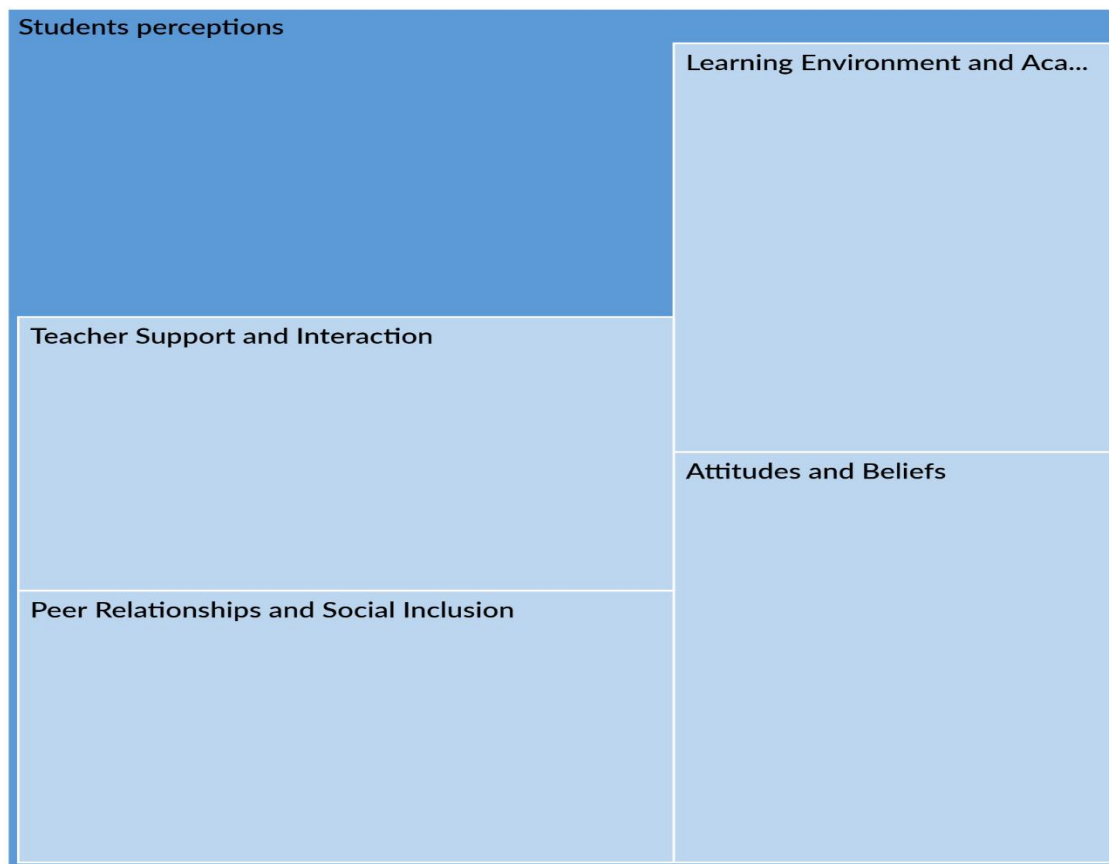
All of the teachers agreed that a welcoming atmosphere in the classroom helps students feel as if they belong to a community. Good connections that are based on acceptance and understanding were considered to be crucial elements in terms of this community environment. "We feel like a little community in our class". said one teacher. "We help and learn from one another, which fosters a supportive and inviting environment for everybody." Teachers often emphasised the ways in which inclusion improves students' comprehension of diversity in the classroom. Positive experiences were thought to be essential for eradicating preconceptions and creating sincere relationships. "Inclusion is an opportunity to break down stereotypes and preconceived notions". a teacher said. "It is about realizing how different we are from one another and how much we can all learn from one another."

Teachers also said that that students were inspired to widen their viewpoints by the welcoming atmosphere. It was believed that interacting with peers who had autism enhanced one's life outside the classroom. One teacher said, "It is about realizing that there are several approaches to learning and thinking. Peers' views are broadened by the unique perspective that their classmates with autism bring to the table." Teachers said that overcoming obstacles in a welcoming setting aided in their students' development. Effective communication and adaptability were seen as important skill sets to acquire. "Challenges are opportunities to grow". said a teacher. "You get practice finding common ground and adjusting your communication style in an inclusive classroom. It is a useful talent for the future."

Teachers did, however, realise that solving problems calls for teamwork. Some argued in favour of more formalized support networks, such as peer mentoring initiatives or increased funding. One teacher said, "We have this together. Increasing the number of support networks, such as peer mentoring, may significantly impact the ability to overcome obstacles." Teachers highlighted how having an inclusive classroom has a good knock-on impact that goes beyond academic achievement. It was believed that fostering an atmosphere of understanding and support affected both academic achievement and overall wellbeing. One teacher said, "When everyone feels included and supported, it creates a positive energy that benefits all aspects of our lives – academically, socially, and emotionally."

Teachers also acknowledged how the environment of the classroom affected their students' motivation and participation. A more excited attitude to studying was linked to positive relationships with peers who have autism. As one teacher put it, "Everyone is more likely to participate and engage when there is a positive atmosphere. It is about establishing an environment where everyone is eager to participate and feels appreciated." The teachers agreed that fostering an inclusive atmosphere is a continual effort that calls for constant development. They said they would be taking an active role in this voyage. "We're all learning and growing together". A teacher said in reflection. "It is about always trying to be more accepting, kind, and encouraging—not about reaching perfection."

#### **4.3 Students' Perceptions on the Inclusion of Students with Autism in Private High Schools in Dubai**

**Figure 3***Student's Perspective***4.3.1 Peer Relationships and Social Inclusion**

The majority of students agreed that inclusive behaviours are essential for creating meaningful peer connections, particularly for students who have autism. Peer support networks and collaborative learning exercises are two examples of inclusive approaches that were emphasised as crucial elements. A pupil underlined this by saying, "Levelling the playing field is achieved via inclusive behaviours. We may interact on a personal level and dissolve boundaries when we participate in activities together." (Appendix B). Students also understood the value of shared experiences in fostering friendships. It was believed that inclusive practices promoted a feeling of camaraderie by giving students with and without autism the chance to work together. "When everyone participates in the same

activities, shared experiences are created". a student said. "We gain knowledge from one another, and it fosters sincere relationships."

Students discussed their varied perspectives on inclusion in the school community, as well as their experiences with it. Positive examples of inclusion were seen in which social circles actively welcomed and included autistic students. "I've seen instances where classmates with autism are fully included in social activities" a student said in her description. The fact that students try to make sure everyone feels included is encouraging. Students did, however, admit difficulties, with certain cases requiring additional work to bridge social barriers. Students considered the value of continuing education and awareness after seeing these difficulties. "While there is inclusivity, there are times when more understanding is needed". a student said. "It serves as a reminder that everyone may develop into a more inclusive atmosphere."

Students' individual experiences served to emphasise how inclusive behaviours affect peer relationships. Empathy and understanding were observed to emerge as a result of positive interactions in inclusive environments. One student said, "Practicing inclusivity fosters understanding of one another's struggles and abilities. It is a process of learning that enhances our connections and extends beyond the classroom." Students also saw how inclusive approaches improved the dynamics of the school community as a whole. It was believed that a nurturing environment promoted a feeling of cohesion and group accountability for each student's welfare. One student said, "A culture of support is created via inclusive behaviours. It involves the cooperation of the whole school community, not just certain individuals."

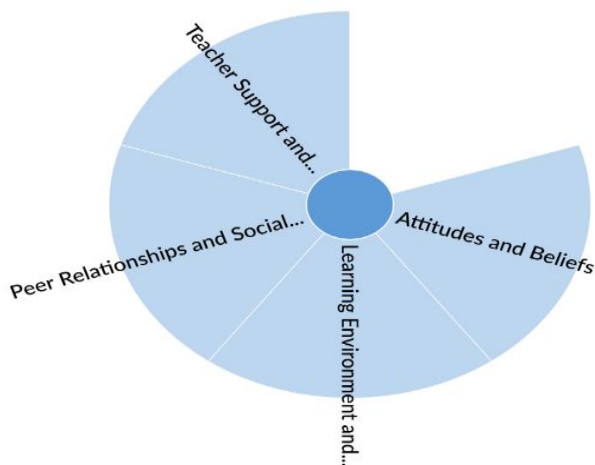
Students acknowledged the benefits of inclusive behaviours while also recognizing the obstacles to full social inclusion. One prevalent issue that was mentioned was communication hurdles, which called for more tolerance and understanding.

"Communication differences can create challenges, but it is an opportunity for us to learn and adapt". a student said. "It is about figuring out how to speak clearly and making sure that everyone feels heard." Students emphasised the importance of education and awareness while identifying the need for further efforts to increase inclusion. "There are challenges, but the key is to keep working toward overcoming them". a student said. "Enhancing knowledge and consciousness may close gaps and provide a more welcoming atmosphere where all individuals have a feeling of inclusion."

Students underlined how shared activities may break down social boundaries in a revolutionary way. Through group projects, after-school activities, or inclusive gatherings, these shared experiences gave students with and without autism a place to interact. One youngster said, "We form bonds when we participate in activities together. Instead of concentrating on our differences, we see one another as unique people with common interests." Students also highlighted how scheduled activities help to create an interactional framework. These activities' inclusive practices were thought to promote a feeling of belonging. One of the students said, "We have a platform to interact with structured activities. Connecting with others comes naturally when everyone is participating. It is about establishing environments where people believe they have a part to play."

#### **Figure 4**

##### *Student Perspective II*



Participating in inclusive activities promotes the growth of empathy and understanding in addition to fostering peer connections. Students realized that being exposed to a variety of viewpoints improved their capacity to connect to their autistic classmates. "When you work together, you learn about each other's strengths and challenges". a student clarified. "It fosters empathy and enables us to see the distinctive features that every individual contributes." Additionally, students emphasised how the learning process is mutually beneficial. Students without autism received knowledge of the experiences of their friends who have autism, while students with autism also gained an understanding of their classmates' viewpoints. One student said, "There is reciprocity. Our connections are strengthened by the mutual understanding that we all gain from one another."

Students admitted that communication disparities caused obstacles even in spite of the benefits of inclusive approaches. In order to guarantee that every student's voice is heard, several students said that more specialised communication strategies are required.

"Communication can be challenging, but it is an area where we can improve". said a student. "Making use of efficient communication techniques guarantees that all participants in discussions and activities are included." Students understood the need to foster an

atmosphere that values candid communication as it facilitates a deeper comprehension of each person's needs and preferences. "It is about creating a culture where it is okay to ask questions and seek clarification" pondered one kid. "An atmosphere that is more inclusive is fostered by open communication, which aids in the removal of communication obstacles."

Students often emphasised the necessity for continuing education and awareness campaigns in resolving the issues. They realized that better knowledge results in more accepting behaviours and a positive social atmosphere. One student said, "Knowledge is power. The more we understand autism, the more equipped we are to help our peers. We are all learning and developing together in this continuous process." Students pushed for frequent awareness campaigns and the inclusion of lessons on autism in the school curriculum. These programmes were thought to be crucial for promoting acceptance and dispelling myths. One student said, "Learning ought to be an ongoing endeavour. In order to build a more knowledgeable and welcoming school community, workshops, conversations, and awareness campaigns may be very beneficial."

#### ***4.3.2 Learning Environment and Academic Impact***

All of the students indicated agreement on the beneficial role inclusive practices play in creating a welcoming classroom atmosphere. It was believed that inclusive practices would foster a feeling of community in which all students, regardless of neurodiversity, would feel appreciated and encouraged. "Inclusive practices make our learning environment more welcoming". said a student. "Inclusion creates a supportive environment for the class as a whole and makes it a place where everyone may succeed." Students also underlined how inclusive behaviours foster cooperation and a range of viewpoints. "Collaborating with peers who have autism has opened my eyes to new viewpoints and enhanced group conversations and activities". One student said, "Diversity

in our learning is enhanced by inclusion. Working together with students who have autism lets us see things more broadly and solve issues in various ways."

Students considered how inclusion affected their academic progress and overall educational experience, in addition to how it affected the learning environment. Positive relationships with peers who have autism have been repeatedly associated with both intellectual and psychological growth. "I've become more flexible and patient as a result of interacting with classmates who have autism" one student wrote. "These abilities are helpful not just in the classroom but in every aspect of our education." Students also understood that learning in an inclusive setting requires reciprocity. They helped their students' academic progress while also learning valuable lessons from their autistic friends. As one student put it, "It is a reciprocal trade. Everybody is gaining knowledge from the others. The many points of view help us to have a more thorough grasp of the topics we're learning."

In addition to helping students achieve academic success on their own, inclusive practices were seen as drivers for creating a welcoming learning environment. Students emphasised how crucial it is to have a setting where anybody can ask for assistance or work together without feeling uncomfortable doing so. One youngster said, "A support system is created via inclusivity. There's a want to help each other achieve and an openness about asking questions or needing support." Students also acknowledged the effect that a helpful learning community had on their engagement and motivation. One factor that motivated people to pursue academic goals was feeling as if they belonged in a community that celebrated diversity. "Knowing that everyone is behind you encourages you to give it your all" a student said. "The goal is to provide a setting in which each person may realize their greatest potential."

While acknowledging the benefits of inclusivity, students also pointed out its drawbacks. Disparities in communication have been noted as a frequent obstacle in educational environments. Students said that they wanted more individualised communication strategies so that all students, including those with autism, could take part fully in class. "Communication can be challenging, especially in academic settings". a student said. "We must investigate methods to guarantee that everyone can participate in conversations and is on the same page." The significance of continuous learning for teachers and students to tackle obstacles and improve the efficacy of inclusive practices in the classroom was also acknowledged by the students. "Education is key, not just for us as students but also for our teachers". underlined one youngster. "Our inclusive teaching methods may be more successful the more people are aware of neurodiversity."

Finally, the views of students on inclusive practices in the classroom emphasised the beneficial effects on learning and personal development. The acknowledgement of difficulties emphasised the continuous dedication to growth and learning. Students are working together to establish an academic environment where everyone can succeed both academically and personally, regardless of their neurodiversity, and this is reflected in their need for customised communication tactics and ongoing instruction. The flexibility and skill development that come from inclusive methods in the classroom were often emphasised by students. It was believed that interacting with people from different backgrounds and cooperating with peers who have autism would help people become more adaptive and flexible. "Inclusion teaches us to be adaptable". a student said. "We become aware of various learning styles and modify our methods accordingly. It is a talent that will help us in our future pursuits and goes beyond the classroom."

Additionally, students acknowledged how inclusive practices help them build critical life skills. Empathy, forbearance, and skillful communication were noted as

beneficial results of learning in an inclusive environment. One student said, "We learn life skills from being in an inclusive setting that go beyond the classroom. It involves cooperating, speaking clearly, and comprehending others." Students considered how inclusion affected their general excitement for learning as well as their involvement in the classroom. Good relationships with peers who have autism have been repeatedly linked to higher motivation and a feeling of direction in scholastic endeavours. "You see the positive impact of inclusion on your peers, it motivates you to engage more" a student said. "It gives our academic path a sense of direction."

Students also stressed the need for fostering an atmosphere where each person feels appreciated for their efforts. It was believed that inclusive practices promoted a feeling of community, which enhanced academic engagement. One youngster said, "Being included gives us a sense of belonging. Your participation in class automatically increases when you feel appreciated. It is about establishing a space where everyone can express themselves." Students often made the connection between their academic performance and personal development and the inclusive learning environment. Personal growth was shown to be influenced by supportive interactions and positive connections with peers who have autism. As one student put it, "Getting to know classmates who have autism has helped me develop personally. becoming well academically is not the only goal; becoming a kinder and more tolerant person is also important."

Students also realized that academic success and a supportive learning environment go hand-in-hand. An inclusive environment with a feeling of community and common aims was thought to be a key factor in academic performance. A student said, "When we're all working towards a common goal of learning and supporting each other, it creates an environment where academic success naturally follows." Students acknowledged the benefits of inclusive practices, but they also pledged as a group to make sure that these

policies were regularly followed for the sake of all students. Students stressed the need for fostering an inclusive atmosphere that actively supports every person, including those with autism, while arguing for further training and awareness campaigns. One of the students said, "We should always be trying to be inclusive. It is about ensuring that everyone in our learning community feels supported and included, notwithstanding their neurodiversity."

#### ***4.3.3 Teacher Support and Interaction***

Students often emphasised how important it is for teachers to promote the inclusion of students with autism. It was believed that the foundation for fostering an inclusive and encouraging environment in the classroom was the assistance offered by the teachers. A student underlined this, "Teacher assistance is essential. The tone of the whole class is established when teachers actively support the inclusion of students with autism. Everyone feels as if they belong in this setting." Students also emphasised how critical it is that teachers possess the knowledge and tools needed to properly help students with autism. As one student put it, "It is essential to have teachers who are aware of the requirements of students with autism and who are equipped to serve them. It guarantees that everyone can participate in the learning environment and is on the same page."

Positive teacher-student interactions have been identified as a critical component in creating an environment that is welcoming and encouraging. Students repeatedly underlined how important it is for teachers to build strong bonds with all of their students, particularly those who have autism. One student said, "Trust and openness are fostered when teachers and students have excellent connections. This is crucial for autistic students in particular, who may need extra assistance." Students also realised that a friendly classroom environment was enhanced by good interactions. In order to foster an atmosphere where everyone felt appreciated, teachers were considered as being crucial in actively engaging with students, listening to their viewpoints, and offering support. "Good

interactions with teachers make a huge difference”. a student said. It all comes down to feeling heard and seen, which has a good impact on the dynamics of the class as a whole.

The significance of teachers' adaptation and flexibility in guaranteeing the triumph of inclusive practices was recognized by the students. Teachers were seen as essential contributors to an inclusive learning environment when they modified their teaching strategies to meet the varied needs of their students, including those with autism. One of the students said, "Adaptability is crucial. The classroom becomes a more inclusive place when teachers can modify their pedagogy to suit the needs of all students, including those with autism." Additionally, students conveyed gratitude to teachers who made the effort to comprehend the distinct advantages and difficulties faced by every individual student. It was believed that this tailored strategy created a feeling of unique support. One student said, "It makes a difference when teachers take the time to get to know each student. It demonstrates their concern for each of our unique needs, and everyone deserves that kind of assistance, but particularly autistic students."

Acknowledging the beneficial effects of teacher assistance and interactions, students openly spoke about obstacles and areas that needed work. Improvements might be made to the way that teachers and students communicate, especially when it comes to the requirements of students who have autism. One youngster said, "It is important to communicate." More effective assistance might be provided if teachers and students were to maintain open lines of communication on the unique requirements of individuals with autism." Students also emphasised the need for continual professional development and training for teachers in order to improve their ability to assist students with autism. "While teachers are doing their best, there's always room for improvement” a student said. “They would be more equipped to manage autistic students and foster an inclusive classroom with ongoing training that would provide them with the newest techniques and insights."

Students often underlined how crucial it is to develop confidence and trust via teacher assistance. Good relationships between teachers and students were seen to be essential for building trust and fostering an atmosphere in which students felt free to ask for help when they needed it and to communicate their needs. One student said, "A supportive environment arises when there is trust between teachers and students. It is about having the confidence to voice concerns and being at ease enough to ask inquiries." Furthermore, the influence of pleasant interactions on students' confidence in navigating the academic environment was recognised by the students. They believed that teachers who offered support and constructive criticism had a major role to play in raising their self-esteem. One youngster said, "We get more confident when we engage positively. It all comes down to knowing that our efforts are valued and acknowledged. Students who may have particular difficulties, such as those with autism, should pay particular attention to this."

The students understood the need for providing customised assistance based on each student's unique requirements, including those of students with autism. It was believed that teachers who took the time to determine the unique learning preferences of each student and modified their pedagogy appropriately were fostering inclusion. "Teachers who recognize that every student is unique and modify their approach create a more inclusive learning environment". said a student. "It is about appreciating and acknowledging our unique qualities and distinctions." Students also said that teachers should take the initiative to recognise and cater for the unique requirements of students who have autism. One youngster said, "What's important is proactive help. An inclusive classroom is greatly enhanced by teachers who take the effort to comprehend the requirements of students with autism and put solutions in place to accommodate them."

#### ***4.3.4 Creating a Supportive Learning Culture.***

Students emphasised how supportive teachers may have a wider effect on creating a positive learning environment in the classroom. Teachers who promoted peer support and a collaborative environment were seen to be inclusivity's catalysts. "Teachers set the tone for the class culture", a student highlighted. "Positive and inclusive learning environments are produced when teachers promote student cooperation and support." Students also stressed how important it is for teachers to actively foster an accepting atmosphere and serve as champions for diversity. One student said, "Teachers are essential in encouraging inclusion outside of their own classroom settings. Students' perceptions of and contributions to the general classroom environment are influenced when teachers promote an environment of acceptance and understanding."

Students understood that they could improve teacher support and contact via cooperation and feedback. It was thought to be advantageous to provide channels of open communication where students could freely express their wants and provide comments. "Feedback is a two-way street", a student said. "The availability of a feedback channel for students guarantees that teacher assistance is adaptable to our changing requirements, including those of autistic students." In addition, students pushed for joint initiatives involving teachers, learners, and parents to establish an all-encompassing assistance network. One student said, "Working together is essential. Strong support systems are created when parents, teachers, and students collaborate. It makes sure that everyone agrees, which helps inclusive practices succeed."

## **4.4 Teachers' and Students' Practices on the Inclusion of Students with Autism in Private High Schools in Dubai**

### ***4.4.1 Differentiated Instruction***

Students often expressed gratitude to teachers who used differentiated teaching to address the various learning requirements of their peers, including those who had autism. The realisation that successful differentiation starts with a deep comprehension of each student's distinct learning style emerged as a recurring topic. One student said, (Appendix B) "A more inclusive classroom is produced by teachers who take the time to understand how each of us learns best. It is important to acknowledge that everyone of us has unique capabilities and areas in which we could want further assistance." Students also emphasised how crucial it is for teachers to recognise neurodiversity in the classroom and adjust their lesson plans appropriately. It has been shown that techniques such as learning style evaluations and personalised education plans are useful instruments for figuring out and meeting the unique requirements of autistic students. One student said, "Teachers who acknowledge the variety of ways we learn and make accommodations for those differences foster inclusivity. It is about establishing an atmosphere in which each person may thrive according to their own talents."

Students underlined that a crucial component of diversified education is the need for flexibility in instructional techniques. It was believed that teachers who modified their lesson plans to suit students' different learning styles and speeds were encouraging inclusion. One youngster said, "It is important to be flexible. Learning environments are more inclusive when teachers are willing to try new things and modify their strategies. It guarantees that everyone can interact with the content in a method that works best for them, even autistic students."

### **Figure 5**

### *Teachers' and Students' Practices*

| Practices                      |                                     |                      |
|--------------------------------|-------------------------------------|----------------------|
| Promotion of Social Inclusion  | Differentiated Instr...             | Communication and... |
| Peer Support and Collaboration |                                     |                      |
| Individualized Support Plans   | Collaborative Planning and Teamwork |                      |
|                                | Adaptive and Inclusive Activities   |                      |

Students also emphasised the need for offering a variety of platforms for representation, expression, and interaction. Differentiated teaching resources, non-traditional evaluation techniques, and experiential learning chances were acknowledged as tactics that accommodate a range of learning styles. According to one student, "Teachers can accommodate the diverse learning needs of their students by presenting information in different ways and providing opportunities for us to demonstrate our understanding."

Ensuring universal access to the curriculum is the key. Students' conversations often revolved on the value of tailored assistance and criticism in differentiated training. Teachers who addressed particular learning difficulties, gave tailored advice, and gave helpful criticism were recognised for their dedication to diversity. One student said, "Personalised assistance has a big impact. We learn and progress when teachers take the time to offer us feedback that is specific to our needs. This is especially important for autistic students who can benefit from more direction."

Students also emphasised how important it is for teachers and students to be in constant contact in order to make sure that educational strategies continue to adapt to changing requirements. One youngster said, "It is important to communicate. Adjustments may be made in real time when there is open communication. It makes sure that teachers are aware of our development and any areas in which we may need further assistance, resulting in a more inclusive learning environment." Students often made the connection between the development of a supportive learning environment and differentiated teaching. Teachers who prioritized each student's distinct contributions and promoted a feeling of community were seen as essential to an inclusive learning environment. "Differentiated instruction goes beyond academics; it creates a supportive atmosphere". a student said. "A happy and welcoming learning atmosphere is fostered by teachers who value our individuality and support us in learning how best serves us."

Students also understood how varied education affected peer interactions. Collaborative learning possibilities and mutual support among classmates were seen as outcomes of accommodating varied needs throughout educational experiences. As one student put it, "The classroom community is strengthened when everyone feels involved. A supportive learning environment is fostered by differentiated teaching, which encourages cooperation among students, including those with autism." Although students acknowledged the advantages of varied education, they were open about the difficulties and areas where they might have done better. A few students said that in order to improve their ability to use differentiated teaching successfully, teachers need more professional development and training. One of the students said, "While teachers are doing a great job, they might use more ideas and insights from training. It is about making sure they have the assurance to modify training to fit the various demands of every learner."

Students also supported teachers' continual introspection and cooperation in order to exchange effective strategies and work together to overcome obstacles. One youngster said, "It is important to keep improving. Teachers may improve their methods and gain insight from one another's experiences. It is about creating an environment where learning and teamwork are valued by everybody, including autistic students."

#### ***4.4.2 Collaborative Planning and Teamwork***

In order to guarantee successful inclusion, students regularly recognised the value of cooperative planning and coordination among teachers, coworkers, and support personnel. It was believed that collaborative planning was a proactive strategy for meeting the many requirements of students, including those who had autism. One student said, "It is important to plan together. Collaboration among teachers and support personnel facilitates a more thorough understanding of the unique requirements of every student. It involves formulating a strategy that guarantees everyone can take an active role in the educational process." Students also understood the need for frequent communication and teamwork sessions where teachers could exchange ideas, go through tactics, and synchronise their teaching philosophies. "Regular collaboration sessions help teachers stay on the same page" a student said. They may exchange best practices, talk about obstacles, and come up with solutions as a group to guarantee successful inclusion."

The cooperative efforts of teachers, co-workers, and support personnel were emphasised by students as a crucial element in developing a welcoming and inclusive learning environment. The dynamics of partnership go beyond the confines of the classroom and include a mutual dedication to the academic achievement of every student. "Teamwork is about everyone working towards a common goal". a student said. "Collaboration among teachers, co-workers, and support personnel strongly conveys the idea that inclusion is a shared duty." Students also stressed the value of collaboration in

combining a variety of specialties. By using a variety of viewpoints, abilities, and experiences, collaborative planning eventually improves the assistance given to autistic students. "Teamwork brings diverse expertise to the table". a student said. "When support staff members work together, it guarantees that students get comprehensive help that considers both their academic and unique requirements. Support staff members often offer insightful opinions."

Students also gave instances of effective group projects that improved the educational opportunities for autistic students. Peer mentorship programs, in which students without autism supported and guided their colleagues with autism, are one noteworthy example. "The peer mentoring programme was a success". as one student put it. "It established a helpful network so that students could share knowledge with one another. It serves as an illustration of how teamwork enhances the educational opportunities for students with autism." Students also emphasised times when teachers and support personnel worked together to develop individualised lesson plans for autistic students. These programmes offered a customised approach to education by considering each person's preferences, skills, and limitations. "Personalised learning plans make a significant difference". a student said. "It guarantees that everyone may flourish in their own manner when teachers and support personnel work together to develop strategies that cater to the special requirements of students with autism."

Students explored ways to improve while acknowledging difficulties and applauding good teamwork. Certain students highlighted the difficulty posed by communication barriers among teammates, stressing the need for having open and transparent channels of communication. One of the students said, "In partnership, communication is essential." Successful cooperation may be achieved by addressing obstacles and promoting honest information exchange among team members. In order to

improve their ability to collaborate, students also stressed the need for continuous professional development on the part of teachers and support personnel. One student said, "One can learn how to collaborate. Teachers and support personnel are guaranteed to have the skills and information necessary to function well as a team via ongoing training. It is all about progress and ongoing learning."

#### ***4.4.3 Peer Support and Collaboration***

Students often underlined how crucial it is to actively participate in peer support in order to encourage the inclusion of their autistic classmates. Peer support was seen as a group endeavour to establish a setting in which each person felt important and included. "Peer support is about actively engaging with our classmates", a student said. "It takes more than simply being conscious of their needs to make sure they feel included in the community. Everybody has a role to play in fostering an inclusive atmosphere." Students also emphasised how important it is to have supportive ties with their autistic classmates. Developing relationships and being aware of one another's advantages and disadvantages was seen to be essential to advancing inclusion. One youngster said, "It is about building real relationships. A feeling of togetherness is created when we are able to comprehend and value one another. The best peer assistance comes from a real position of understanding and friendship."

Students gave illuminating instances of student-led projects that actively promoted inclusivity in the classroom. One such effort was the establishment of a buddy system, in which students matched with their autistic classmates in order to provide companionship and assistance. According to a pupil, "The buddy system worked well. It matched students who had autism with those who had not, resulting in friendships and a support system. It serves as an example of how students may take the initiative to make their school a more welcoming place."

Students also presented instances of autism awareness campaigns started by their classmates to inform the school community about the condition. These initiatives sought to dispel prejudices, increase comprehension, and foster an accepting environment. One pupil said, "Increasing consciousness has great power. Students who take the effort to spread awareness about autism help to dissolve barriers and foster a more accepting society. The goal is to establish a school community in which each person is recognized and understood."

Students often underlined how important peer cooperation is for creating an inclusive atmosphere. Students with autism were included in collaborative projects and group activities on purpose since they were considered as a way to celebrate diversity and share knowledge. As one student put it, "Creating an inclusive culture requires collaboration. Collaborating on initiatives that purposefully include everyone conveys that we appreciate the contributions made by one another. It is about fostering an atmosphere that values variety."

## **Figure 6**

*Teachers and Students' Practices II*



Students also recalled times when they worked together to plan activities that celebrated inclusion and the individual gifts of their autistic classmates. Talent shows, painting exhibits, and other displays of the wide range of skills within the school community were part of these events. One student said, "Event planning requires teamwork. Establishing platforms that showcase the abilities of all individuals, including those with autism, fosters inclusion and demonstrates how our differences unite us." As they acknowledged the benefits of cooperation and peer support, students openly spoke about obstacles and ways to do better. Potential obstacles include poor communication and the need for more formalised frameworks for peer assistance programmes were put forward by a few students. One of the students said, "It is important to communicate." Peer support programmes may function more effectively if they are designed with open lines of communication. It guarantees that everyone agrees and actively participates in their peers' inclusion."

Students also argued in favour of continuing education and training to provide them with the know-how and abilities required to be successful peer supports. One student said, "Learning is an ongoing process. Students get ongoing training to guarantee we have the

resources needed to help one another effectively. It is about giving us the tools we need to actively contribute to making schools inclusive."

#### ***4.4.4 Adaptive and Inclusive Activities***

Students often emphasised how actively they participated in inclusive and adaptable school community events. It was believed that taking part in these programmes would help to promote unity and recognise the unique skills and abilities of all students, including those with autism. One youngster said, "Being a part of inclusive activities means uniting as a community. It allows us to recognise one other's positive traits and foster an atmosphere where everyone is made to feel welcome." Students also spoke about their responsibilities in planning and taking part in activities that purposefully catered to the various needs of their classmates. In addition to being seen as an objective, inclusion was also seen as a shared duty among the students to actively participate in making these events successful. As one student put it, "We actively work to ensure that our activities are inclusive. It is not simply a matter of planning them; it is also about making sure that everyone can take part and have fun, regardless of ability."

Students gave instances of inclusive projects that they thought had a particularly significant and positive effect. The creation of inclusive sports programmes that modified conventional sports to suit a variety of abilities was one such endeavour. As one student put it, "Inclusive sports have had a big influence. It is about redefining sports so that everyone may participate in them. Above all, these activities foster enjoyment for all participants and the development of skills and collaboration." Students also spoke about the achievements of programmes centred on art and creativity that welcomed a range of artistic expressions and skill sets. Collaborative initiatives and inclusive art shows gave students a chance to show off their uniqueness. "Art initiatives have been particularly impactful", a student said. "They enable us to value our peers' originality and express ourselves in original ways."

Creating an environment where each person's creative expression is heard is the main goal."

Students often made the connection between fostering an accepting culture within the school community and their involvement in inclusive and adaptable activities. It was believed that actively embracing diversity through various activities would help dispel prejudices and create an environment where everyone felt appreciated. "Inclusive activities contribute to a culture of acceptance". a student said. "Engaging in active participation communicates our appreciation and celebration of individual uniqueness. Creating a school community where each person feels valued for who they are is the goal." Students also emphasised how inclusive activities help to build good connections among classmates. Working together on adaptive activities generated relationships and connections that went beyond differences, fostering a school climate that is more accepting and encouraging. "Inclusive activities bring us together" a student said. "A feeling of togetherness is created when we collaborate, whether it in sports, the arts, or other endeavours. It is about establishing connections that transcend our divides."

As they celebrated the accomplishments of inclusive and adaptive activities, students candidly shared difficulties and recommended ways to make improvements. A few students mentioned possible obstacles, such the need for more information and understanding of the range of requirements of students, including those with autism. One of the students said, "Knowledge is power. Some difficulties result from our incomplete comprehension of our peers' demands. To guarantee that our events are really inclusive, we can overcome these obstacles with the support of education and awareness campaigns." Students also pushed for continual feedback systems so that inclusive activities could be evaluated for efficacy, and changes could be made over time. One youngster said, "It is important to get feedback. It enables us to recognise what is effective and what needs

improvement. Establishing avenues for ongoing input guarantees that our initiatives continue to be inclusive and adaptable to the changing requirements of our school community."

#### ***4.4.5 Communication and Understanding***

Students again underlined how crucial it is to encourage peer knowledge of autism and the special needs of their peers via active communication. It was believed that communication may serve as a bridge to increase understanding, dispel prejudices, and foster a supportive and empathetic atmosphere. One youngster said, "It is important to communicate. It involves actively engaging in peer conversations, exchanging knowledge, and promoting a greater understanding of autism. An inclusive community is built on the basis of open communication." Students also emphasised their involvement in starting discussions regarding autism and neurodiversity. These discussions attempted to debunk misconceptions, provide information, and promote candid discussion on the experiences of their autistic peers. As one student put it, "We initiate the conversation regarding autism. It is about striking up discussions that otherwise may not have taken place. Information sharing fosters the development of a community that is more informed and compassionate."

Students gave instances of student-led projects that improved inclusion-related communication and information exchange. One noteworthy project was the planning of awareness campaigns that disseminated knowledge about autism, featured individual accounts, and established forums for candid conversations. "Awareness campaigns have proven to be effective" a student said. "They make it possible for us to communicate in a relevant and approachable manner. The goal is to provide a forum for candid discussions on autism." Students also spoke about how peer education programmes were put into place, training students to be ambassadors for inclusivity. By giving students the

information and abilities to speak clearly, these initiatives promoted a more encouraging and understanding atmosphere. One of the students said, "Peer education is effective. It is about teaching students how to speak out for inclusion, communicate clearly, and assist their classmates who have autism. These programmes foster an understanding-based society."

Students emphasised the value of storytelling and personal histories in fostering empathy and understanding. Students were able to relate to one another on a human level by sharing tales and personal experiences, which encouraged empathy and compassion. "Personal narratives are powerful tools" a student stated. "The experiences of our friends with autism become more relatable when we share our own tales. It is about building empathy and understanding via a relationship that transcends data and facts." Students also spoke about projects in which they worked with their autistic friends to produce and distribute material that emphasised their distinct abilities and viewpoints. This cooperative strategy was thought to be a means of amplifying various perspectives and advancing a more thorough understanding of neurodiversity. "Collaborative content creation is impactful" a student clarified. "Collaboratively producing material that highlights the abilities and qualities of our classmates who have autism dispels misconceptions and advances a more complex understanding."

As they spoke about their attempts at comprehending and communicating, students recognized difficulties and offered solutions. Some students said that in order to improve their communicative abilities and have a deeper comprehension of the various requirements of their classmates who have autism, they must continue their schooling. One of the students said, "Learning never stops. Constant learning about autism gives us the information and communication abilities we need to be strong friends and advocates." Students also pushed for inclusion-related and neurodiversity-related subjects to be taught

in schools. It was thought that including these topics in formal education would guarantee that every student gained a basic awareness of autism. "Curriculum inclusion is important". a student said. "Learning about neurodiversity as a subject in school helps to mainstream the discussion and guarantees that everyone is aware of it. It is about integrating inclusivity into our classroom as a matter of course."

Students spoke on how important it is to set up question periods and open dialogues in order to promote inclusive discussions regarding autism. "They provide an environment where anybody may inquire about autism and feel at ease. It is about creating an atmosphere in which knowledge is derived from inquiry." Students also emphasised their involvement in setting up unofficial get-togethers where they may have casual discussions regarding neurodiversity. These environments promoted a feeling of unity and understanding by allowing for more informal and open talks. One of the students said, "Informal meetings have an influence. They provide a laid-back environment where students feel comfortable to talk about autism and express their views. Making these discussions a regular feature of our social interactions is the goal."

Students organised seminars and talks on their own initiative to provide their classmates with more insights on autism. These classes were designed to inform and increase awareness among the school community, and they were often given by students with personal experience or knowledge of autism. One of the students said, "We can learn more about the subject via workshops and lectures. Our personal touch is added, and our peers are able to relate to the topic on a deeper level when we facilitate these sessions."

## **Chapter 5: Discussion, Recommendations and Conclusions**

### **5.1 Discussion**

Using a sequential explanatory design and a mixed-method approach, the study collected data through surveys and open-ended interviews. Together with a summary of the findings based on each research question, this chapter arranges the discussion of the findings in such a way as to address the answers to the four research questions, together with the original contributions, recommendations based on the study's findings, and suggestions for further research.

The results indicate that a considerable number of teachers and trainers in the UAE think they have insufficient experience to work with students with ASD in inclusive classroom settings. This could indicate a shortcoming in terms of professional development on ASD as well as on inclusive education. Higher educational institutions should act quickly and come up with new ways of helping teachers, such as developing more effective training programmes, supporting all the teachers even after a period when they have been trained, and basing all teacher training on scientific evidence that agrees with the findings of De Boer (2009). Mainstream teachers have several problems when it comes to addressing inclusive education for students with ASD. In addition, some issues, such as scarcity of resources, insufficient support systems, and lack of awareness of effective strategies in working out the different needs of students who have ASD, have been observed (Brown, Brown, and Poulson, 2008). These results call for targeted interventions to overcome these barriers in order to distribute resources and put in place professional development programmes that would improve the educational capability of teachers, allowing them to effectively implement inclusive education policies.

Most teachers in the UAE believe that inclusive teaching materials would benefit students with ASD. However, the outcomes may imply variations in the knowledge and

implementation of such tools. Therefore, there should be a discussion about a specific set of practical tools and what can be done to make them easier to use and more accessible in different learning environments. The study noted that the best collaboration, as well as communication among teachers, parents, community, and administrative staff in a school, positively influences delivering inclusive education to learners with ASD, which is similar to the findings in the research by Elhoweris and Efthymiou (2020). There is a need to discuss efficient collaboration patterns, underscore the need to involve families at a pedagogical level, and outline ways for improving dialogue among participants.

The positive attitudes indicate that teachers' behaviours are linked to perceptions of inclusion and autism. Successful teaching methods, coupled with positive attitudes and views, can foster a supportive, encouraging learning platform for students with ASD (Jones and Frederickson, 2010). The study's findings were similar to those of Madani (2019), who revealed that better strategies for assessment and evaluation need to be in place if the progress and achievements of students with ASD are to be monitored in inclusive settings. These findings suggest the importance of policies and the need for monitoring quality education for autistic students in the UAE. Therefore, one could research whether there are any changes that have to be made in order to accept even students with ASD into high schools.

The world effect as well as the implications of the inclusive education policies towards students with ASD in the UAE call for actions. Such an action involves offering helpful mechanisms, original ideas, and teachings seen from the perspective of enhancing cross-board inclusive education methods. Consequently, the discussion should concentrate on the utilisation of these results across various societal contexts and educational settings (Cambridge-Johnson et al., 2014). This brings into question the importance of the various perspectives that newer versus veteran teachers provide within an inclusive setting. People

within a given group with one to five years' experience see things differently when compared to people who have more experience (Calderon, 2013). Consequently, early career teachers can also be trained on specific professional development that focuses on inclusion policies for people living with ASD.

Notably, there was some variation between the policy knowledge of one to five year experienced teachers compared to others. This indicates some unique challenges or benefits within the initial stages of movement away from the specialist toward the more open type of teaching system. If policies are to be successful, creating training and support programmes for teachers at this critical stage of the beginning of their career may be vital (Sharif et al., 2016). The fact that there have been marked differences between general education and special education teachers as far as their understanding of different policies, is a clear indicator of unequal views among these two groups of teachers. In particular, some remarkable differences were revealed among teachers who specialised in general education. This emphasises the importance of coordinated strategies and specialised training initiatives that narrow the gulf of understanding among everyday education teachers and teachers who deal with those with handicaps, so as to promote a more consistent and inclusive learning setting.

This study's results indicate the impact of specific training on teachers' knowledge and understanding of inclusion in relation to students with ASD. The same means that teacher support and granting them official specialist credits in special education improves their efficiency in implementing inclusive processes. The tremendous differences in knowledge about policies based on teachers' experiences teaching students with special needs highlight the impact of real-life experience on shaping beliefs, which is similar to the findings of Gaad and Khan (2007). Individuals with zero years, one to five years, and six to ten years of experience had distinctive viewpoints. The comparison of general education

teachers and specialist education teachers emphasises the importance of providing appropriate professional development for teachers in different work settings.

Interdisciplinary professional development programmes that promote cross-specialised knowledge among a more unified and capable teaching community are needed. Significant variations in perceived preparedness for inclusion across teachers in terms of formal special education qualifications supports the positive impact of specialised training.

Increasing teacher readiness might involve strategies such as giving teachers support and incentives to become certified in special education.

Notable differences resulting from interactions with disabled students highlight the importance of practice in the development of teachers' perceptions of their maturity. This might suggest a more effective way of equipping teachers with the competency and skills needed to embrace inclusive education through modifying experience-based programmes (AlGhanem, Mustafa and Abdallah, 2020). Evaluation using Cronbach's alpha for inter-assessor reliability showed a high value of 0.958 for the "Knowledge of Policy" construct, which indicates excellent inter-rater agreement in terms of validity, supporting how much teachers know about education/learning policies. All ten of the construct's elements were significantly correlated with one another, suggesting that they all tap into the same underlying idea. It is, therefore, conclusive, having an excellent, reliable scale that clearly reflects teachers' understanding of education policy in their responses.

Box plots further illustrate the relationship between the teachers' policy knowledge and various demographic variables. Surprisingly, the medians were different in terms of years of experience; teachers with 16 to 20 years of experience had maximum medians. Additionally, gender and formal special education certification also appeared to affect knowledge scores, calling for specific interventions and support mechanisms (Ramdoss et al., 2012). The reliability scale for "Teacher Prep/Teach Perception" was high at 0.977 of

Cronbach's alpha. On the grounds of this remarkable dependability, the construct's twelve measures capture fairly consistently the instructional judgments of preparedness. The findings suggest that the scale is a valid way to measure teachers' perceptions with regard to being prepared for the profession.

The differences in students' levels of autism awareness determined their views and behaviours toward autistic peers. A positive connection exists between empathy and awareness, highlighting why education can be beneficial in making an inclusive and accommodating space. The usefulness of information to promote inclusion was evident among students who were aware of autism as they indicated more positive interactions, less stigma, and inclusive behaviours, which agrees with the findings of Pandia and Purwanti (2019). Recognition of prevalent myths and determination to refute them through education is clearly a proactive approach to undermine misunderstanding. The student understood why lifelong learning was necessary and supported the school's comprehensive seminars and workshops as a means of raising awareness. Extensive awareness of the pros and cons of the incorporation of autistic students in the school was demonstrated by their views. These effects included positive impacts on dynamism, diversity, and the recognition of diverse talents among people.

Communication challenges that can result from such inequalities were observed, highlighting the importance of listening to, and utilising, suitable communication mediums.

The broader educational environment was reflected in student perspectives on school culture and acceptance. Inclusive school culture, school comprehensive programmes, and administrative priority for inclusion were noted as positive aspects. One area that needed attention was ongoing attempts towards the total integration of all students in the school system, which is similar to the findings of Siyam and Abdallah (2022).

Students stressed the need for dynamic policies and a culture of tolerance. They argued that it is not something that can be achieved only once, but which needs to be a continuous process. Together, these findings present a school-student body that appreciates consciousness, comprehension, and acceptance as necessary elements for fostering a healthy, supportive learning community. These results give rise to a number of suggestions about practice in the educational arena (Hendricks, 2011). Constantly educating students on autism may also lead to a compassionate population of students, which may be beneficial. Such school-wide programmes and other relevant events explicitly aimed at creating understanding and tolerance are essential in moulding a conducive school environment. It is imperative that school leadership actively promotes inclusive such practices and routinely evaluates policies in order to provide an enabling administrative environment. By involving students in efforts to promote awareness and embrace cultural plurality, schools can help them improve the school environment.

This study found that the implications of inclusive practices as they relate to students' academic success, as well as their entire school lives. The development of flexibility and patience occurred as these individuals developed positive peer relationships, which in turn contributed to their intellectual and psychological progression. However, only inclusive practices were acknowledged as a means of establishing a favourable learning environment in which students would comfortably ask for assistance (Brown, Brown, and Poulson, 2008), with an emphasis on how a supportive learning community, motivation, and achievement are connected. Despite agreeing with the merits of such measures, students noted difficulties, especially communication gaps, underlining the importance of tailored-made communication approaches. Continuous learning for teachers and their students is crucial as it affects the effectiveness of inclusive practice. Students emphasised the importance of education as a tool for fighting discrimination and removing

misconceptions about autism. They pledged to make sure such policies were observed, and demanded an environment free of bullying for all students, including those with autism (Jones and Frederickson, 2010). They insisted on continuing education, awakening efforts, and adaptive instruction programmes for sustaining friendliness in learning.

The students focused on how vital it was for a teacher to include learners with autism. Positive teacher-student interaction was deemed crucial in building an inviting atmosphere of encouragement. Strong teacher-student relationships were indicated to be associated with positive results in terms of trust and openness, especially important for helping autistic students who may need more help. They also highlighted the need for continual learning and improvement on the part of teachers, whose responsibilities include helping persons with autism in the world (Hendricks, 2011). This implied that teachers' adaptability would lead to meaningful inclusion. When teachers redesigned their teaching strategies to fit and attend to the needs of ALL students, including individuals with ASD, they were viewed as necessary participants in an inclusive learning context. First, they emphasised the fact that teachers need to connect well with their students and listen to what they say in order to be able to guide them positively within the classroom setting.

This also made the students realise that it went beyond just helping teachers create conducive learning conditions. Catalysts of inclusion are teachers providing peer support and a collaborative environment. This underscores the need to create an enabling mood in classrooms and to champion diversity, which is similar to the findings of Mansoor et al. (2018). Open communication channels between teachers, students, and parents were stressed as necessary for feedback and shared learning objectives. Students saw feedback as a means of communication between teachers and students with the intention of offering flexible teacher assistance. Inclusive practices must be adhered to at all times; therefore, a

collaborative effort with all stakeholders must be used to ensure the establishment of an effective support network.

Through differentiated instruction, teachers regularly showed appreciation to the students that they were addressing their needs, and this also included students with autism. It was stressed that successful differentiation depends on an in-depth comprehension of each student's distinctive way of learning. The key topics included recognition of neurodiversity and tailoring lesson plans for students with special needs, which is similar to the findings of Madani (2019). The use of the assessment of learning styles and individualised education plans was emphasised. The perception of flexibility in instructional technique, particularly the modification of lesson plans in relation to different learning styles and speed, acted like an enabler. The students pointed out the need for multiple venues for expression, representation, and interaction, reiterating that teachers must be specialised with appropriately tailored assistance and feedback.

Students underlined that teaming up was a good thing in order to help students in general, as well as students with autism. Frequent meetings should be undertaken, ensuring constant communication among the teachers for ideation sharing and aligning their unique philosophy about education. Cooperation extended beyond the formal environment, demonstrating a shared responsibility for student education. Collaboration with regard to different points of view, skills, and experiences was viewed as an effective way of getting extra input on the support available to autistic students, which agrees with the findings of Calderon (2013). To illustrate, students gave examples of successful group work, including peer mental-health programmes and personalised study plans. They also recognised weaknesses and called for ongoing professional development for tutors and other service providers. The importance of student involvement in peer support could not be overlooked when promoting inclusion among students with autism. Students stressed having autism-

friendly relationships among themselves so that they could understand one another's strengths and weaknesses, which agrees with the findings of Brown, Brown and Poulson (2008). Student-driven initiatives such as buddy systems and autism awareness were recognised for their positive outcomes. Inculcating an inclusive culture was done by involving all the learners in collaborative projects and inclusive activities. Peer cooperation contributed positively towards celebrating diversity, promoting cooperation, and building a welcoming and supportive school.

One of these was peer support, which came up as a vital tool for inclusion as learners voluntarily participated in buddy systems and the social consciousness programmes. It was evident that inclusive and adaptable activities can help build a culturally-accepting environment as well as encouraging positive interactions among peers (Sharif et al., 2016). The talk about communication and understanding stressed the importance of open discussions, public awareness campaigns, and continuous education in order to create bridges out of lack of knowledge, understanding, and empathy (Jones and Frederickson, 2010). The issues on the validity and reliability of interview data were well handled and, as a result, raised the level of confidence in the study. Methodical approaches to data collection, member checking, and inter-coder reliability supported the robustness of the findings. This increases the external and internal validity of the results, which can also be generalized outside the local context.

In discussing their successes and positive practices, students frankly described obstacles; they also made suggestions for ways to improve the future. The lack of ongoing education, awareness campaigns and feedback systems were obstacles to sustained effectiveness in inclusive practices. This study has gathered reliable information about autism that stakeholders can use to decide exactly what kinds of measures are needed for the private high schooling of autistic students (Jones and Frederickson, 2010). Solid

strategies, differentiated instruction, cooperative learning, and peer assistance after school, as well as dynamic activities, all add up to a comprehensive strategy for achieving an education where teaching differences are the rule. This reflects the changing nature of students' thinking regarding how teachers can maintain and develop their professional qualities. Teachers must always seek new knowledge, whether they are doing research or moving forward in practice; this requires outstanding dedication by each member of a team that involves devoted engagement with cooperation at every level to build social cohesion within schools.

## **5.2 Recommendations**

From this research, a key recommendation is that there should be Individualised Education Plans (IEPs) for students with ASD. Such plans should not only include materials from parents and teachers related to the child's specific case, but also consider professional input by those who specialise in dealing with problems among students on the spectrum. However, these individualised plans cannot be limited to purely academic aspects. Furthermore, they should be sensitive to the different social needs of each child. The plans should be carefully considered and modified in response to changing circumstances with regard to the student. By doing this it is possible to provide a more personally-tailored learning experience.

Moreover, to further increase the overall inclusion of ASD students the aim should be to enhance and strengthen inclusive classroom practices. Thus, as part of teacher training programmes, teachers should be taught to modify and use methodology consistent with different learning styles. Examples of these include sensory-friendly elements in the learning environment, various teaching methods and flexible seating arrangements. Consequently, such inclusive practices would lead to an atmosphere of

warmth, with practitioners creating a space where all are welcome with open arms and then helped to advance academically as well as emotionally.

To support high school-aged ASD students there must be communication between parents and teachers. One step in this direction would be the establishment of clear lines for communicating regular scheduled meetings, setting up digital platforms or reporting notebooks to give feedback regarding the child's accomplishments and progress. Open discussions would enable teachers and parents to get a better look at the child, fostering closer cooperation. This greater transparency would fill in one more detail of a structure to help the students progress with their studies.

With regard to the development and dissemination of IEPs for students with ASD, parents should join forces with teachers and special education professionals. In fact, these planned steps should not only be about academic targets and goals, but also would need to consider the students' social needs and sensory aspects. These plans, which should be periodically reviewed and revised in terms of developing more effective educational measures corresponding to the student's progress, could flesh these bones out.

Promoting and strengthening inclusive classroom practices would better integrate students with ASD overall. Therefore, ongoing teacher training programmes should provide teachers with the necessary tools and methods for adjusting their teaching approaches to suit a wide range of learning styles. Examples include adapting the environment in sensory-friendly ways, making use of differential instruction techniques, and establishing flexible seating arrangements. However, by adopting such inclusive practices, teachers can create an environment that allows all students to grow academically and socially in the type of space they deserve.

Students with ASD succeed in high school because of effective communication between parents and teachers. Suggestions include setting up clear and effective channels

of communication including regular meetings, digital platforms, or a communications notebook to make sure parents are informed about their child's progress in studies, activities participated in, and any difficulties experienced. By opening such lines of communication, we could develop a more comprehensive understanding of each student's needs and the resources they require. In this way, parents and teachers would become partners in education. This greater transparency would help create an environment of support that the student will benefit from throughout his or her education.

### **5.3 Concluding Remarks**

In conclusion, the current study originated from the fact that the UAE's 2021 Vision and National Policy for ASD requires ensuring that students with ASD are able to access schools in such a way as to provide them with a positive experience and equity. Consequently, there is a need to deliberate on the different variables and the implications of the implementation necessary for the inclusion of students with ASD in particular, and specifically in high schools. Finally, the study has worked towards providing a suitable ASD inclusion framework and for making recommendations for better developing the implementation of the National Policy for ASD in the United Arab Emirates.

As a result, the outcomes of the research could contribute to building a framework and structure for teacher preparation, training, the accessibility of resources, student preparation, and possible bridging programmes.

### **5.4 Personal Gains**

This study has been an eye opener for me as a clinician, allowing me to delve deep into this issue rather than criticising the system. It has empowered me and taught me to see the bigger picture, to consider the whole system and the multilayers that affects inclusion, and has made me realize how complex the topic is. As a therapist working with patients and parents, my perspective on my role has increased as I have come to realise that I am part of

this circle, and that my contributions don't end at the hospital door. Rather, I need to expand it to schools, decision makers and parents.

### **5.5 Further Research**

As observed from the study's results, one of the most repeated issues is training and its relationship to positive attitudes. However, Salovita (2020) argues that this could be an excuse for excluding students with special needs. Consequently, it is a socially acceptable argument and other issues related to collaboration and hands-on training are more beneficial than cold training. Therefore, this study recommends an experimental study on the training effect on inclusion, and one to compare such an effect with that found in other countries in the Middle East and from an international perspective. Furthermore use of multiple regression for future research is recommended in order to find out relations in different groups and within groups.

The present study sheds light on general issues related to inclusion without the ability to generalise the findings. There is a need to seek solutions on a bigger scale because of the small sample size used in this study. Therefore, we would call for a large-scale study using a larger sample size comparing emirates, and comparing the perspective in the UAE as a whole with the perspective in other countries in the Gulf in an effort to help support the inclusion system in the Middle East as a whole.

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## Appendices

### Appendix A: Sample Consent Form

#### Research Title

#### **Explanatory Sequential Study on Teachers' and Students' Perceptions of Inclusion Provisions of Students with ASD in High Schools in Dubai.**

This consent form is just one step in the ethical clearance procedure; a copy has been provided to you. It ought to provide you with a general understanding of the purpose of the study and the nature of your involvement. Please ask if you would want further information about anything that is discussed here or about anything that is not included. Please take the time to carefully read this form and any supporting documentation.

#### ***Invitation to Participate***

I am writing my dissertation entitled: "Explanatory Sequential Study on Teachers' and Students' Perceptions of Inclusion Provisions of Students with ASD in High Schools in Dubai", and you are invited to participate. My name is Suha Alshuaibat, and I am a Senior Autism Diagnostician, Mental Health Department in Aljalila Students' hospital and a PhD candidate at the British University in Dubai. I would like to invite you to participate in a research project about Perceptions and Practices on the Inclusion of students with ASD.

#### ***Research Purpose***

With the UAE underlining inclusive education, and the inclusion of students with ASD specifically, this study will aim to explore teachers' and students' perceptions with regard to the inclusion provisions of students with ASD in high schools in Dubai

#### ***Research Method***

I wish to extend an invitation to you to take part in a survey and interview if you choose to participate. Your responses will be shared with the other research participants – my supervisors - and sent back to you for review.

#### ***Your Professional Opinion***

Your professional opinion regarding the inclusion of students with ASD in high schools will be requested. The participants in the research will be informed of the findings. Research participants may benefit from the findings in a variety of ways, including a better knowledge of how inclusive behaviours and attitudes can build a foundation for all students with ASD.

#### ***Confidentiality - Anonymity - Security***

If you choose to take part, all personal information collected about you for the study, including your name as a participant, will be kept completely private and never disclosed to the public. Throughout the study, any information that could be used to identify you personally will be kept in a closed filing cabinet in my office. Password protection will be used for electronic data. I will delete all data including personal information after the study is finished. The study's published results will only include statistical or group data that cannot be used to identify a specific participant.

#### ***Okay To Say No***

It is up to you to decide whether or not to take part in this study. Please read the above material and consider it. Please ask me to clarify any portion of the information if you do not understand it. It's okay if you want to speak with someone who isn't involved in this study for advice. Your decision will not impact your current or future relationships with your school if you choose not to participate or if you later decide to stop participating. You will be able to obtain a copy of the data, results, and information upon request. You may always stop taking part at any moment, and all information that was gathered up until then as a result of your limited involvement will be deleted and not used in the research. Should

you choose to take part, kindly sign the document as stated below. By signing below, you attest that you have read, taken into consideration, and comprehend the information above, and that you have made the decision to take part.

***What Your Signature Means***

By signing this Consent Form, you attest that you have read the material about participating in this research project to the best of your knowledge and that you are willing to take part. You are able to leave the study at any moment. You should feel free to request clarification or further information at any time during your involvement, as this will be considered your first consent for continued participation.

Signature of Participant

Date

Print Name:

Signature of Researcher

Date

***Contact Information***

NAME

Telephone:

Email:

If you have any questions concerning your participation in this project you may also contact

Suha Alshuaibat– Senior Diagnostician – Mental Health Department –  
Aljalila Hospital, (+971 4 2811496), email: [suha.alshuaibat@ajch.ae](mailto:suha.alshuaibat@ajch.ae)

A copy of this consent form has been given to you for your records and reference.

## Appendix B: Sample Teachers' Survey Form

*This survey is part of a research study on inclusive education for students with Autism Spectrum Disorder (ASD) in high schools in Dubai. Your responses are anonymous and will be used for research purposes only.*

### **SECTION ONE: PERSONAL INFORMATION**

Gender:

Male ☐

Female ☐

Age:

<29 ☐

30-39 ☐

40-49 ☐

50+ ☐

Are you a qualified Special Education Teacher?

Yes ☐

No ☐

Your highest qualification:

3 years teaching diploma ☐

Bachelor's degree ☐

Master's Degree ☐

PhD ☐

Your current position is:

☐ Classroom teacher

☐ Special Education teacher working with inclusion department.

☐ Special Education teacher working within classrooms.

☐ Special Education teacher providing sessions for students with difficulties.

Years of experience in:

☐ As Special Education teacher \_\_\_\_\_

☐ As a General Education Teacher \_\_\_\_\_

Throughout your career, you taught how many student with Special needs ?

| No | Type of disability                                  | Number of Students         |
|----|-----------------------------------------------------|----------------------------|
| 1  | Sensory (e.g. Hearing)                              | [0, 1-5, 6-10, 11-15, 16+] |
| 2  | Social Communication and behaviour challenges (ASD) | [0, 1-5, 6-10, 11-15, 16+] |
| 3  | Physical challenges                                 | [0, 1-5, 6-10, 11-15, 16+] |
| 4  | Intellectual disabilities (mild, moderate, severe)  | [0, 1-5, 6-10, 11-15, 16+] |

| No | Type of disability                | Number of Students         |
|----|-----------------------------------|----------------------------|
| 5  | Mental Health (e.g. Depression)   | [0, 1-5, 6-10, 11-15, 16+] |
| 6  | Compound or comorbid Disabilities | [0, 1-5, 6-10, 11-15, 16+] |
| 7  | Other (please specify)            | [0, 1-5, 6-10, 11-15, 16+] |

## SECTION TWO: POLICY:

Inclusive education is mandated by the government in UAE through the KHDA.

1- You are asked to consider how these policies are being used in your school in response to the following questions.

Are you familiar with these policies?      ☐ Yes                      ☐ No                      ☐ Not sure

2- Please select the extent to which you agree or disagree with the following statements regarding the inclusive education policy:

| NO |                                                                                                                            | Strongly Disagree        | Disagree                 | Neither agree nor disagree | Agree                    | Strongly Agree           |
|----|----------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 1  | For inclusive education to be successful at my school, the government and lawmakers still need to provide more assistance. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2  | Students with ASD are enrolled in my school in accordance with the inclusive education policy at all times.                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3  | When creating lesson plans, every member of the staff at my school considers the inclusive education policy.               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4  | All students with ASD have easy access to inclusive programs because to the inclusive education policy.                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |

- |   |                                                                                                                         |                          |                          |                          |                          |                          |
|---|-------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 5 | The top staff members and our school principal always make sure that we are adhering to the inclusive education policy. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | There is access to ongoing professional development focused on helping students with ASD.                               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | At our school, we routinely talk about how to put the inclusive education policy into practice.                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | There is easy access to information regarding ASD and associated services.                                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 9 | In my school, the inclusive education policy is always adhered to when creating assessment tasks.                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

1   2   3   4   5   6   7   8   9   10

How much is your school implementing the inclusive education policy, on a scale of 1 to 10?

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

3- Please complete these sentences:

1. The following are the aspects of the inclusive education policy that are performing well:

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2. The inclusive education policy has to be modified in the following ways:

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### SECTION THREE: TEACHER PREPARATION:

The following questions will enquire you about the trainings were given to you during your teacher preparation course:

1. In my teacher education program, we studied:

A minimum of one course of study on ASD

☐Yes   ☐No   ☐Do not  
remember

A professional experience, or practicum, in which I assisted students with ASD

☐ Yes ☐ No ☐ Do not remember

| NO |                                                                                                       | Strongly Disagree        | Disagree                 | Neither agree nor disagree | Agree                    | Strongly Agree           |
|----|-------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 1  | Overall, I feel that my teacher education course did not really prepare me to teach students with ASD | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |

2- My teacher education program equipped me to work well with students who have the following difficulties:

| NO |                                                | Strongly Disagree        | Disagree                 | Neither agree nor disagree | Agree                    | Strongly Agree           |
|----|------------------------------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 1  | Sensory difficulties (e.g. Hearing)            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2  | Intellectual Disabilities                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3  | Physical challenges                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4  | Social Communication Behavioural (e.g. Autism) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5  | Mental Health (e.g. Depression)                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6  | Compound / Comorbid Disabilities               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 7  | Other (Specify below)<br>-----                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |

3- I was equipped by my teacher education program to:

| NO |                                                                                                    | Strongly Disagree        | Disagree                 | Neither agree nor disagree | Agree                    | Strongly Agree           |
|----|----------------------------------------------------------------------------------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 1  | Teach and work with students who have ASD and a variety of learning styles in a regular classroom. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2  | Modify the course material so that it is suitable for students with ASD.                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3  | Utilize a range of instructional techniques to fulfill each student's needs.                       | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |

|   |                                                                    |                          |                          |                          |                          |                          |
|---|--------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 4 | Personalized lesson plans should be created for students with ASD. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 | Control the conduct of the ASD students.                           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Work together with other experts to assist students who have ASD.  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | Determine what the students with ASD need to learn.                | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 8 | Join forces with families to assist students who have ASD.         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

4- Please complete these sentences:

Teacher education programs need to include the following to better educate teachers to help students with ASD in general classes:

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2.The most significant ability I acquired from my teacher education course regarding instructing students with ASD was:

#### SECTION FOUR: RESOURCES:

Please rate your level of agreement or disagreement with the following claims.

| NO |                                                                                                                                           | Strongly Disagree        | Disagree                 | Neither agree nor disagree | Agree                    | Strongly Agree           |
|----|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 1  | My school has all the tools and technology required to accommodate students with ASD.                                                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2  | Teachers at my school with training in special education are qualified to assist other teachers while working with students who have ASD. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3  | To assist in providing an inclusive education for students with ASD, special education experts make frequent visits to our school.        | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4  | To support teachers and students with ASD, my school                                                                                      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |

- provides an adequate number of teacher assistants.
- |   |                                                                                                                                      |                          |                          |                          |                          |                          |
|---|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 5 | The government provides financial support to my school so that it can help students with ASD enjoy an inclusive education.           | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 | Psychologists and therapists provide support to my school so that I can work with students who have ASD.                             | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 | The administration and faculty at my school work together to support students with disabilities in receiving an inclusive education. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please complete the following statement:

1. The most crucial resource required for our school to successfully implement inclusive education is \_\_\_\_\_.

#### SECTION FIVE: Perceptions

Please rate your level of agreement or disagreement with the following claims.

- |   |                                                                                                                        | Strongly<br>Disagree     | Disagree                 | Neither<br>agree<br>nor<br>disagree | Agree                    | Strongly<br>Agree        |
|---|------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 1 | All students with ASD ought to be taught in regular classrooms, in my opinion.                                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | In my opinion, only special education teachers ought to work with students who have ASD in regular classroom settings. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | I think special education classes are a better environment for students with impairments.                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 | I think that the success of inclusive education will depend on the kind and severity of the student's impairment.      | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |

## SECTION FIVE: KNOWLEDGE

1. How confident are you in your ability to instruct students with ASD? WHERE (1) IS ENTIRELY UNCONFIDENT AND (10) IS ULTRA CONFIDENT

|    |                                                                            | 1                        | 2                        | 3                        | 4                        | 5                        | 6                        | 7                        | 8                        | 9                        | 10                       |
|----|----------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| NO |                                                                            |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |
| 1  | I am generally confident in my ability to work with students who have ASD. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2  | I find it difficult to help students with ASD                              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

I possess the requisite expertise and abilities to:

| NO |                                                                                       | Strongly Disagree        | Disagree                 | Neither agree nor disagree | Agree                    | Strongly agree           |
|----|---------------------------------------------------------------------------------------|--------------------------|--------------------------|----------------------------|--------------------------|--------------------------|
| 1  | In a generic classroom, instruct students with a variety of learning styles together. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 2  | Modify the course material to suit students with ASD.                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 3  | Utilize a range of instructional techniques to fulfill each student's needs.          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 4  | Personalized lesson plans should be created for students with ASD.                    | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 5  | Control the conduct of students who have ASD.                                         | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 6  | Work together with other experts to assist students who have ASD.                     | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 7  | Determine what the students with ASD need to learn.                                   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |
| 8  | Collaborate with families to assist students who have ASD.                            | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> |

Please complete these statements:

1. The following would increase my understanding of how to instruct students with ASD:

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2. The most crucial aspect of instructing students with ASD that I am aware of is:

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Thank you for completing the survey!

Appendix C: Sample Students' Survey Form

Inclusion of students with ASD

*This survey is part of a research study on inclusive education for students with Autism Spectrum Disorder (ASD) in high schools in Dubai. Your responses are anonymous and will be used for research purposes only.*

SECTION ONE: Personal Information :

1- Gender: ☐ Male ☐ Female

2- Age:

3- How many students with disability have you studied next to in your school years?

*Please respond for each type of disability*

| Type of disability |                                             | Number of Students         |                             |                             |                              |                              |
|--------------------|---------------------------------------------|----------------------------|-----------------------------|-----------------------------|------------------------------|------------------------------|
| NO                 |                                             | <input type="checkbox"/> 0 | <input type="checkbox"/> 1- | <input type="checkbox"/> 6- | <input type="checkbox"/> 11- | <input type="checkbox"/> 16+ |
| 1                  | Physical Disabilities                       | 5                          | 10                          | 15                          |                              |                              |
| 2                  | Intellectual Disabilities                   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1- | <input type="checkbox"/> 6- | <input type="checkbox"/> 11- | <input type="checkbox"/> 16+ |
|                    |                                             | 5                          | 10                          | 15                          |                              |                              |
| 3                  | Sensory (e.g. Vision or Hearing Impairment) | <input type="checkbox"/> 0 | <input type="checkbox"/> 1- | <input type="checkbox"/> 6- | <input type="checkbox"/> 11- | <input type="checkbox"/> 16+ |
|                    |                                             | 5                          | 10                          | 15                          |                              |                              |
| 4                  | Behavioural (e.g. Autism)                   | <input type="checkbox"/> 0 | <input type="checkbox"/> 1- | <input type="checkbox"/> 6- | <input type="checkbox"/> 11- | <input type="checkbox"/> 16+ |
|                    |                                             | 5                          | 10                          | 15                          |                              |                              |
| 5                  | Emotional (e.g. Anxiety)                    | <input type="checkbox"/> 0 | <input type="checkbox"/> 1- | <input type="checkbox"/> 6- | <input type="checkbox"/> 11- | <input type="checkbox"/> 16+ |
|                    |                                             | 5                          | 10                          | 15                          |                              |                              |
| 6                  | Multiple Disabilities                       | <input type="checkbox"/> 0 | <input type="checkbox"/> 1- | <input type="checkbox"/> 6- | <input type="checkbox"/> 11- | <input type="checkbox"/> 16+ |
|                    |                                             | 5                          | 10                          | 15                          |                              |                              |
| 7                  | Other (specify below)                       | <input type="checkbox"/> 0 | <input type="checkbox"/> 1- | <input type="checkbox"/> 6- | <input type="checkbox"/> 11- | <input type="checkbox"/> 16+ |
|                    | -----                                       | 5                          | 10                          | 15                          |                              |                              |

SECTION TWO: RESOURCES:

Please indicate how you rate your agreement with the following statements:

|    |                   |          |               |       |                |
|----|-------------------|----------|---------------|-------|----------------|
| NO | Strongly Disagree | Disagree | Neither agree | Agree | Strongly Agree |
|----|-------------------|----------|---------------|-------|----------------|

|   |                                                                                       |                          |                          | nor<br>disagree          |                          |                          |
|---|---------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1 | My school has all the tools and technology required to accommodate students with ASD. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | My school has trained the students to support peers with ASD                          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Students receive bridging programs to increase their knowledge about ASD              | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Please finish the following sentence:

1. The most crucial resource required for our school to successfully implement inclusive education is \_\_\_\_\_.

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### SECTION THREE: perceptions

Please rate your level of agreement or disagreement with the following claims.

| NO |                                                                                | Strongly<br>Disagree     | Disagree                 | Neither<br>agree<br>nor<br>disagree | Agree                    | Strongly<br>Agree        |
|----|--------------------------------------------------------------------------------|--------------------------|--------------------------|-------------------------------------|--------------------------|--------------------------|
| 1  | All students with ASD ought to be taught in regular classrooms, in my opinion. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| 2  | I think I can work beside a pupil who has ASD.                                 | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| 3  | I believe that students with ASD are spirits.                                  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| 4  | I believe I can include students with ASD in my friend's circle.               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |
| 5  | I believe I can socialize with students with ASD outside school.               | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> | <input type="checkbox"/> |

### SECTION FOUR: KNOWLEDGE

| NO |                                       | 1                        | 2                        | 3                        | 4                        | 5                        | 6                        | 7                        | 8                        | 9                        | 10                       |
|----|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1  | Overall, I know what ASD is.          | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2  | I struggle to support peers with ASD: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Rank from most important to least important.

NO

Summer bridging course

courses about ASD included in the curriculum

Experience studying next to a student with ASD

Reading about how to be a friend to a student with ASD

Other

Please finish these sentences:

1- My knowledge of how to accept, become a friend with a peer with ASD could be advanced by:

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2- The most crucial aspect about ASD that I know is::

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Thank you for completing the survey!

Appendix D: Sample the Teachers' Interview Form

Teachers' Interview Form - Draft

Teacher's Name: \_\_\_\_\_

Date: \_\_\_\_\_

Time: -

Directions: This form can be used by the researcher for documentation purposes during visits to the schools. It is used to Study teachers' perceptions and practices on the inclusion of private high school students with autism in Dubai.

|                                                                                                                                                                                                |        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| <p>1. Familiarity with inclusive education</p> <p>For you, what does inclusive education entail?</p>                                                                                           | Answer |
| <p>2. Is inclusion for students with ASD being implemented?</p> <p>Do you believe that teachers who have to work with students who have ASD in the classroom will be able to support you??</p> | Answer |
| <p>3. Training</p> <p>In order to enhance your capacity to incorporate students with ASD in your classroom and throughout the school, what kind of training would you like to receive?</p>     | Answer |
| <p>4. Specialised teachers' support</p> <p>Would collaborating with an experienced educator help you include students with ASD in your teaching?</p>                                           | Answer |
| <p>ASD inclusion policy</p> <p>What are your thoughts on the laws that promote inclusive education?</p> <p>Are you familiar with this law?</p>                                                 | Answer |
| <p>Resources</p> <p>What resources can make inclusion of students with ASD easier for you?</p>                                                                                                 | Answer |

|                                                                                                                                                                      |               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <p>Success to implement inclusion</p> <p>If you could integrate students with ASD into your classroom, would you be willing to participate in training sessions?</p> | <p>Answer</p> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|

#### Appendix E. Sample of the Students' Interview Form

##### Student Interview Form - Draft

Student's Name: \_\_\_\_\_

Date: \_\_\_\_\_ Time: -

Directions: This form can be used by the researcher for documentation purposes during visits to the schools. It is used to Students students' perceptions and practices on the inclusion of private high school students with autism in Dubai.

|                                                                                                                                                        |               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <p>1-Familiarity with inclusive education</p> <p>For you, what does inclusive education entail?</p>                                                    | <p>Answer</p> |
| <p>2. Is inclusion for students with ASD being implemented?</p> <p>What are your thoughts about studying next to a student with ASD?</p>               | <p>Answer</p> |
| <p>Training</p> <p>What type of summer bridging programs you suggest to receive to improve your skills to facilitate inclusion for peers with ASD?</p> | <p>Answer</p> |
| <p>Stigma</p> <p>How do you view peers with ASD?</p>                                                                                                   | <p>Answer</p> |

|                                                                                                                                                                             |        |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|
| Relationships<br><br>Would you include a student with ASD to your friend's circle? would you socialize outside school?                                                      | Answer |
| Resources<br><br>Do you think your school has enough resources to include students with ASD?                                                                                | Answer |
| Success to implement inclusion.<br>Would you be willing to participate in training programs designed to help you support the inclusion of students with ASD in your school? | Answer |

# APPENDIX 1: SUMMARY OF THE INTERVIEW THEMES SUBTHEMES AND CODES

Table 1

*Code concept and select semantic codes with text examples.*

## *Teachers' Interview*

| Code concept                          | Semantic code example                                                                                                                                                                                                      | Quoted example from teachers' interview text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Training and Professional Development | <p>training opportunities' efficacy and adequacy</p> <p>more focused and specialised sessions</p> <p>ongoing and updated training.</p> <p>How continual training affected their self-assurance and capacity to promote</p> | <p>General training provides a foundation, but it often falls short in addressing the diverse needs of students with autism".</p> <p>"...more specialised training sessions with an emphasis on useful tactics are required."</p> <p>"Interventions is constantly changing". said an teacher. To properly serve our students, it is imperative that our training be up to date with the most recent research and approaches."</p> <p>"Although the training was beneficial, it is difficult to implement in a dynamic classroom with a range of needs".</p> <p>More hands-on training sessions or mentorship initiatives might close this gap."</p> |

|                        |                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | <p>inclusive practices</p> <p>Collaboration</p> <p>multidisciplinary cooperation</p> <p>special education coordinators and resource experts</p> | <p>"Collaboration is key. Working together, exchanging ideas, and solving problems as a group improves the educational experience for autistic students."</p> <p>"It might be difficult to find time set out for cooperation, even when it is recommended"</p> <p>"multidisciplinary cooperation to better meet each student's unique requirements, we need more organized opportunities."</p> <p>"It is important to have a support structure in place. Help is much appreciated when special education coordinators who are aware of the particular requirements of autistic students are available. Nonetheless, difficulties arising from the demand surpassing the resources at hand were called attention to"</p> <p>"Increasing funding for resources and support staff would help create a more welcoming learning atmosphere."</p> |
| Resource Accessibility | <p>Need for specialised materials and support people</p> <p>Sufficiency of the resources</p>                                                    | <p>"It is essential to have access to materials that are specifically designed to meet the needs of students with autism"</p> <p>"It makes it possible for us to provide a more welcoming and inclusive learning environment."</p> <p>"Although we recognize the value of specialist resources, accessing them may be challenging. Sometimes our capacity to completely meet the different requirements of students with autism is hampered by limited availability."</p> <p>"The foundation of inclusive education is resources. Giving autistic students the kind of specialised attention and care they need is difficult in the absence of sufficient resources and support personnel"</p> <p>"We can create activities that accommodate various learning styles if we have the appropriate resources." This improves</p>               |

|                       |                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | <p>The beneficial impact of extra staff</p> <p>resource accessibility has an influence on society outside of the classroom,</p> | <p>everyone's experience in the classroom, not just the autistic students."</p> <p>"Having support staff—whether it be a teaching assistant or a licensed counselor—greatly improves our capacity to offer individualized support."</p> <p>It completely transforms the kind of instruction we can provide."</p> <p>"Support staff members do more than just keep the classroom running smoothly; they also help students' emotional health."</p> <p>"Having that additional assistance may have a profound impact on the social and emotional development of individuals with autism."</p> <p>"Having support staff is important, but it is also important to make sure they receive training that addresses the special needs of students with autism".</p> <p>"It is about assembling a group that can function as a unit to provide the most assistance."<br/>"Sharing resources and ideas among teachers can be a powerful way to overcome individual limitations".</p> <p>Within the school, exchanging tactics and resources fosters a more welcoming community."</p> <p>, "I've noticed improvements lately, as schools are realizing the value of allocating funds for inclusive education." I hope this trend continues because it is good."</p> |
| Attitudes and Beliefs | <p>advantages and difficulties of integrating autistic students into regular classes</p>                                        | <p>Inclusion is not just about having students with autism in the same classroom; it is about creating an environment where everyone feels valued and included".</p> <p>"Both teachers and students benefit from this wonderful experience."</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|  |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Inclusive education helps peers of students with ASD and students with ASD</p> <p>The need of adaptability in instructional strategies</p> <p>Professional growth and change in views</p> <p>connections with students with ASD</p> | <p>"While I understand the importance of inclusion, there's a part of me that worries about whether I can meet the diverse needs effectively".</p> <p>"We're all on a learning curve."</p> <p>"Inclusion fosters a sense of empathy and understanding among all students".</p> <p>"They may benefit from one another's knowledge and gain valuable social skills."</p> <p>"The difficulty is in striking a balance between the various demands of each pupil. It might be difficult to strike a balance when some people need more specialised help."</p> <p>"It is important to be open to new ideas. Because what works for one kid may not work for another, inclusive learning requires us to modify our techniques accordingly."</p> <p>"I've got to reconsider how I educate. To make sure that all students, including those with autism, can succeed in the classroom, it is a process of ongoing learning and adaptation."</p> <p>"I was apprehensive about inclusion at first, but as I went to seminars and accumulated more experience, my viewpoint changed. It is about appreciating the distinctive qualities that every kid offers to the classroom and accepting variety."</p> <p>"Misconceptions have been dispelled by professional growth in understanding research and success stories. It reaffirmed the notion that inclusive classrooms help all students and create a more understanding and caring community."</p> <p>"Developing trust is essential. Positive learning relationships arise when students see that you have faith in their talents."</p> <p>"It is important to communicate honestly with parents, special education experts, and coworkers."</p> |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|                                 |                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|---------------------------------|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                 |                                                                                                             | <p>"It makes sure that everyone is on the same page when it comes to assisting the kid and helps close gaps."</p> <p>"Empathy and open communication are essential. Attitude barriers may be broken down by acknowledging that each person has particular talents and problems as well as by being receptive to learning from one another."</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Communication and Collaboration | <p>communication and teamwork</p> <p>Collaboration with support staff</p> <p>Collaboration with parents</p> | <p>"A successful inclusive classroom is built on communication. In order to recognize and address the various needs of students with autism, it is imperative that teachers, administrators, and support personnel have regular, open communication."</p> <p>"We acknowledge the value of communication, but sometimes information doesn't flow as smoothly as it should".</p> <p>"This may affect our capacity to provide autistic students regular and well-coordinated care."</p> <p>"When teachers and support staff collaborate, it creates a supportive network".</p> <p>"By combining our resources and approaches, we can overcome obstacles more successfully."</p> <p>"Working together enables us to see the bigger picture." Together, we can recognize and handle social and emotional as well as intellectual difficulties, building a more complete support system."</p> <p>"Inclusive education is a team effort".</p> <p>Collaboration has a good knock-on impact that helps teachers and students when administrators value and encourage it.</p> <p>"While collaboration is encouraged, having structured opportunities, such as regular workshops or training sessions, would ensure that everyone is on the same page and working towards a common goal."</p> <p>"It would be really helpful to have regular meetings where we can talk about each student's</p> |

|                                   |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------------|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Social Dynamics and Relationships | Collaboration with administration              | <p>progress, share strategies, and brainstorm solutions. It guarantees that everyone is cooperating to get the greatest results for our students and staying on the same page."</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|                                   |                                                | <p>"Parents are key stakeholders in the education of students with autism".<br/>Incorporating parents into routine updates and conversations promotes a comprehensive strategy, coordinating the endeavors of teachers and caregivers to enhance the child's growth."</p>                                                                                                                                                                                                                                                                                                                                                                                                        |
|                                   | comprehension and compassion among classmates  | <p>‘Administrators play a crucial role in setting the tone for collaboration’.<br/>“A culture where everyone feels heard and appreciated is created when they actively support and encourage communication avenues."<br/>"Finding time for collaboration can be challenging, especially with busy schedules”.<br/>“It would be a good idea to set aside time and resources specifically for cooperative activity."<br/>“I’ve personally seen how teamwork can turn obstacles into possibilities. Collaborative efforts among teachers, administrators, and support personnel have a profound effect on students. It is about using our combined power to achieve our goals."</p> |
|                                   | more organized events to promote socialization | <p>"The more we work together, the more effectively we can modify our methods to fit the requirements of each person. It is important to create an atmosphere where students feel encouraged and may develop socially and emotionally in addition to focusing on academics."</p>                                                                                                                                                                                                                                                                                                                                                                                                 |
|                                   | raise awareness                                | <p>“It is about seeing beyond differences”.<br/>“ I believe that everyone of them has something unique to offer, and that recognizing one another's advantages fosters a supportive social atmosphere”<br/>"It may be challenging to peers to know how to engage with each other at times, particularly when they have diverse communication styles. However, I've discovered that some students</p>                                                                                                                                                                                                                                                                             |



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|  | <p>The impact of an inclusive atmosphere on students individual learning experiences</p> | <p>"Knowing more about autism has definitely changed how they interact".<br/>         "I think they could understand their classmates better if they knew more about autism".</p> <p>" Raising awareness has always been associated with fostering a more accepting and encouraging school climate"<br/>         Organizing seminars or workshops on autism might be beneficial. It all comes down to establishing a space where people may feel encouraged."<br/>         "There are still some myths out there".</p> <p>"Knowing about autism has helped peers in my class to be more understanding and patient." It is a life skill that enables them to connect to others in many ways; it is not just about education."<br/>         "It sets the tone for a more positive and inclusive environment when we all understand and accept each other's differences".<br/>         "We're all on a learning path. We can better help one another the more information we have. It is an ongoing process rather than an isolated event."</p> <p>"Having students with autism in our class brings diversity".<br/>         Their distinct viewpoints and abilities enhance our educational setting."<br/>         "It can be challenging initially, especially when there are communication differences".<br/>         "However, those difficulties diminish as we grow to know one another, and we discover methods to communicate."</p> <p>"It enhances the richness of our classroom".<br/>         Everyone can offer something worthwhile."<br/>         Students on the autistic spectrum often possess extraordinary abilities or insights that enrich our conversations and assignments."<br/>         "It may be difficult at times for people to comprehend one another. It is about making sure that everyone feels heard and figuring out efficient communication channels."</p> |
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|  |  | <p>"knowing from one another is equally as important as knowing academic material. Students interactions with peers who have autism have improved their patience, empathy, and open-mindedness."</p> <p>. "Peers learn more than just the curriculum in an inclusive classroom".</p> <p>"They gain knowledge of cooperation, empathy, and flexibility. These are lifelong abilities that transcend the classroom."</p> |
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Table 2

*Code concept and select semantic codes with text examples.  
Students' interview*

| Code concept                            | Semantic code example                                      | Quoted example from students' interview text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Peer Relationships and Social Inclusion | Peer support networks and collaborative learning exercises | <p>"Leveling the playing field is achieved via inclusive behaviors. We may interact on a personal level and dissolve boundaries when we participate in activities together."</p> <p>"When everyone participates in the same activities, shared experiences are created".</p> <p>We gain knowledge from one another, and it fosters sincere relationships."</p> <p>"While there is inclusivity, there are times when more understanding is needed". a student said. It serves as a reminder that everyone may develop into a more inclusive atmosphere."</p> |
|                                         | Inclusion affects the dynamics of the school community     | <p>"Practicing inclusivity fosters understanding of one another's struggles and abilities. It is a process of learning that enhances our connections and extends beyond the classroom."</p> <p>"A culture of support is created via inclusive behaviors. It involves the cooperation of the whole school community, not just certain individuals."</p>                                                                                                                                                                                                      |

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|                                          |                                                                                                                                                                            | <p>"Communication differences can create challenges, but it is an opportunity for us to learn and adapt".</p> <p>"A culture of support is created via inclusive behaviors. It involves the cooperation of the whole school community, not just certain individuals."</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Learning Environment and Academic Impact | <p>Inclusive practices would foster a feeling of community.</p> <p>Inclusion affected peers' academic progress</p> <p>Inclusion helps peers build critical life skills</p> | <p>"Inclusive practices make our learning environment more welcoming".</p> <p>"Inclusion creates a supportive environment for the class as a whole and makes it a place where everyone may succeed."</p> <p>"Diversity in our learning is enhanced by inclusion. Working together with students who have autism lets us see things more broadly and solve issues in various ways."</p> <p>"I've become more flexible and patient as a result of interacting with classmates who have autism".</p> <p>"These abilities are helpful not just in the classroom but in every aspect of our education."</p> <p>"It is a reciprocal trade. Everybody is gaining knowledge from the others. The many points of view help us to have a more thorough grasp of the topics we're learning."</p> <p>"We learn life skills from being in an inclusive setting that go beyond the classroom. It involves cooperating, speaking clearly, and comprehending others."</p> <p>"You see the positive impact of inclusion on your peers, it motivates you to engage more".</p> <p>"Being included gives us a sense of belonging. Your participation in class automatically increases when you feel appreciated. It is about establishing a space where everyone can express themselves."</p> |

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|                                 |                                                                                                                                    | , "Getting to know classmates who have autism has helped me develop personally. becoming well academically is not the only goal; becoming a more kind and tolerant person is also important."                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Teacher Support and Interaction | <p>Teachers' assistance and knowledge</p> <p>Positive teacher-student interactions</p> <p>teachers' adaptation and flexibility</p> | <p>"Teacher assistance is essential. The tone of the whole class is established when teachers actively support the inclusion of students with autism. Everyone feels as if they belong in this setting."</p> <p>"It is essential to have teachers who are aware of the requirements of students with autism and who are equipped to serve them. It guarantees that everyone can participate in the learning environment and is on the same page."</p> <p>"Inclusion fosters a sense of empathy and understanding among all students".</p> <p>"They may benefit from one another's knowledge and gain valuable social skills."</p> <p>"Trust and openness are fostered when teachers and students have excellent connections. This is crucial for autistic students in particular, who may need extra assistance."</p> <p>"Good interactions with teachers make a huge difference". “</p> <p>It all comes down to feeling heard and seen, which has a good impact on the dynamics of the class as a whole”</p> <p>“Adaptability is crucial. The classroom becomes a more inclusive place when teachers can modify their pedagogy to suit the needs of all students, including those with autism."</p> <p>“It was believed that this tailored strategy created a feeling of unique support”</p> <p>"It makes a difference when teachers take the time to get to know each student."</p> <p>“It demonstrates their concern for each of our unique needs, and everyone deserves that kind of assistance, but particularly autistic students."</p> |

Table 3

*Code concept and select semantic codes with text examples.*

*Students' and teachers' practices*

| Code concept                        | Semantic code example                                   | Quoted example from students' and teachers' interview text                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Differentiated Instruction          | Flexible, personalized and diverse learning experiences | <p>"A more inclusive classroom is produced by teachers who take the time to understand how each of us learns best. It is important to acknowledge that every one of us has unique capabilities and areas in which we could want further assistance."</p> <p>"Teachers who acknowledge the variety of ways we learn and make accommodations for those differences foster inclusivity." It is about establishing an atmosphere in which each person may thrive according to their own talents."</p> <p>It is important to be flexible. Learning environments are more inclusive when teachers are willing to try new things and modify their strategies. It guarantees that everyone can interact with the content in a method that works best for them, even autistic students."</p> <p>"teachers can accommodate the diverse learning needs of their students by presenting information in different ways and providing opportunities for us to demonstrate our understanding."</p> <p>"Personalized assistance has a big impact. We learn and progress when teachers take the time to offer us feedback that is specific to our needs. This is especially important for autistic students who can benefit from more direction."</p> |
| Collaborative Planning and Teamwork | Collaboration among teachers and support staff          | <p>"It is important to plan together. Collaboration among teachers and support personnel facilitates a more thorough understanding of the unique requirements of every student. It involves formulating a strategy that guarantees everyone can take an active role in the educational process."</p> <p>"Teamwork brings diverse expertise to the table".</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

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|                                | Peer mentorship programs                      | <p>"The peer mentoring program was a success".</p> <p>"It established a helpful network so that students could share knowledge with one another. It serves as an illustration of how teamwork enhances the educational opportunities for students with autism."</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Peer Support and Collaboration | Active participation and developing relations | <p>"Peer support is about actively engaging with our classmates". a student said. It takes more than simply being conscious of their needs to make sure they feel included in the community. Everybody has a role to play in fostering an inclusive atmosphere."</p> <p>"It is about building real relationships. A feeling of togetherness is created when we are able to comprehend and value one another. The best peer assistance comes from a real position of understanding and friendship."</p> <p>The buddy system worked well. It matched students who had autism with those who had not, resulting in friendships and a support system. It serves as an example of how students may take the initiative to make their school a more welcoming place."</p> <p>"Creating an inclusive culture requires collaboration. Collaborating on initiatives that purposefully include everyone conveys that we appreciate the contributions made by one another. It is about fostering an atmosphere that values variety."</p> <p>"Adaptability is crucial. The classroom becomes a more inclusive place when teachers can modify their pedagogy to suit the needs of all students, including those with autism."</p> <p>"It was believed that this tailored strategy created a feeling of unique support"</p> |

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|                                   |                                                                | <p>"It makes a difference when teachers take the time to get to know each student."</p> <p>"It demonstrates their concern for each of our unique needs, and everyone deserves that kind of assistance, but particularly autistic students."</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Adaptive and Inclusive Activities | Adaptable school community                                     | <p>"Being a part of inclusive activities means uniting as a community." It allows us to recognize one other's positive traits and foster an atmosphere where everyone is made to feel welcome."</p> <p>"We actively work to ensure that our activities are inclusive. It is not simply a matter of planning them; it is also about making sure that everyone can take part and have fun, regardless of ability."</p> <p>"Inclusive sports have had a big influence. It is about redefining sports so that everyone may participate in them. Above all, these activities foster enjoyment for all participants and the development of skills and collaboration."</p>                                           |
| Communication and Understanding   | communication may serve as a bridge to increase understanding, | <p>"It is important to communicate. It involves actively engaging in peer conversations, exchanging knowledge, and promoting a greater understanding of autism. An inclusive community is built on the basis of open communication."</p> <p>"We initiate the conversation regarding autism. It is about striking up discussions that otherwise may not have taken place. Information sharing fosters the development of a community that is more informed and compassionate."</p> <p>"Peer education is effective. It is about teaching students how to speak out for inclusion, communicate clearly, and assist their classmates who have autism. These programs foster an understanding-based society."</p> |