**Exploring the Implementation of Inclusive Education Across Saudi Arabia's Public School System**

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**Table of Contents**

# List of Tables and Figures

# List of Appendices

**Abstract**

Though the Kingdom of Saudi Arabia (KSA) does offer Inclusive Education (IE) in the public system, necessary in-school supports and services remain limited (Aldabas, 2015; Alquraini, 2011; Alshenifi, 2018). This dissertation is aligned with the goals set out by the Saudi Ministry of Education and one of the governmental initiatives that targets IE, Saudi Vision 2030. The Vision is a strategic framework that focuses on improving many aspects of the education system and designing educational programs for students with disabilities, including those on the autism spectrum. The Ministry of Education in the KSA is paying particular attention to students on the autism spectrum with the goal of promoting learning in an inclusive classroom with an IE program and benefitting from the general curriculum. To help support these students, the Ministry is keen on increasing preparatory opportunities for its teachers with the aim of implementing effective IE for students on the autism spectrum. In addition to the impact of teachers on educational development, the Ministry of Education recognizes the essential role that parents can play in the IE community. The goal is for parents to make positive contributions, give feedback, and work closely together with their child's teachers. Therefore, the purpose of this dissertation is threefold, a) to conduct an exploration of the current implementation of IE in Saudi Arabian public schools; b) to respond to the increased number of students on the autism spectrum by exploring teachers' self-reported competence in using IE practices for these students; c) to explore parent perspectives and satisfaction with their children's performance in IE settings. In the first study, a comprehensive systematic critical review was conducted to examine the current state of IE in the KSA by focusing on the extent to which IE is implemented in each region, the effectiveness of IE implementation, and on the barriers that impact a comprehensive IE roll-out in public schools. The results were that IE would not be considered

satisfactory and does not achieve the needed level of implementation (Alharbi & Madhesh, 2018). Further, teachers were considered to be core actors in the implementation of successful IE based on the ability to meet students' needs and that adhering to established "best practices" requires a level of competence and readiness. Considering the high number of students on the autism spectrum in the KSA and the fact that only 1.7% of these students were enrolled in mainstream classrooms in the public education system, there is a need to prepare teachers to meet the demands of an increasingly diverse classroom and to learn more about including students on the spectrum (Alsheninfi, 2018). Study 2 was designed to address these concerns by exploring 166 teachers' (72% female and 28% male) self-reported competence to teach students on the autism spectrum in inclusive settings. In this study, teachers' competence was the dependent variable, and three independent variables were tested: teachers' knowledge about IE practices, as well their attitude and beliefs about including students on the autism spectrum in mainstream classrooms. Teachers' self-reported competence levels were low toward including students on the autism spectrum in inclusive classrooms. The results highlighted the significance of teachers' knowledge, attitudes, and beliefs as predictors of their self-reported competence. Given that the competence of teachers can be reflected in students' academic performance, and that inclusive practice hinges on collaboration among influential stakeholders in students' lives, parents have a significant role in their children's education programs and should have the chance to reflect on their child's IE program. Thus, Study 3 aimed to explore parents' perspectives on their satisfaction with their child's IE program by interviewing eight parents from the KSA. The results highlight that most parents were not satisfied with their child's IE program and were seeking better options. Parents reported that there were clear challenges that they believe impacted the effectiveness of their child's IE. The three studies in this dissertation highlighted

the need for the development of more effective IE practices that could improve teacher

competence and parent satisfaction levels. It also identified the importance of improving

teachers' competence in IE by providing training for current and future teachers and by creating

opportunities for meaningful home-school collaboration. This research has implications for the

development and improvement of IE practices, policies, and standards, in the KSA and

internationally.

*Keywords:* inclusive education, Saudi Arabia, barriers, training, effective classrooms

**Résumé**

Bien que le Royaume d'Arabie saoudite (RAS) offre une éducation inclusive (EI) dans le

système public, les soutiens et les services nécessaires dans les écoles demeurent très limités

(Aldabas, 2015; Alquraini, 2011; Alshenifi, 2018). Cette dissertation s'aligne avec les objectifs

fixés par le ministère de l'Éducation saoudien, ainsi que sur un de ses initiatives

gouvernementales visant l'EI, soit le plan Saudi Vision 2030 (Vision). La Vision est un cadre

stratégique axé sur l'amélioration de nombreux aspects du système éducatif et sur la conception

de programmes éducatifs pour les élèves handicapés, y compris ceux atteints de troubles du

spectre autistique. Le ministère de l'Éducation du RAS accorde une attention particulière aux

élèves atteints de troubles du spectre autistique, dans le but de promouvoir l'apprentissage dans

une classe inclusive avec un programme d'EI et de bénéficier du programme général. Pour aider

ces élèves, le ministère souhaite augmenter les opportunités de préparation pour ses enseignants

dans le but de mettre en œuvre une EI efficace pour les élèves atteints de troubles du spectre

autistique. En plus de l'impact des enseignants sur le développement de l'éducation, le ministère

de l'Éducation reconnaît le rôle essentiel que les parents peuvent jouer dans la communauté de

l'EI. L'objectif est que les parents apportent une contribution positive, donnent leur avis et

travaillent en étroite collaboration avec les enseignants de leur enfant. Par conséquent, l'objectif

de cette dissertation est triple : a) de mener une exploration de la mise en œuvre actuelle de l'EI

dans les écoles publiques du RAS; b) à répondre à l'augmentation du nombre d'élèves atteints de

troubles du spectre autistique en étudiant la compétence autodéclarée des enseignants à utiliser

les pratiques de l'EI pour ces élèves; c) à explorer le point de vue et la satisfaction des parents

quant aux performances de leurs enfants dans le cadre de l'EI. Dans la première étude, un

examen critique systématique complet a été réalisé afin d'examiner l'état actuel de l'EI au RAS en

se concentrant sur le niveau de mise en œuvre de l'EI dans chaque région, l'efficacité de la mise

en œuvre actuelle de l'EI et sur les obstacles qui ont un impact sur un déploiement complet de

l'EI dans les écoles publiques. Les résultats ont démontré que l'EI au RAS ne serait pas jugé

satisfaisant et n'atteint pas le niveau de mise en œuvre requis (Alharbi & Madhesh, 2018). De

plus, les enseignants ont été considérés comme des acteurs essentiels de la mise en œuvre d'un EI

réussi en raison de leur capacité à répondre aux besoins des élèves et du fait que l'adhésion aux «

meilleures pratiques » établies exige un niveau de compétence et de préparation. Compte tenu du

nombre élevé d'élèves atteints de troubles du spectre autistique au RAS et du fait que seulement

1,7 % de ces élèves sont inscrits dans le système d'éducation public, il est nécessaire de préparer

les enseignants à répondre aux exigences des classes de plus en plus diversifiées et d'en

apprendre davantage sur l'inclusion des élèves atteints de troubles du spectre autistique

(Alsheninfi, 2018). L'étude 2 a été conçue pour répondre à ces préoccupations en explorant la

compétence autodéclarée de 166 enseignants (72 % de femmes et 28 % d'hommes) à enseigner

des élèves atteints de troubles du spectre autistique dans des environnements inclusifs. La

deuxième étude était une étude quantitative visant à examiner la compétence autodéclarée des

enseignants à enseigner aux élèves atteints de troubles du spectre autistique dans des

environnements inclusifs. Dans cette étude, la compétence des enseignants était la variable

dépendante et trois variables indépendantes ont été testées : les connaissances des enseignants

sur les pratiques de l'EI, ainsi que leur attitude et leurs croyances concernant l'inclusion des

élèves atteints de troubles du spectre autistique dans les classes ordinaires. Les niveaux de

compétence autodéclarés par les enseignants sont faibles en ce qui concerne l'intégration des

élèves atteints de troubles du spectre autistique dans les classes inclusives. Les résultats ont mis

en évidence l'importance des connaissances, des attitudes et des croyances des enseignants en

tant que prédicteurs de leur compétence autodéclarée. Étant donné que la compétence des enseignants peut se refléter dans les résultats scolaires des élèves et que la pratique de l'inclusion repose sur la collaboration entre les parties prenantes influentes dans la vie des élèves, les parents jouent un rôle important dans les programmes d'éducation de leurs enfants et devraient avoir la possibilité de réfléchir au programme d'EI de leurs enfants. Ainsi, l'étude 3 visait à explorer le point de vue des parents sur leur satisfaction à l'égard du programme d'EI de leur enfant en interrogeant huit parents du RAS. Les résultats soulignent que la plupart des parents n'étaient pas satisfaits du programme de l'EI de leur enfant et cherchaient de meilleures options. Les parents ont signalé qu'il y avait des défis manifestes qui, selon eux, ont eu un impact sur l'efficacité de l'EI de leur enfant. Les trois études de cette dissertation ont mis en évidence la nécessité de développer des pratiques d'EI au RAS plus efficaces qui pourraient améliorer les compétences des enseignants et les niveaux de satisfaction des parents. Elles ont également établi l'importance d'améliorer les compétences des enseignants en matière d'EI en proposant une formation aux enseignants actuels et futurs et en créant des opportunités de collaboration significative entre la famille et l'école. Cette recherche a des implications pour le développement et l'amélioration des pratiques, des politiques et des normes de l'EI au RAS et à l'étranger.

*Mots-clés :* éducation inclusive, Arabie saoudite, obstacles, formation, classes efficaces

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(بسّم الله الرَّحمـن الرَّحيم)


"In the Name of Allah Most Graceful and Merciful"

I humbly acknowledge the blessings of Almighty Allah who has enabled me to study the PhD. I knew myself as a student who devoted her time to this moment of being a professor. It is just my dream to be a teacher and then a professor, and to bring knowledge to my community. My dream started when I was a child at the age of 9, holding chalk and writing on my family's furniture pretending to be a teacher. To the memory when I was the smallest teacher in my family, teaching my brother and cousins.

Being a graduate student in motherhood is both exciting and terrifying with some challenging moments. As well, studying abroad was a hard decision to be taken to be far from your parents, siblings, and lovely country. However, during this great experience I got many advantages that helped to develop new sides in my personality and developed multiple skills. Now, at this moment I realize that I am currently submitting my final PhD assignment.

All my profound gratitude goes to my supervisor Dr. Tara Flanagan, for her intensive support and guidance throughout our years of working together since 2016. Dr. Tara, "my supervisor", I would like to thank you, for your whole confidence in my skills, ability to achieve my academic goals throughout this long process. Many thanks for supporting me with chances to succeed and to follow my dreams from the very moment that I joined McGill in 2016. To the moment that you welcomed me in your team, starting from my basic skills in research until the moment that I wrote a whole dissertation and then submitted my papers for publishing; I look forward to continuing this relationship as a colleague.

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pursuing this degree and for your constant, unwavering love, and support.

**Contribution to Original Knowledge**

The original contributions of this research will add to the field of Human Development and to the education system in the Kingdom of Saudi Arabia. The first contribution would be an intense critical systematic review based on Saudi research papers covering general education, special education, and inclusive education. This comprehensive review provides deep insight into the history of education for students with disabilities up until the present. Secondly, this comprehensive review provides an in-depth examination of authorizing an "inclusive policy" in the educational system for students with disabilities in general and those on the autism spectrum. This examination focuses on the student's ability to study in mainstream classrooms and focuses on the teachers' competence and qualifications for teaching IE. Another contribution of this study are the discussions and perspectives of parents of children on the autism spectrum, which is a unique exploration in this field. The parents' perspectives highlight their children's needs in mainstream classrooms and the weaknesses within schools.

In this research, the primer researcher (Arwa Alrawkan) conducted academic workshops with teachers across the KSA to collect data and to help teachers add to their professional development in the field of IE. Interestingly, the researcher received multiple emails from different academic institutes in the KSA about conducting these workshops again with current teachers in their schools, as well as students at universities. This positive feedback gives the impression that teachers are interested in learning more about IE and are ready to receive more training.

Furthermore, an original contribution by this research is that we provided a deep exploration of teachers' competence, knowledge, experience, belief, and attitude towards including students on the autism spectrum in mainstream classrooms across the KSA. The

teachers in this study are from: Riyadh, Makkah, Al-Madinah, Al-Qassim, The Eastern Province, Al-Baha, Jizan, Najran, Tabuk, and the North Borders. Examining different teachers from different regions makes our results strong and thorough. Additionally, we interviewed parents to explore and examine their perspectives about IE, which we believe is the first study to do so. Moreover, we interviewed parents from multiple regions which gave our study an edge. The present research explores barriers to IE, highlights various issues and identifies significant suggestions. Our results may be used for future hypotheses and research questions that emerge from our critical systematic review, the statistical analysis, and the in-depth thematic analysis of data.

This research was sparked by my education and my loyalty and love to my country, the Kingdom of Saudi Arabia. I also hold a special place in my heart for inclusive education and deeply care about students finding the right education program that suits their needs. This research emerged from my previous work experience in Saudi Arabia and findings that there is a need to develop their education system for students with disabilities -specifically those on the autism spectrum- who are waiting for an inclusive education. It is my hope that this research will provide important results and effective recommendations for policymakers and teachers to achieve a more successful IE environment. I am confident that this research will greatly add to Saudi and international literature as an avenue to promote social justice for students with disabilities and those on the autism spectrum.

**Contribution of Authors**

I am the first author on all studies included in this dissertation. This dissertation includes five

chapters and three manuscripts. This dissertation is in conformity with the McGill thesis

guidelines posted by the Faculty of Graduate and Postdoctoral Studies. I am responsible for the

main notion and visualizations of this research and accountable for the data collection, and data

analysis, in addition to writing the dissertation. All manuscripts are co-authored by Dr. Tara

Flanagan, my supervisor, who provided extensive feedback on the manuscripts and served in an

advisory capacity during the conceptualization and application of each study. In addition, I

consulted with Dr. Flanagan on all parts of the research design of the dissertation including the

data collection, data analysis, and the interpretation of the results. Luciana Martine conducted a

peer-review and provided feedback on the analyzed data and themes in the third study. The

French translation of the abstract was performed by Stephanie Perlis.

**Introduction**

**Inclusive Education Across Saudi Arabia**

Despite the popular term "Inclusive Education" (IE), inclusion still tends to be a broad concept that lacks a focused and thorough definition. This in turn could contribute to misunderstandings about the objectives and influences of the practices of IE (Forlin & Loreman, 2014). However, efforts by the International Human Rights Agreements, Covenants and Legislation provide definitions of inclusion that "focus on equity, access, opportunity and rights" (Forlin & Loreman, 2014, p. 3). These four terms: equity, access, opportunity, and rights are supposed to be implemented effectively in students' education to receive a well-rounded education amongst other peers in mainstream classrooms (UNHCR, 2014). UNESCO confirmed the positive role of inclusive education and the transference from exclusion to inclusion practices in school communities (Forlin & Loreman, 2014). Currently, UNESCO (2017) is still working to further develop practices in IE and working on an updated academic definition of inclusion.

Education is in the middle of a movement to facilitate inclusion on a global level (Moberg et al., 2020). In the 1990's, education programs for students with disabilities were generally limited to two options. One was special education programs that were provided in separate institutions or schools. The second option was integration programs provided in special classrooms in regular schools (Lambert, 2008). Both special and integration programs were distinguished by their academic and social limitations (Smith & Tyler, 2001). Students who were enrolled in both programs followed special education curricula on a full or part-time basis and had less access to social interactions (Smith & Tyler, 2001). The notion of being educated separately in isolated communities or schools had become unacceptable and did not represent equity in education (Thomas, 2013). Furthermore, it reflected some discrimination which could

influence an individual's self-esteem (Thomas, 2013). Many educators faced strong waves of criticism as a reflection of communities' rejection of the isolated schools. "Special education places an emphasis on individual deficits that are to be remedied rather than cultural or environmental factors" (Khochen & Radford, 2012, p. 140). It is worth noting that there are students with disabilities who are capable of effectively learning beside their peers in mainstream classrooms and sharing a united curriculum but are still not included in these classrooms (Hosshan et al., 2020; Khochen & Radford, 2012). Some educators believe that special education programs do not provide an adequate quality of academic support and do not meet these students' needs (Aldabas, 2015; Alquraini, 2011).

Prior to IE, the field of special education focused more on applying integrational approaches for students with disabilities working in regular classrooms (Rambler and Watkins, 2020). "Integration was mostly a system-level reform, taking for granted that changes in placement would affect the teaching and learning processes in class for the integrated students" (Peder, 2016, p. 208). Integration as an approach, focuses on teaching strategies and procedures in classrooms to meet students' needs (Alshunaifi, 2018). However, after a while, academics in the field of educational development started to believe that integration is not the most appropriate approach for students with disabilities (Amor et al., 2018). "Integration can be influenced by changes in educational practice, context, culture, and conditions that quickly make these features inappropriate and outdated" (Amor et al., 2018, p.1278). Several researchers also believe that an integration approach concentrates more on the physical placement for socialization purposes, rather than academic purposes (Alshunaifi, 2018). In this case, professionals in the field of education consider theoretical aspects of IE to fulfill teachers' awareness and to become familiar with its practices (Peder, 2016).

To provide students with disabilities greater social access and more equitable learning opportunities, educational laws such as the *Individuals with Disabilities Education Act* (IDEA) in 1990 were enacted (Yell et al., 2011). The fundamental principle of the IDEA is to facilitate the learning process for students within their integration programs. Within the IDEA, schools are required to meet and respond to the diverse needs of their students and implement different learning styles through appropriate curricula (American Psychological Association, 2017). Examples of this support include resource rooms, individual educational plans, and the Least Restrictive Environment (LRE) approach. The LRE approach allows students with disabilities the right to learn in settings that are close to mainstream classrooms but are still based on students' needs (Rueda et al., 2000).

Facilitating learning for students with disabilities in one place and with one purpose, has become a goal for many developing countries (Hosshan et al., 2020). In 1990, an academic action was established, the *United Nations Educational, Scientific, and Cultural Organization* worked to provide education for all and established the framework of Meeting Basic Learning Needs (UNESCO, 2017). This framework began in Thailand and strived towards providing equal academic opportunities for all students, regardless of their disabilities. Furthermore, this framework aimed to create an educational system for generations of students (Khochen & Radford, 2012; UNESCO, 2017).

Including students with disabilities in mainstream education classrooms is not a new attitude (Smith & Tyler, 2011). Little by little, the academic attitude towards including students with disabilities in mainstream classes has been improving (Jahnukainen, 2015). "In simple terms, inclusive schooling means that all children are able to learn together in the general education system and receive the individual learning support they require" (Hosshan et al., 2020,

p. 99). The main reason for implementing IE is to establish an academic system that attains equal academic and social opportunities, while respecting individual differences (Hosshan et al., 2020). Globally, IE was founded as a comprehensive educational field to provide practices and strategies within different educational environments to meet various needs (Joubert & Harrington, 2020). It is more about learning together in one classroom and as one community (Joubert & Harrington, 2020).

IE emerged to provide more in-depth solutions and greater attention to an individual's learning. IE also strives to make improvements in the educational system that integration alone did not provide (Peder, 2016; Rambler and Watkins, 2020). The objective, definition, and process of IE can present differently based on certain factors and situations. Rambler and Watkins (2020) listed culture limitation, individual needs, and academic foundations as examples of these factors. Additionally, "the practical state of inclusive education in many countries differs widely, between and even within schools" [and] "it seems to be a gap between formulations and realizations of IE" (Peder, 2016, p. 206).

Both approaches of integration and IE provide support for the physical placement of students and their learning opportunities within mainstream classrooms. However, IE provides intensive academic support while the student is still accessing the general education curriculum in the mainstream classroom with their peers (Amor et al., 2018; Rambler and Watkins, 2020). Social interactions and group activities are provided more within IE environments since inclusion includes socialization as one of its primary objectives (Jahnukainen, 2015).

A preliminary review of the literature suggests that there is progress in implementing IE in Middle Eastern countries (Alkhateeb, Hadidi, & Alkhateeb, 2016). Although the ME is committed to inclusion, they are lacking clarity about the exact definition and operationalization

of inclusion practices (Alquraini, 2010). Their history of inclusion has been complicated and varies by region (Alkhateeb, Hadidi, & Alkhateeb, 2016). Many of the countries in the ME are facing challenges in effectively implementing IE. The Ministry of Education (MoE) in the KSA has tried authorizing various rules and programs to facilitate education students with disabilities, however, failed to provide "information about the full inclusion of students with disabilities" (Aldabas, 2015, p.1161). Specifically, the Ministry keeps changing between having integration in mainstream schools and having students with disabilities in separate schools or in resource rooms (Alshenaifi, 2018). In addition, numerous barriers were detected from previous studies about inclusion in the Saudi Arabian educational system. These barriers include teachers' skills in providing successful IE for students with disabilities and, more particularly, for those on the autism spectrum (Aldabas, 2015).  As well, the isolation and avoidance of these students resulted in a sense of frustration and rejection, which in turn negatively influenced their participation (Amr er al., 2016; Alhammad, 2017). These negative encounters also further hindered students' social skills (Alquraini, 2011).

Recent educational studies have identified inclusion only benefits students with specific types of disabilities (Aldbas, 2015; Alquraini, 2011). Results presented in Alshunaifi's (2018) study highlighted an increase in the trend of including students with learning disabilities, behavioral challenges, and physical disabilities. Alnemary et al. (2017), Alquraini (2011), and Sulaimani & Gut (2019) all agree that students on the autism spectrum remain segregated from mainstream classrooms and are not benefiting from inclusion.

Students on the autism spectrum are being denied inclusion in mainstream classrooms and their basic educational needs are not being met in general education (Alnemary et al., 2017). There is a recommendation for more research to investigate to what extent IE is implemented in

Saudi schools for students on the autism spectrum at the time that students with other disabilities also started being included in mainstream classrooms (Alnemary et al., 2017; Dare et al., 2017).

Teachers' poor knowledge and experience about inclusion creates academic challenges in mainstream classrooms (Amr et al., 2016). Teachers are lacking essential information about strategies to implement for students with different needs (Amr et al., 2016). In the KSA, a study by Alshenaifi (2018) stated that younger teachers prefer to work in classrooms that are not inclusive because they know that students with disabilities require significantly more time and effort. Additionally, "teachers were nervous to simultaneously teach at different levels and expressed more confidence in teaching children who had physical disabilities" (Alshenifi, 2019, p.156). Similarly, results by Amr et al. (2016) confirmed that when teachers are not aware about inclusion and they lack the experience to practice inclusion with students, their skills are not sufficient (Amr et al., 2016). Many teachers reported difficulty in teaching students with disabilities in mainstream classrooms (Alshenifi, 2018). They expressed that they are unaware how to modify the curriculum and assessments accordingly. Thus, mainstream classroom teachers send students with disabilities to receive most of their learning in the schools' resource rooms (Alshenifi, 2018; Amr et al., 2016).

Facilitating successful inclusion in the KSA is challenging (Alhammad, 2017). Western research overwhelmingly demonstrates that educators must have the skills to feel competent and confident to support the inclusion of their students (Hehir & Katzman, 2012; Robinson, 2017). In order to move forward and to better understand factors contributing to the unsuccessful inclusion practices that have been attempted in the past, we must examine what is successful or not.

**Rationale of the Current Thesis**

The main concept of IE is that every student could learn beside other peers and to learn from teacher's best practices in mainstream classrooms (Amor et al., 2019). Since IE is "caring, accepting" [and] "a cohesive community" students on the autism spectrum can also benefit from inclusive classrooms (Sunardi et al., 2014, p. 78).

In Saudi Arabia, the Saudi Vision 2030 seeks to develop the education field for students with disabilities including students on the autism spectrum. The goal of the vision is for these students to receive a higher quality education and to be able to interact more with the school and community (Saudi Vision 2030, 2020). This is associated with the goal of reshaping the education system to ensure that students with disabilities in general and specifically those on the autism spectrum, acquire the knowledge to become independent citizens (Saudi Vision 2030, 2020). This vision also aims to develop services and evaluations to promote positive academic and social outcomes. The MoE plans to provide teachers with the appropriate training and preparation programs (Saudi Vision 2030, 2020).

Recent studies by Sulimani and Gut (2019) evaluated the education services for students on the autism spectrum in the KSA. Their conclusion included recommendations for ongoing research to examine inclusive educational programs and to investigate teachers' proficiency to ensure that students on the autism spectrum are studying in an effective program. In order to achieve the Saudi Vision 2030, researchers need to learn more about students on the autism spectrum in order to achieve a new baseline for information for the MoE in the KSA.

Students on the autism spectrum often face barriers in expressing their needs to their teachers as a result of their teachers' lack of knowledge and competence in IE (GOV.UK, 2021). Research in IE has demonstrated that teachers can help students on the autism spectrum progress,

if given the correct training (Beghin, 2021). For IE to be implemented effectively, teachers have to be prepared and acquire a high level of professional development training in IE (Haimour & Obidat, 2013). Within the Saudi Vision 2030, the MoE aims to provide training for 13,000 mainstream teachers to meet the requirement for the Saudi educational development (Allmnakarah &Evers, 2019). "Without research into the efficacy of support and services, the ability to make evidence-based decisions and recommendations is limited" (Sulimani & Gut, 2019, p. 8). Continuously, Sulimani and Gut (2019) believe that education for students on the autism spectrum in the KSA needs to be improved to reach an appropriate level of success. In their research, Sulimani and Gut (2019) conclude that there is an urgent need to study the current education that is provided for students on the autism spectrum and identify whether teachers can successfully meet these student's needs. Saudi researchers Haimour and Obidat (2013) share similar views and recommend ongoing research about mainstream teachers' abilities to include students on the autism spectrum and strategies to implement IE. In Saudi Arabia, teachers are on the way to facilitate IE for students on the autism spectrum.

Saudi Arabia is shifting its educational approach towards IE and therefore is targeting students with and without disabilities (Alnahdi, 2020). This shift ensures that each student receives equal and appropriate support (Aldaba, 2015). It also consists of teachers' competence and level of readiness to successfully implement IE in their classrooms and to create a suitable and supportive academic environment for each student (Alquraini & Rao, 2018). Teachers are key in implementing IE effectively and bridging the curriculum and students' needs (Lord, 2020). To do so, teachers need to understand the importance behind the shift towards IE classrooms and the main definition of IE (Alquraini & Rao, 2018). After understanding that, teachers will be able to positively help drive the IE movement (Lord, 2020). When teachers

achieve greater competence in IE, then the goal of IE in Saudi Arabia will be achieved (Alquraini & Rao, 2018). According to Beghin (2021) teaching students on the autism spectrum requires teachers to put in more effort in providing a supportive and suitable learning plan. Each student has different needs, therefore, strategies and instructions within IE must be adapted to address their unique needs (Grynova & Kalinichenko, 2018). Also, the curriculum needs to be adapted to facilitate students' learning with minimal challenges (Grynova & Kalinichenko, 2018). According to McGillicuddy and O'Donnell (2014) implementing IE in mainstream classrooms for students on the autism spectrum is highly demanding. "Both the initial and continuing professional development levels have a role to play in challenging teachers' implicit understanding of inclusive education, as well as their role perceptions and professional actions in respect of these students" (McGillicuddy & O'Donnell, 2014, p. 329). Therefore, teachers must find ways to establish effective classrooms, to create mastery strategies, to minimize relevant difficulties and to address various needs (Savolainen et al., 2012).

In many countries, teachers' competence in implementing inclusive education for students on the autism spectrum has been studied. For example: Canada (Cappe et al., 2017), the United States (Corona et al., 2017), Ireland (Anglim e al., 2018), China (Li et al., 2018), Sweden (Engstrand & Roll-Pettersson, 2014) and Australia (Beamish et al., 2021). It is worth noting that based on the results from a cross-national 23 country study, the definition of competence was associated with: culture, policies of IE and teachers' preparation programs (Vieluf et al., 2013). Since policies about IE and its implementation are different from one country to another (Alnahdi, 2021), it is important to specifically investigate teachers' competence in including students on the autism spectrum in public schools in the KSA.

Receiving parents' feedback and communication about their children's education has become an important goal by educators (Majoko, 2019). The role that parents play in their children's lives affects them in many ways. Parents can deliver feedback about educational programs or services that are provided to their children and how IE is effective with their children (Majoko, 2019). We should value these important familial perspectives. The goal of the Saudi Vision 2030 is to strengthen parents' role in their children's education by 80% (Alismail & Faridi, 2021). This will be achieved by trying to maximize parent participation and engagement with their children's learning process (Alismail & Faridi, 2021). As well, to establish new plans within the education system to increase teacher-parent communication, since it has been established that parents can have a positive role and influence on their children's success and performance (Saudi Vision 2030, 2020).

The KSA consists of 13 regions with one centralized government in Riyadh that controls education. Within each region there is an education department and education office that helps facilitate the learning. These departments and offices delegate their responsibilities and powers to programs, schools, and services. The number of students registering for special and inclusive education classrooms varies by region. The registration also depends on many factors, such as: the low number of students with disabilities, teachers' availability with special education training, and ability to provide inclusive education programs in mainstream classrooms. Thus, it is significant to examine whether there are differences in parents' perspectives about the implementation of IE and IE services in these regions. As well, to identify any differences in teachers' competence across the regions.

In brief, this thesis has provided the history and an evaluation of the current level of effectiveness of inclusive education in the KSA. To move forward and enhance IE, we must have

a clear picture of where it currently stands. We narrowed down IE to focus on students on the autism spectrum by examining teachers' competence in including these students in mainstream classrooms. Afterwards, we listened to parents and explored their perspectives on the IE provided for their children.

This thesis finds the need to investigate: (1) an updated and organized systematic review of the current IE program in Saudi public schools (study 1), (2) the competence level of teachers who are teaching IE in public schools (study 2) and (3) parents' voices and levels of satisfaction with the existing inclusive education program (study 3). To investigate these objectives, a comprehensive literature review, a systematic critical review and two empirical studies were conducted. The main objectives are:

A. To what extent is inclusive education willing to be implemented in public schools in the KSA.

B. Whether teachers' knowledge, experience, attitude, and beliefs influence their ability to teach students on the autism spectrum in IE classrooms in public schools in the KSA

C. Investigate factors that positively contribute to teachers' competence in IE

D. Explore factors that are related to the process of implementing inclusive education programs for students on the autism spectrum

E. Investigate parents' perspectives and levels of satisfaction of IE programs offered to their children on the autism spectrum in public schools in the KSA.

The main research questions that have prompted the investigations are:

1. What is the current state of IE in the KSA?

2. Is the current state of IE in the KSA effective?

3. What are the barriers to effective IE in the KSA?

4. Do teachers' knowledge and beliefs contribute to their competence in teaching students on the autism spectrum in mainstream classrooms?

5. Is the relationship between teachers' knowledge and level of competence (including students on the autism spectrum in mainstream classrooms) moderated by their attitude towards inclusive education?

6. Are there significant differences in teachers' self-reported competence based on how much special education training they have received? Do years of experience and pre-service training in IE affect one's ability to effectively teach students on the autism spectrum?

7. What are parents' perspectives towards inclusive education for their children who are on the autism spectrum in the KSA?

8. Are there any differences in parents' perspective based on their region in the KSA?

9. Are parents satisfied with the inclusive education program for their children who are on the autism spectrum?

10. How do parents assess their children's academic progress in IE based on their children's needs?

**Chapter Overview**

To answer these research questions and explore their objectives, a comprehensive literature review was included in chapter 1, followed by the three studies. Below are the overviews of each study:

Study 1 consists of a comprehensive systematic critical review regarding the current state of inclusive education in the KSA. It also analyzes the preparation it requires to implement an inclusive education approach in mainstream classrooms in public schools in the KSA. According to human rights (UNESCO, 2017), every student (including students in the KSA) has the right to

be educated with appropriate support and the right to be given the chance to be included in mainstream classrooms (Alharbi & Medhesh, 2018). Study 1 focuses on the extent to which inclusive education is implemented in Saudi Arabian public schools and investigates all relevant barriers that influence its effective implementation. As well, recommendations and guidelines to implement inclusive education successfully were provided. Since there is little data in the field of inclusive education in the KSA, this study traced the development of inclusive education in Western countries to understand its evolution and history. The basics of developing an inclusive community and an inclusive educational environment for each student are social academic justice and equity (Alshenaifi, 2018). The main aim of this paper is to determine the current challenges of an inclusive educational environment. Inclusive education allows us to teach each student with disabilities in general education classrooms.

Study 2 consists of an empirical study that examined teachers' self-reported competence regarding teaching students on the autism spectrum through inclusive education in mainstream classrooms. The study included 166 teachers in public schools across Saudi Arabia. This study also examined the differences in knowledge, attitudes and beliefs between mainstream teachers who were trained in special education and those teachers who were not. Other demographic factors (e.g., age, sex, level of education, and training) were also assessed to explore other variables that contribute to teachers' competence in including students on the autism spectrum.

Study 3 consists of a qualitative study that aims to investigate parents' perspectives and levels of satisfaction with inclusive education programs offered to their children on the autism spectrum in public schools in the KSA. Eight parents were interviewed through 14 open-ended questions. Their answers were analyzed using inductive content analysis and the similarities, differences, and prevalence of the themes in their responses were examined. Chapter 5 is a

discussion chapter about the results from the three studies and considers the implications of the findings and future directions for research.

Between each study, a short transition is provided to help bridge the studies together. Given the connectedness and shared focus of the studies, there is some repetition in the literature reviews across all studies. A conclusion with a description of the original contributions of this dissertation is included at the end of this Dissertation.

## Definitions of the Study Terminology

### Barriers to Learning

Are a group of factors and events that negatively impact the process of learning or bring negative impacts on the academic outputs. These barriers range from mild to severe and include short and long-term effects (Lean & Colucci 2010).

### Co-Teacher

"It is the partnering of a general education teacher and a special education teacher or another specialist for the purpose of jointly delivering instruction to a diverse group of students, including those with disabilities, in a general education setting and in a way that flexibly and deliberately meets their learning needs" (Friend et al., 2010, p. 11).

### Equality/ Equity

Provides students with and without disabilities and disorders equal social and academic opportunities to live high quality lives, including justice in all life services (Terzi, 2014).

### Evidence-Based Practices

Implementing effective academic interventions, instructions, methods, approaches and techniques that were built upon research and evidence (Hornby et al ., 2013).

### Inclusive Education

"a process of systemic reform embodying changes and modifications in content, teaching methods, approaches, structures and strategies in education to overcome barriers with a vision serving to provide all students of the relevant age range with an equitable and participatory learning experience and the environment that best corresponds to their requirements and preferences "(United Nations, 2016, p. 3).

In Canada, inclusive education is an academic approach that provides equal access to learning. It includes a modification in teaching methods, strategies, and structures in education to facilitate academic and social challenges in schools and communities (British Columbia Ministry of Education, 2016). A Saudi study by Al-Assaf (2017) defined inclusive education as "the creation of pedagogical approaches for responding to diverse needs of learners within a common school for all" (Al-Assaf, 2017).

**Kingdom of Saudi Arabia (KSA)**

It is the official name for Saudi Arabia. It is in the Middle East, and it is the largest country in the Arabian Peninsula. In this study, the name of the Kingdom of Saudi Arabia is used in different ways: the Kingdom of Saudi Arabia, Saudi Arabia, and the KSA.

**Least Restrictive Environment (LRE)**

It is an academic approach that refers to the right of educating students with disabilities with their peers without disabilities together within the maximum potential range (Alguraini, 2013).

**Special Education**

In the KSA, "special education" is defined as, "a group of programs, planning and strategies specifically designed to meet the requirements of special education for disabled students. It includes ways of teaching, tools, and the application of special equipment" (Saudi

Ministry of Education, 2019). It also aims to promote students' academic, social, and behavioral skills, and prepare them to integrate them effectively in their community (Amr, 2011; Gaad, & Almotairi, 2013; Hadidi, & Alkhateeb, 2015). According to the Ministry of Education in Ontario, "special education" refers to "an educational program that is based on and modified by the results of continuous assessment and evaluation and that includes a plan containing special objectives and an outline of educational services that meets the needs of the exceptional pupil" (2017, p. 9).

**Students with Disabilities**

There are differences in the definitions of students with disabilities. By reviewing literature from the USA, researchers use the term "students with disabilities" or "children with disabilities" to refer to students who have learning, physical, or mental disabilities or disorders such as attention deficit hyperactivity disorder (Kauffman et al., 2014; UNESCO, 2019; Scotch et al., 2011). In Canada, students with disabilities are often referred to as "special needs students" (Quebec, 2017) and "have a disability of an intellectual, physical, sensory, emotional or behavioral nature, have a learning disability, or have special gifts that require additional/specialized accommodations or services in schools" (British Columbia Ministry of Education, 2016, p. 1). In the KSA the term "students with special needs" is used, but it is not recommended to be included in official legal paperwork (Saudi Ministry of Education, 2019). Therefore, this paper will use the term "students with disabilities" because it is the most used in the KSA.

**Chapter 1: Literature Review**

"Inclusive education is a matter of adopting a socio-ecological approach regarding the interactions between students' capabilities and environmental demands, stressing that educational systems must adapt to and reach all students" (Amor et al., 2018, p. 1278). There is a need to deeply rethink the opportunities in the education system and find ways to practice inclusion in a way that fulfills each student' needs, while simultaneously providing high quality education (Peder, 2016). It is challenging for some teachers to support students with a wide range of abilities all in one classroom (Meynert, 2014). Some research found the background of teachers, including their competence, knowledge and experience plays a significant impact on the implementation of IE (Low et al, 2018). Gordon and Illinois (2017) emphasized the role of teachers' competence in their practice in mainstream classrooms to deliver successful inclusion and to facilitate learning. Meynert's (2014) study provides an example in facilitating learning that if teachers apply the curriculum without adaptations, it is expected that some of the students will experience failure. The importance of preparing teachers has become essential as the responsibilities of mainstream teachers have increased to eliminate educational barriers to meet students' different needs at one time and in one classroom (Ramberg & Watkins, 2020). The Incheon Declaration and Framework for Action emphasized that IE is built on a foundation of inclusion and equity, which helps facilitate a successful transformation period from special to inclusion education (Ramberg & Watkins, 2020).

## Education System in Saudi Arabia

General education in the KSA includes kindergarten, primary school of six grades, intermediate schools of three grades, and high school of three grades. Then, students, as in many countries across the world, move to higher education. A major feature of the Saudi education system is that the education is provided by one ministry of education in the capital city Riyadh,

and it is supported by the government (Asiri, 2020). In different regions in the KSA, the education services are facilitated and controlled through affiliated educational department and school boards (Asiri, 2020). Students with disabilities are not excluded from the education system (Aldabas, 2015). The MoE started providing special support for students with disabilities or disorders within the frame of education services and essential lifelong skills (Aldabas, 2015). These services mostly started as special education in separate institutions. Even though education in the KSA showed interest towards the IE, special education is still dominant in the educational system for many students with different disabilities and disorders, as well as across different regions (Aldabad, 2015). "By 2006, approximately 80% of all students with disabilities received their special education services within regular schools" (Alnahdi et al., 2019, p. 72). At this time, IE was provided for a few students such as students who have learning difficulties (Aldabas, 2015).

By looking at the global movement towards IE, we can recognize that the history of IE in the KSA is limited by its time and services to specific students and regions (Aldabad, 2015). Reviewing the Saudi literature, results have emphasized the need for a developed IE program and effective practice for all students who are able to receive accommodative and adaptive regular curriculums (Aldabas, 2015; Alharbi & Madhash, 2017; Alnahdi, 2020; Alnahdi et al., 2019; Asiri, 2020). As well, there were recommendations for more development in teacher education programs in universities (Alzahrani & Brigham, 2017).

**Preparing Teachers in Saudi Arabia for Inclusive Education**

Educational visions across the world have evolved towards the question: how to address students' diverse learning needs in one time and one place? (Pray et al., 2017). "Countries across the world are engaged in educational reforms and one of the various reforms involves an

overhaul in the way future teachers of these children are prepared to address diversity in contemporary classrooms" (Alquraini & Rao, 2018b, p. 108). The strong global movement towards achieving IE to meet students' different learning needs requires placing a high value on the educational competencies-based teacher training programs at the university level (Alquraini & Rao, 2018b; Asiri, 2020; Pray et al., 2017). The process of preparing teachers to align with the evolution of education towards IE integrates various efforts to ensure high quality (Pray et al., 2017). Many educators across the world have participated in such efforts to accelerate this movement to rebuild effective teachers' educational programs, preparing them for the inclusion movement. In addition to these efforts, the first step of official pre-service training is to guarantee high quality teaching to address students' different needs (Alquraini & Rao, 2018b).

In line with this movement, educators in the KSA work intensively to get their teachers ready and competent to teach students with different needs (Asiri, 2020). The MoE places emphasis on "special education" as the sole academic program to prepare teachers for their careers in schools. The "pecial education" program mainly supports students with disabilities and disorders in separate special education schools, special classrooms in regular schools, or in resource rooms (Alshunaifi, 2018). Special education programs are available in 30 universities and colleges in the KSA, opening the door for the first time for student-teachers to be prepared in the sub-field to teach and support students with learning disabilities, intellectual difficulties, and hearing or visual impairments (Aldabas, 2015). Subsequently, in the last twelve years, the special education program has increased to include the sub-fields of autism, communication and behavior disorders, giftedness, emotional behavioral disorders, and students with multiple disabilities (Alquraini & Rao, 2018b). Special education programs in Saudi universities affirm standards in the establishment of education professionals and specifically underscores

characteristics of students' foundation level in learning, as well as evidence-based strategies and instructions, students' different needs, adaptations and accommodations, evaluation instructions, and teachers' ethical practices (Aldabas, 2015; Alharbi & Medhash, 2017; Alquraini & Rao, 2018b; Asiri, 2020).

The Ministry of Education enacted new guidelines for students including recommendations towards IE for all learners under the name of the *2016-2020 Strategy* (Saudi Ministry of Education, 2019). The goal of this strategy is to ensure a high quality and equal education that boosts life-long learning opportunities in an inclusive approach for all students. The strategy also aims to promote education for students with disabilities and to develop universal IE that provides various opportunities for quality education for all students (Saudi Ministry of Education, 2019). The Ministry of Education has devoted its efforts to ensure that regular schools are following and adopting IE for students with disabilities so they may learn along with typical peers. Additionally, the Ministry has worked to minimize, if not eliminate, any barriers preventing effective inclusion (UNESCO, 2021).

Although policymakers and educators seek better practices for teachers to address students' different needs, the current preparation programs are focused on special education and not an IE program (Alharbi & Medhash, 2017; Alquraini & Rao, 2018b). The little support that teachers can receive as training in IE are mostly provided by courses or field work training within the special education program (Alzahrani & Brigham, 2017). However, pre-service training in IE as a requirement is not yet mandated for teacher preparation programs in universities (Al-Sudairi, Ba-Othman, 2018). Individual educators in Saudi Arabia understand the importance of preparing teachers in IE. Thus, the individual pursuit of this training by educators

was given for teachers to deliver basic knowledge about IE with the contribution of the MoE (Al-Sudairi, Ba-Othman, 2018).

A study by Alquraini and Rao (2017) examined expectations of Saudi faculties of education on the level of readiness in teachers' preparation programs in universities towards adopting IE in mainstream classrooms. The study aimed to examine if the preparation programs consisted of the basic knowledge and required skills under four broad categories of assessment: services and outcomes; professional practices; ethical concerns; and collaboration. The results found current educational programs are more developed to support education for students with disabilities. However, this program did not reach the aim of IE instructions, strategies, and practices (Alquraini & Rao, 2018b). Furthermore, Alnahdi (2020) supported Alquraini and Rao's (2017) results and emphasized that despite teachers being eager to work in the IE setting, the teachers lack the opportunities to build a strong foundation, supporting their practice in IE. Qualified teachers are the core of educational success (Amr et al., 2016).

**Teacher Competence in Inclusive Education**

Teachers' competence is an academic concept that reflects teachers' willingness to facilitate inclusive education practices in mainstream classrooms (Alnahdi, 2020; Pit-ten Cate et al., 2018). Teacher's competence also positively contributes to their students' progress-regardless of their abilities and needs (Srivastava et al., 2017). Today, the concept of teachers' competence has been highlighted as an important element in academic research (Alnahdi, 2020; Friedman & Kass, 2002; Sharma & Nuttal, 2016). The concept of teachers' competence began with measuring both their cognitive abilities and personal attributes (Friedman & Kass, 2002; Tschannen-Moran et al., 1998). Then the definition evolved to include the practical process of high-quality teaching in classrooms (Künsting Josef, et al., 2016). The conceptualization of

teachers' competence did not emerge by chance. It emerged early in the 1970's by researchers at Rotter in Rand Corporation when they examined reading ability levels and the interventions facilitated by teachers. Another part of their study examined teacher competence using questionnaires (Friedman & Kass, 2002). The sum of the questionnaire indicated the extent of teachers' beliefs that students succeed, progress, or fail is based on the teacher's ability and qualifications (Tschannen-Moran et al., 1998). Rand's theory was that teachers with a high level of competence and a high self-confidence can influence their students' progress and achievements (Tschannen-Moran et al., 1998). Later in the 1970's, Bandura continued working on the concept of teacher competence (Pit-ten Cate et al., 2018). Bandura was interested in the cognitive process of teachers and the role of the school environment (Friedman & Kass, 2002; Tschannen-Moran et al., 1998).

**Previous Research in Competence**

The academic research in the field of teacher competence also examines how teachers will reduce obstacles in the classroom and how much effort teachers are willing to put in to enhance the performance and achievement of their students (Friedman & Kass, 2002; Sharma & Nuttal, 2016). As well, the academic research examines the flexibility of teachers in meeting the different needs in their classroom, while controlling their level of stress (Künsting Josef, et al., 2016; Tschannen-Moran et al., 1998). Regarding competence, research highlighted the extent to which teachers can establish enhanced classrooms to foster students' progress. "Competence" is an essential element in IE based on Rand and Bandura's contributions. Besides that, researchers have continued studying competence and consequently they demonstrated that cognitive ability and personal attributes or skills are not the sole influencers or predictors for competence (Pit-ten Cate et al., 2018). In addition, research found that willingness in inclusion, background about

students with disabilities, belief in education, and motivation to help and support are additional factors that feed teachers' competence (Friedman & Kass, 2002; Pit-ten Cate et al., 2018; Srivastava et al., 2017). As a result of the evolution that the education field is currently facing, educators are looking for new updates and findings of research studying competence (Pit-ten Cate et al., 2018).

**Teachers' Competence and their Professional Development**

Teachers' external and internal features such as personality, cognitive abilities, teaching skills, and competence define the frame in which these teachers are willing to include students and convey effective teaching (Sharma & Nuttal, 2016). High competence reflects teachers' ability and previous background in IE. As well, it reflects teachers' self-regulation to behave positively with their students who have different needs (Kunsting et al., 2016). This becomes clear when Bandura states that becoming more competent in IE increases the likelihood to apply IE effectively (Pit-ten Cate et al., 2018). Particularly, increasing teachers' knowledge will help to improve their professional development, which also helps to improve their competence in IE. A positive association was confirmed between competent teachers and their professional development. Those teachers with high competence mainly pay attention to developing their "willingness to implement innovative instructional strategies, work engagement, resilience to stress, and classroom observations of teaching quality" (Lauermann & Berger, 2021, p. 2). More importantly, competent teachers' pay more attention to their professional well-being, which consequently increases their satisfaction about their work's role and responsibilities (Lauermann & Berger, 2021). Then in turn, teachers will be able to deliver positive advantages to their classroom environment and IE implementations (Kunsting et al., 2016).

**Competence in Mainstream Classrooms Practices**

Competence is the core of IE, especially when considering its implementation (Bandura, 1997; Pit-ten Cate et al., 2018). There is evidence that competence is strongly related to teachers' outcomes in classrooms including their performance (Wu et al., 2022). From this point an extraction showed that the competence of teachers mirrors their level of education, qualifications, and training (Wu et al., 2022). Hence, they are more likely to be ambitious and willing to transfer their knowledge into an effective teaching process (Friedman & Kass, 2002). Similar results were found in Kunsting et al. (2016) that the levels of knowledge, skills, and experience that they gain previously contribute to delivering typical practice. Kunsting et al. (2016) continued adding that there is a positive influence in teachers' confidence to include students with disabilities in their mainstream classrooms (Kunsting et al., 2016). Therefore, teachers' level of confidence contributes to positively impacting their students' behaviors (Pit-ten Cate et al., 2018). New results in 2021, by Lauermann and Berger, agree with the results of both Friedman and Kass (2002) and Kunsting et al. (2016) that a high competence is strongly linked with confidence in teachers' own skills to facilitate difficulties and challenges, control overlapping tasks, and invest their knowledge and abilities into effective work when facing barriers. The suggested relationship by researchers between teachers' competence and their motivation can also deliver positive outcomes to the teachers' themselves such as their ability to minimize learning challenges and applying new strategies (Kunsting et al., 2016; Lauermann & Berger ,2021; Tschannen-Moran & Hoy, 2001).

Besides confidence and effective practice, motivation was also found to be related to high competence (Wu et al., 2022). Sharma and Nuttal (2016) and Pit-ten Cate et al, (2018) have demonstrated that motivated teachers in inclusive education can therefore influence their students' motivation. Thus, the chance of teachers' motivation increases and can be reflected in

their daily practices and attitude with their students (Sharma & Nuttal, 2016). Wu et al. (2022) found a strong association between highly qualified teachers and level of motivation into the execution of effective curriculum modifications and accommodations, learning techniques, and appropriate assessments. This in turn, is associated with high academic accomplishment (Pit-ten Cate et al., 2018). The importance of teachers' competence presents in teachers' skills such as: "higher in the domains of instruction, student assessment, classroom management, and personal qualities, [which] were most effective in terms of student outcomes" (Pit-ten Cate et al., 2018, p. 51).

The role of competence not only targets teachers' skills and classroom environment, but also it promotes students' success (Hosshan et al., 2020;). Several studies have emphasized the role of teachers' competence on their students' academic performance and progress (Alnahdi et al., 2019; Alnahdi, 2020; Hosshan et al., 2020; Soodak et al., 1998). This relationship between competent teachers and students' progress has been defined to be an indirect relationship. This relation can be achieved when teachers show high quality in their practices, instructions, and teaching methods (Lauermann & Berger, 2021). Teachers who use high-quality teaching methods are able to provide meaningful support to students to meet their needs (Alnahdi, 2020). A cross sectional study reported significant influences by competent teachers on their students, to actively use teachers' cognitive ability during instructions. As well, students' motivation and engagement has been increased (Lauermann & Berger, 2021; Tschannen-Moran & Hoy, 2001). A study by Johansson et al. (2015) found a higher teachers' competence delivers higher accomplishment in students' academic performance.

Several literature reviews have studied the competence of teachers on their students' performance and few studies have noticed that competence is a skill or character, "which cannot

be measured by observable indicators such as certificates and degrees" (Johansson et al., 2015, p. 578; Lauermann & Berger ,2021). As a result, in some cases, students' achievement in classrooms are used to evaluate teachers' competence (Johansson et al., 2015). "Under an inclusive philosophy, schools exist to meet the needs of all students; therefore, if a student is experiencing difficulties, the problem is within the schooling practices and not with the student" (Sharma et al., 2012, p. 12). Including students in mainstream classrooms within the IE program is a complex function since it demands teachers to use a higher skill set to meet these newer requirements and to maintain their professional development in this field (Sharma et al., 2012). Making improvements in their teaching practices and establishing new strategies can help each student learn and progress (Hosshan et al., 2020). Therefore, it is important to take teachers' knowledge, background and competence into consideration (Alnahdy, 2019). What teachers deliver in their classroom environment is a direct reflection of their learning and experiences (Low et al., 2020).

When students on the autism spectrum are placed in mainstream classrooms, these teachers are in charge of modifying and accommodating their materials and instructions to ensure students' success (Moores-Abdool, 2010). In this case, teachers may be expected to improve their knowledge about inclusion, which can be challenging for those who do not have a background or prior experience in this area (Amr et al., 2016). The demand for teachers to educate students with different needs and abilities in one classroom is increasing (Srivastava et al., 2017). The ability to teach IE includes "a range of teaching methods, learning activities, and evaluation strategies in the classroom" (Amr et al., 2016. P. 67). In this paper, researchers explored the relationship between teacher competence and underlying factors affecting their IE practice. These factors include knowledge in IE instructions, beliefs about students learning in

mainstream classrooms, and their attitudes towards including students on the autism spectrum. The differences between these areas are distinguished by their level of education and effectiveness of their practice. This paper examines the effective implementation of IE and effective practices in mainstream classrooms for students on the autism spectrum. For the purposes of this paper, IE is considered when students on the autism are learning alongside typical peers in one mainstream classroom.

Efficacy is one of the educational concepts that describes competence. "*Teacher efficacy*" is reflected in their competence to achieve a given task. Tschannen-Moran et al. (1998) defined self-efficacy as the "future-oriented belief about the level of competence a person expects he or she will display in a given situation" (p. 207). According to Bandura, self-efficacy in teachers helps them to determine whether they will be competent enough to organize and perform the actions necessary to achieve the required task at needed level (Tschannen-Moran et al., 1998). Bandura in this case, confirmed that "because .. [teachers] .. stem from the projected level of competence a person expects to bring to a given situation, outcome expectancies add… to the predictive power of efficacy measures" (Tschannen-Moran et al., 1998, p. 210). Therefore, competence reflects teachers' efficacy in using the necessary actions to accomplish an educational goal (Sharma & Nuttal, 2016). According to Rodgers et al. (2014) in some academic papers efficacy and competence are used interchangeably. From a different perspective, Tschannen-Moran et al. (1998) stated that competence is used to determine teachers' efficacy. In our research, we used "*competence*" rather than "*efficacy*". Using efficacy in this research can give the meaning of skills that teachers need to succeed in IE. However, competence in teaching is more focused on the accuracy in determining teachers' abilities in practicing and achieving IE effectively in mainstream classrooms. The concept of competence in this paper serves our goal to

investigate whether teachers have the necessary capabilities and potential needed to create effective inclusive classrooms.

**Factors Contributing to Teachers' Competence in Inclusive Education**

It is worth distinguishing here between "belief" and "attitude" to avoid any overlapping. Many researchers and academics consider "cognitive aspects have been attributed to belief, and effective or motivational aspects have been attributed to attitude" (Martin & Bertram, 1962, p. 35). Belief is expressed as the basis of cognitive process in individual thoughts, and attitude is an individual reflection of the cognitive process, which is clear in one's emotional approaches and practices (Fogelberg, 2016). Beliefs are structured from the interactions of multi-factors (culture, previous experience, education) surrounding individuals and play a significant role in their knowledge. Gradually these ideas became accepted and rooted in one's cognition and built a net of value related to their life pattern (Fogelberg, 2016; Martin & Bertram, 1962). Then the level of attitude leads the individual to rate their perceptions, emotions, and behaviors to be positive or negative (Fogelberg, 2016).

Individuals' beliefs can determine and influence their attitude, but beliefs and attitudes do not influence each other (Fogelberg, 2016; Martin & Bertram, 1962). Two teachers may have the same attitude, but both of them have different levels of beliefs and vice versa (Martin & Bertram, 1962). For example, two teachers can have a positive attitude to include students on the autism spectrum in mainstream classrooms. However, one of them believes inclusion should be restricted under academic intervention, while the other teacher believes interventions and special support are unnecessary services (Fogelberg, 2016; Martin & Bertram, 1962). Overall, beliefs reflect individual perspectives, while attitudes reflect their emotions and their acceptance or rejection of specific actions.

*Teachers' Beliefs in Inclusive Classrooms*

The concept of competence espoused by both Rand and Bandura has confirmed the influence of teachers' beliefs on their ability to deliver effective education and to enhance student performance (Subban & Mahalo, 2011). Moreover, this concept considered "teachers who express confidence in their ability to teach difficult or unmotivated students evidence a belief that reinforcement of teaching activities lies within the teacher's control or is internal" (Tschannen-Moran et al., 1998, p. 204). Rand's study of teacher competence in reading programs and interventions yielded significant results associated with teacher competence and impact on student success. The individual students' success with reading performance was higher when their teachers had confidence in them and when they delivered high-quality teaching (Peder, 2016; Tschannen-Moran et al., 1998).

Despite a limited number of studies that examine teachers' beliefs in IE, they all emphasized that teachers' beliefs have an important role in their ability to teach diverse student populations (Civitillo et al., 2016). Belief is a mirror of an individual's experience, behaviors, and outcomes (Verne, 3013). Teachers' beliefs often include students' rights to be included in mainstream classrooms, beliefs that students can achieve success regardless of their abilities, and beliefs that they can positively influence their students' progress (Alnahdi, 2019; Civitillo et al., 2016; Low et al., 2020; Sharma & Nuttal, 2016; Subban & Mahalo, 2011; Varcoe et al., 2013). The IE approach motivates teachers to make positive changes for their students by accepting the rights of education for all (Civitillo et al., 2016). Civitillo et al, (2016) summarized Bandura's (1997) thought that students' progress in the classroom is an external sign that reflects teachers' beliefs, thinking, and tendencies towards those students. In summary, teacher's beliefs and

competence have a direct influence on their desire, motivation, and decision-making process in the classroom (Avramidis et al., 2019).

In mainstream classrooms, teachers establish their teaching approach and methods based on their belief of a student's ability to learn, to communicate with others, and to make progress. Hence, teachers' beliefs have direct effects on their strategies, plans and ideology (Verne, 3013). Educators in the field of inclusion are concerned about the degree to which teachers' beliefs can influence their level of expectations of their students (Subban & Mahalo, 2011). The concern here is teachers who have low expectations and unrealistic beliefs (Sharma & Nuttal, 2016). Consequently, educators are considering how teachers in IE can positively shift their beliefs towards including students on the autism spectrum in their mainstream classrooms (Khalid et al., 2019; Verne, 3013).

***Attitude and Knowledge for Effective Teaching in Inclusive Classrooms***

In addition to competence and beliefs, attitudes of teachers are also important in increasing and attaining the goal of inclusion in mainstream classrooms for students on the autism spectrum (Civitillo et al., 2016; Haimour & Obidate, 2013). Including students on the autism spectrum in an IE program and placing them into mainstream classrooms with peers gives the mainstream teachers additional responsibilities (Moores-Abdool, 2010). These additional responsibilities include keeping abreast of changes "in policies, administrative structures and availability of resources" (Srivastava et al., 2017, p. 562). Thus, to implement effective inclusive education, training teachers about inclusion in mainstream classrooms is essential (Sharma & Nuttal, 2016). Preparing teachers for inclusion brings many advantages and improved practices (Subban & Mahalo, 2017). A teacher's lack of willingness to prepare likely decreases the chances of creating a positive inclusive education environment and will likely fail to "meet the

needs of diverse student populations in their classrooms" (Sharma & Nuttal, 2016, p. 12).

Srivastava et al. (2017) agrees with Sharma and Nuttal (2016) that differences in learning styles

and educational needs in inclusive classrooms can put unwilling teachers in difficult situations.

The term of teachers' competence encompasses teachers' level of preparation and trust

in their knowledge, capability, and skills to include students with various needs in mainstream

classrooms (Alnahdi, 2019). Sharma and Nuttal (2016) demonstrated connection between

teachers' competence and attitude when practicing IE. This strong relationship was confirmed by

Bandura (1997) who stated that teachers who gain and work with a high level of competence will

positively accept teaching students with different needs in the mainstream classroom (Sharma et

al., 2012). Later, Soodak et al. (1998) further analyzed this relationship and stated that having a

high level of competence towards students with disabilities allows the students to achieve more

positive academic outcomes. Vice versa, if a teacher has a negative attitude towards accepting

students with disabilities, this will negatively influence their competence and the students'

success (Sharma et al., 2012).

The relationship between attitude and competence of teachers is not guaranteed to be

positive (Subban & Mahalo, 2017). Some literature reviews presented opposing results, where

they found attitude to be strongly related to some aspects of teacher competence, such as

competence in practice or collaboration with other teachers or parents (Werner et al., 2022).

These evidence-based results show that a positive relationship is supported by a teacher's prior

knowledge.

Some literature uses the word "interaction" instead of "relationship" to describe how

each of these factors influence each other (Sharma & Nuttal, 2016; Subban & Mahalo, 2017;

Werner et al., 2022). Interaction refers to a teacher's knowledge of IE practices, IE strategies, and

IE policies (Werner et al., 2022). On the other hand, other literature reviews confirm the positive interaction between attitude and belief to define teacher competence (Subban & Mahalo, 2017). A teacher's background and knowledge about IE supports academic interventions and curriculum accommodations (Werner et al., 2022). As teachers increase their knowledge of IE, their competence also increases (Werner et al., 2022). Because the process of learning evolves rapidly, teachers should continue undertaking their professional development, including pre-service training (Sharma et al, 2012).

Moreover, students' needs change over time and accordingly, their needs should be met with a highly knowledgeable teacher (Alnahdi, 2019). Sharma et al. (2012) reported a high need for changes in teachers' pre-service training programs at universities to help fill the gap in teaching qualifications for IE (Sharma et al., 2012). Subban and Mahalo (2017) suggested that training programs can positively enhance teachers' competence and attitudes towards students in an inclusive classroom (Ahsan et al., 2012; Subban & Mahalo, 2017; Werner et al., 2022; Varcoe et al., 2013). Sharma and Nuttal's (2016) work emphasized the differences between teachers who are more competent (who include students with disabilities) and those who are less competent. The teachers with positive attitudes were the teachers who received knowledge and training about inclusion (Sharma & Nuttal, 2016). Subban and Mahalo's (2017) study drew a similar conclusion that teachers who received previous knowledge about inclusion were more qualified in their practices and tended to show more positive attitudes than other unqualified teachers. Both Sharma and Nuttal (2016) and Subban and Mahalo (2017) suggest a direct correlation between a teacher's knowledge, attitude and a teacher's competence with IE. Inclusive education targets many students with disabilities and disorders and students on the autism spectrum are one

of them. Students on the autism spectrum can progress when they are in sufficient academic environments in which they receive support (Simpson et al., 2011).

<center>**Students on the Autism Spectrum**</center>

An essential goal of inclusive education is to recognize the urgent need for students with disabilities to practice academic and social skills in their environments (Bakken & Obiakor, 2016). School communities are considered public organizations that offer opportunities in supporting students with disabilities (Joubert & Harrington, 2020). "Inclusive educational programming can better prepare students with disabilities for future integrated experiences within educational, employment, and recreational activities" (Bakken & Obiakor, 2016, p. 100). A common concern is to what extent can students with behavioural and autism spectrum disorders benefit from inclusive education? (Alshenifi, 2018; Dare et al., 2017; Zeina, 2014).

Inclusion in education is a critical and complex process since it relies on equivalent opportunities (UNESCO, 2017). For students on the autism spectrum, equivalency can be even more difficult, since they often face multiple educational challenges (Able et al., 2015; Carter et al., 2017). Thus, the essential inquiry here is, where should students on the autism spectrum learn? (Simpson et al., 2011). Some educators in special education want to see new changes in education for students on the autism spectrum (Simpson et al., 2011). They disagree that inclusive classrooms are the best learning environments for students on the autism spectrum for three reasons (Able et al., 2015; Amore et al., 2018; Carter et al., 2017; Simpson et al., 2011). Firstly, the background of general teachers and their training is not enough to support their responsibility of teaching students on the autism spectrum in mainstream classrooms (Able et al., 2015). They are not prepared for this level of teaching yet (Able et al., 2015; Alnahdi, 2020). Secondly, the number of students in one mainstream classroom may cause teachers to pay less

attention to the unique needs of students on the autism spectrum (Simpson et al., 2011). Thirdly, peer rejection towards students on the autism spectrum has emerged in mainstream classrooms (Carter et al., 2017). Nevertheless, there is limited research on peer rejection in the classroom (Able et al., 2015).

In contrast, some teachers believe and agree with IE for students on the autism spectrum. In (2018), Low et al. stated that students on the autism spectrum are one of the targeted groups in inclusive education. Van Tran et al. (2020) echoed that opinion and said that "inclusive education is considered the highest goal to facilitate access, success, and participation for children on the autism spectrum and the most preeminent educational setting for the development of the majority of children on the autism" (p. 265). The increasing global number of children on the autism spectrum has made professionals in the field of education aware of the necessity of preparing teachers to meet the varying levels of skills and needs of students on the spectrum (Alsheninfi, 2018). Instructions and strategies may not be effective with all students. Varying teaching methods is commonly regarded as one of the difficulties for teaching this population of students in mainstream classrooms. In such cases, teachers require extensive training to successfully manage these classrooms (Dare et al., 2017; Zeina, 2014). About two decades ago, students on the autism were sent to special education schools to study in isolated settings, thus preventing them from studying in educational settings (Ferraioli & Harris, 2011). The current inclusive education situation is different and many of the newer programs are unique because they allow students on the autism spectrum to study in an inclusive education setting with other typical peers (Ferraioli & Harris, 2011).

It has been proven that many people on the autism spectrum, if provided with early and appropriate educational interventions, can benefit from a more typical educational setting

(Alamri & Tyler-Wood, 2015). Low et al. (2018) reported in their study that an estimated 10 to 20 students per every 1000 may be diagnosed with autism. Consequently, an increasing diagnosis rate serves as another reminder of the importance of rethinking the educational rights of students on the autism spectrum (Simpson et al., 2011). As IDEA stands for, no student is essentially different from their peers, since all students come to the classroom with the same purpose (Low et al., 2020).

**Overview of Autism Spectrum Disorder**

Autism spectrum disorder is "a neurodevelopmental disorder that is characterized by difficulties with social communication, social interaction, restricted and repetitive patterns in behaviors, interests, and activities" (American Psychological Association, 2022, p. 1). The definition includes "spectrum" terms to reflect the "heterogeneity in the presentation and severity of autism spectrum symptoms, as well as in the skills and level of functioning of individuals who have autism spectrum" (American Psychological Association, 2022, p. 1).

In 2013, the Statistical Manual of Mental Disorders (DSM-V) released the characteristics of autism spectrum disorder that distinguish impairment in three areas: deficit in social interaction, social language or communication, and repetitive or restricted behavior (Bregman & Higdon, 2012). According to the DSM-5, the first area of autism diagnostic criteria is social impairment. This can be presented through social-emotional impairment and difficulty in non-verbal communicative behavior for social practice and activities. People on the autism spectrum may also have difficulty building and managing social relationships (CDC, 2020). The second area of the autism diagnostic criteria is a social language or communication impairment. This is generally characterized by difficulty in verbal communication and includes deficits in both receptive and expressive language. Examples of difficulty with non-verbal communication

include poor eye contact, lack of body language, lack of facial expressions, and failure to understand others' body language (CDC, 2020). The last area of the autism diagnostic criteria is a unique pattern of behaviors or restricted interests that present in at least two of the following domains. These domains include repetitive use of specific objects, speech or motor movements. Also, there may be an insistence on specific routines that may result in high stress if there are any changes made to such routine. Additional domains include having a very high level of interest in specific subjects, including an interest towards abnormal objects and hyperactivity levels to sensory input such as light and noise (CDC, 2020).

Symptoms of autism spectrum present from early childhood and tend to persist in an individuals' adolescence and adulthood (Bregman & Higdon, 2012). Furthermore, autism spectrum presents differently from one individual to another and varies based on its severity and the number of symptoms which may change over time (Masi et al., 2017). Therefore, some people on the autism spectrum can live independently, while others with more severe symptoms may require a more intense level of care and support (Masi et al., 2017). Patterns of behavior for individuals on the autism spectrum differ in its severity from low functioning to high functioning (Yu et al., 2017).

**Prevalence of Autism**

*Prevalence of Autism in North America*

An essential factor behind the noticeable interest in the field of autism is the growing prevalence of autism spectrum diagnoses across the globe (Elsabbagh et al., 2021). Illustrations of this gradual increase show a progression in many areas, namely: individuals' knowledge, expansion of professional experiences, and awareness of diagnosis criteria between families themselves (CDC, 2020; Falkmer et al., 2015). According to the Center of Disease Control and

Prevention (CDC), there is no association between the global prevalence of autism and differences in cultures, race, ethnicity, and socioeconomic groups (2020). According to Yu et al. (2017):

> "A review of the global prevalence of autism puts the median estimate of autism spectrum prevalence slightly lower than a rate of 62/10,000. There are variations between studies, but no obvious evidence for differences in the prevalence between geographic regions and/or ethnicities" (p. 126).

The reported prevalence of the number of students on the autism spectrum has increased gradually since the mid 1990's (Bregman & Higdon, 2012). Using the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR), the CDC has identified autism spectrum rates ranging from 2.0 to 12.0 per 1,000 children (2007). In 2018, the Canadian National Autism Spectrum Disorder Surveillance System (NASS) provided a report about the prevalence of autism spectrum disorder in Canada. The NASS found that approximately 1 in 66 children have been diagnosed with autism spectrum disorder (Government of Canada, 2018). Furthermore, a 2019 report by the World Health Organization showed about 1 in 160 children were diagnosed with autism spectrum (World Health Organization, 2019). One year later in 2020, the CDC released another report which showed an increase in autism prevalence; 1 in 54 children in the United States were diagnosed with autism spectrum (Maenner, et al., 2020).

### *Prevalence of Autism in the Middle East*

Despite the increase in the number of published research about autism spectrum in various disciplines, most of this research has been conducted in Western countries. Furthermore, those papers and findings provide "limited to no systematic information about the understanding

and management of autism spectrum in the rest of the world" (Alnemary et al., 2017). By examining literature reviews, there appears to be a clear shortage in autism spectrum diagnoses in Arab countries. There is a limitation in investigating the prevalence of autism in Arab countries to determine if there is any increase in the number of individuals on the autism spectrum (Alkhateeb et al., 2019; Alnemary at al., 2017; Kelly et al., 2016; Zeina et al., 2014). The precise number of individuals on the autism spectrum in Arab countries is currently unknown and that may be consequential for various factors (Alnemary et al., 2017). "In Arab countries, the diagnosis of autism in general is difficult because of the lack of diagnostic instruments and specialists in autism. Intense social stigma can also be an important factor" (Alkhateeb et al., 2019, p. 1650). Furthermore, Alnematy et al. (2017) thinks there is a lack of community awareness about autism symptoms in Arab countries and a lack of understanding about their children's academic and social rights. Therefore, there is a lack of parents seeking support for their children on the autism spectrum in Arab countries. Research in the field of autism in Arab countries is gradually increasing in recent years. In the United Arab Emirates (UAE), a recent study by the Dubai Autism Center revealed that approximately 1 in 146 children have been diagnosed on the autism spectrum (Virolinen et al., 2020). Additionally, the study revealed a delay in autism diagnoses and assessments from the family's side. Virolinen et al. (2020) found that 16.4% of families were seeking diagnosis support when their children were 6 years old or older. In Bahrain, there are 4.3 per 10,000 children who have been diagnosed with autism spectrum (Kelly et al., 2016).

Evidence of the prevalence of autism spectrum in the Kingdom of Saudi Arabia is also limited (Zein et al., 2014). In the KSA, the Special Education Institute and Program define autism as a disorder that is generally presented within the first three years of a baby's life (Alamri

& Tyler-Wood, 2015). Results from Saudi studies show the number of children on the autism spectrum has increased sharply in recent years (Albatti et al., 2022). In 2014, Taha and Hussain (2014) stated that approximately 42,500 children have been identified with autism spectrum 1:166 ratio. Three years later in 2017, Alnemarry et al. estimated 67,000 children had been diagnosed with autism spectrum: approximately 3.8 times higher than the previous statistic. In 2022, results from a study by Albatti et al. showed a rapid increase in the total number of children diagnosed with autism spectrum; about 1 in 40. The DSM-5 states, "autism spectrum disorder is diagnosed four times more often in males than in females" (Loomes et al., 2017, p. 466). Nevertheless, Albatti et al. (2022) found the ratio of male and female children in Saudi Arabia who meet the autism spectrum diagnosis to be 3:1 ratio.

Early diagnosis of autism spectrum may help Saudi students and their families receive appropriate intervention and support (Khan et al., 2020). The process of assessing and diagnosing children on the autism spectrum has gone up in the KSA (Alnemary et al., 2017; Alotaibi & Almalki, 2016). However, the necessary diagnosis of autism spectrum and academic and behavioral assessments to define special educational eligibility has not been amended (Alotaibi & Almalki, 2016). Accordingly, Alamri and Tyler-Wood (2015) stated that diagnosis of autism spectrum is provided in the late stages and therefore students on the autism spectrum are likely to miss essential early academic and behavioral interventions. From a similar point, Tyler-Wood (2015) reported a lack of relevant academic services such as the Individualized Education Plans (IEP), IQ tests, behavioral modification programs, and resource rooms.

**Education Students on the Autism Spectrum**

Autism Spectrum Disorder has not become as rare as a disorder compared to what it was between 1985 to 1994 (CDC, 2007). The rapid increase in autism spectrum diagnoses is a critical

sign to reconsider the availability and appropriateness of the education programs for those students on the autism spectrum (Van Der Steen et al., 2020).

Students on the autism spectrum may present with limited communication skills and social challenges (Van Der Steen et al., 2020). In addition, they are likely to demonstrate their abilities in atypical ways. Therefore, their communication and social difficulties may prevent these students from asking for teachers' help and support (Van Der Steen et al., 2020). Thus, the education system may face some challenges in providing high quality education programs and interventions to suit all the needs of students (Magyar, 2011).

Policymakers in ministries of education face challenges with creating proper educational programs within inclusion education (Van Der Steen et al., 2020). The heterogeneity in students on the autism spectrum may create some challenges for policymakers and teachers in meeting the different needs of students in inclusion programs (Van Der Steen et al., 2020). This heterogeneity in students' needs requires various strategies and instructions. Furthermore, Sulaimani (2019) added that, including students on the autism spectrum requires policymakers to reconsider the following: addressing the distinction of autism disorder, educational policies, the range of academic interventions, educational plans, and organized procedures to facilitate the learning process (Magyar, 2011).

Despite the challenges of including students on the autism spectrum in inclusive classrooms, the advantages of these students studying in mainstream classrooms are very meaningful (Martin et al., 2021). Results presented in two studies confirmed the positive role of inclusion and the advantages of studying with other typical peers (Alnematy et al., 2017; Ferraioli & Harris, 2011). These advantages are presented in students' cognitive, academic, and

social skills (Alnematy et al., 2017; Ferraioli & Harris, 2011). Nevertheless, there is a shortage in the number of studies that highlighted the outcomes of IE (Ferraioli & Harris, 2011).

Moving from a segregated setting to an inclusive one is a step towards achieving equality between all students, regardless of their differences (UNESCO, 2017). Inclusive education can be high quality, while allowing the opportunity for students on the autism to develop their social skills (Martin et al., 2021). Literature in this area also suggests that inclusion can result in high student achievement from those on the autism spectrum, including progression in their language skills and their IQ (Ferraioli & Harris, 2011).

Ferraioli and Harris (2011) confirmed the positive impacts of inclusion on social skills by comparing students in inclusive education classrooms and students in isolated settings. Similarly, Teixeira De Matos, and Morgado, stated that "in inclusive settings students on the autism spectrum have the chance to improve upon some of their difficulties, particularly social ones, by modeling the behavior of their peers" (2016, p. 972). The findings showed an improvement in social and adaptive skills of those in an inclusive environment. In addition, effective inclusive education provides chances for students to enhance their social skills, create relationships with peers and teachers, and to be more involved in class activities (Alkerida, 2021; Van Der Steen et al., 2020).

### *Overview of Education Programs for Students on Autism Spectrum in the KSA*

The Saudi MoE included students on the autism spectrum in its special education department (Aldabas, 2015). Educating students on the autism spectrum was not applied in the KSA until 1990. Moreover, from 1990 to 2000 educational programs for students on the autism spectrum were only provided within special education schools (Aldabas, 2015). In 2001, the MoE established the Rules and Regulations of Special Education Programs (RRSEP) to support

the rights of all students with disabilities, including students on the autism and to give them access to special education programs in a more effective environment (Aldabas, 2015). This legalization highlighted the significance of including students with disabilities in special education classrooms in regular schools. It also confirmed that students with disabilities now will be educated in the LRE (Alkerida, 2021). The LRE gives students the opportunity to learn in an environment that is similar to the mainstream classrooms; however, with special education services (Alamry & Tyler-Wood, 2015).

To be educated in settings as similar as regular classes as appropriate for the student, at the end of the 20th century, students on the autism spectrum were included in 47 special classrooms in regular schools across the KSA (Aldabas, 2015; Alkerida, 2021). According to Aldabas (2015), students on the autism spectrum received special education programs in special classrooms in regular schools, however students with severe autism received their education programs in separate schools.

Between the period of 2001 to 2004, there was a noticeable shortage in education in regular schools of students on the autism spectrum compared with other disabilities or disorders in education programs (Sulimani & Gut, 2019). In 2004, the Saudi government increased the amount of research in the field of autism and aimed to develop effective curriculums and programs to better align with students' different needs. While doing so, they tried to parallel their educational frameworks with what was being implemented worldwide (Batool, 2020; Sulimani & Gut, 2019). As well, the MoE encouraged universities to open undergraduate programs to help teachers learn more about autism (Alquraini, 2011; Alzahrani & Brigham, 2017; Sulimani & Gut, 2019).

Previous Saudi research highlighted that students on the autism spectrum in the KSA face many challenges in the education system (Alqurini, 2011). These challenges were apparent in a lack of some services, programs, and support (Sulaimni & Gut, 2019). As well, there was some low quality of classroom's instructions, strategies, curriculum, and the individualized education plans (Sulaimni & Gut, 2019; Zeina et al, 2014). Alzahrani and Brigham (2017) found that students on the autism spectrum are below the Ministry's academic expectations.

Another issue highlighted in the research was the limited number of school psychologists, assistant teachers, and applied behavioral therapists (Alsalem, 2015). As well, the findings showed a shortage in the number of co-teachers (or what is referred to in Saudi Arabia as a "shadow teacher") who cooperate with the resource room teachers to provide academic support for students with disabilities (Alsalem, 2015; Alshenaifi, 2018, Batool, 2020). The educational programs still lack updated guidelines, instructions, academic interventions, and evidence-based practices (Alsalem, 2015).

Research in the area of special education has highlighted the delay in providing academic support to students on the autism spectrum. Sulaimani and Gut (2019) and Zeina et al, (2014) argued the delay to include students on the autism spectrum in regular schools was likely because of the number of students coupled with the lack of teachers' awareness about autism. In 2015, there were a few students on the autism spectrum who were supported in 47 special education classrooms across the KSA (Aldabas, 2015). A report by the MoE (2019) that, 2896 students were enrolled in special education classrooms or schools across the KSA. These emerging issues and inclusion delays affect the quality and the effectiveness of education for students on the autism spectrum in the KSA. Alzahrani and Birgham (2018) in their study stated the need for more development in the educational programs for students on the student spectrum.

As well, they conclude the importance for the work collaboration between policymakers and teachers in order to provide more inclusive classrooms and instructions. Besides teachers, parents have an essential influence in their children's learning (Falkmer et al., 2015). Thus, literature in education that gives high priority to parents' role in their children's academic programs was reviewed in this study. "As parents understand their children best, are their primary socialization agents and are globally increasingly requested to collaborate with other stakeholders including school staff" (Majoko, 2019, p. 917).

## Parents' Role in their Children's Education Program

Currently in the field of educational research, there is a growing need to highlight parents' perceptions and attitude about IE as it is evident their opinions were rarely considered in previous literature (Falkmer et al., 2015; Paseka & Schwab, 2019). This transition towards including parents' perspectives align with Paseka and Schwab's (2019) belief that parents are responsible for many factors, including their children's academic education. The relationship between a parent and child can be very strong. In his ecological theory, Bronfenbrenner emphasizes the essential role parents play in human development. This strong and direct relationship between parents and child can directly influence a child's life and attitude (Tudge et al., 2021). According to this theory, parents are considered the vertebral column that supports their children's progress throughout their lifespan (Tudge et al., 2021).

Bronfenbrenner's theory emphasizes the essential role parents play in human development. According to this theory, parents are considered the vertebral column that supports their children's progress throughout their lifespan (Tudge et al., 2021). While this important and well-known Bronfenbrenner theory has been studied for many decades, most of the studies examined the relationship between this theory and parents' role in their children's general

development. However, this study only mentions the theory to emphasize the important association between parents and their children's overall development and academic progress.

Reviewing the literature about the history of inclusion shows parents were found to be one of the first advocates of social and educational rights for children with disabilities (Rembis, 2017). Furthermore, the research outlined various factors which play a part in parents' roles and perspectives (see, e.g., Falkmer et al., 2015; McKinlay et al., 2022; Paseka & Schwab, 2019). Studies have found a correlation between parents' participation in their children's education and their children's academic outcomes, whereas a positive correlation can produce satisfactory academic improvement (Falkmer et al., 2015). Parents are the bridge between their children and their children's success (McKinlay et al., 2022). As well, parents have an impact in building their children's self-esteem and confidence. This familial relationship can also promote the effectiveness of schools' environment via positive, frequent, and mutual collaboration. Successful collaboration can lead to children achieving greater success in IE after accommodations are made (McKinlay et al., 2022; Paseka & Schwab, 2019). Previous results have revealed a positive association between parental support and children's social performance. Therefore, parents should be active members in their children's school in the context of helping to design, plan, and adapt their children's IE (Bahdanovich Hanssen & Erina, 2021).

Parents' perspectives towards their children's IE differ depending on many factors such as: type of disability, level of support received, and city of residence (McKinlay et al., 2022). Parents' views mirror their children's outcomes from IE, largely due to support from their children's teachers (Majoko, 2019). According to Al-Jabery et al. (2014), parents believe teachers are constantly working towards creating effective IE environments and this perception may lead them to have high expectations about their children's special and academic

performance. Studies that have investigated parents' perspectives and opinions are the most accurate reflection of a children's learning situation (Majoko, 2019; McKinlay et al., 2022). These studies emphasize the need for more prepared and competent teachers who are knowledgeable about IE and about features of autism (Majoko, 2019; McKinlay et al., 2022). More specifically, teachers who lack experience in teaching students on the autism spectrum in IE have little awareness about how their attitudes will negatively influence parents' satisfaction (Majoko, 2019). Teachers' knowledge and level of skills in IE have a direct impact on positive parents' perspectives (Majoko, 2019). For example, a study by Majoko (2019) found that most parents were satisfied with the provided IE with their children on the autism spectrum, and their satisfaction was associated with their children's teachers' high knowledge about inclusion. In contrast, a study by Parsons and Lewis (2010) found that most parents withdraw their children from schools to be homeschooled because of the negative responses and experiences of both parents and their children faced. This study by Parsons and Lewis (2010) highlighted parents' negative experience with teachers who lack basic knowledge and experience working in IE. Reviewing studies demonstrated that teachers' levels of knowledge, competence and welcoming them in mainstream classrooms are amongst the main parental concerns of children on the autism spectrum (Falkmer et al., 2015; Majoko, 2019). Teachers' lack of knowledge about the nature of autism and effective interventions primarily contribute to the dissatisfaction of parents.

Communications between teachers' and parents were another significant factor in effective IE (Al-Jabery et al., 2014; Mutabagani & Callinan, 2020). Results found that teacher-parent communication can positively provide meaningful improvement in both the educational program and the learning process (Falkmer et al., 2015). Researchers stated the importance of a close parent's relationship with their children positively impacts their perspectives on their

children's progress (Paseka & Schwab, 2019). According to Paseka and Schwab (2019), effective communication with parents can also be considered a resource for teachers in mainstream classrooms. Thus, it is important to include parents' feedback in the process of IE (Majoko, 2019). In countries such as the UK, the USA and Zimbabwe, educational policies include parents, and they are fundamental in planning and designing their children's services (Majoko, 2019). Educational systems and policies in Canada emphasize parents' role as a part of making inclusive education successful for their children (Inclusion BC, 2014). In Canada, these policies see parents working in partnership with teachers to be well informed about their children's outcomes and they are very involved in the implementation process of IE (Inclusion BC, 2014). Similarly, the education system in Saudi Arabia believes in the role and collaboration of parents. Thus, the MoE prioritizes parents' rights to be included and informed about their children's educational decisions. Parents also have the right to be consulted regarding the assessments for their children (Saudi Ministry of Education, 2021). Research has confirmed the significance of teacher-parent communication as a crucial factor which influences the outcomes of IE (Paseka & Schwab, 2019). Thus, teachers and other educators should listen and collaborate with parents in order to accomplish positive results (McKinlay et al., 2022).

Focusing our attention on students on the autism spectrum is important for two reasons. First, studies about students on the autism spectrum and their education in Saudi Arabia are still limited and more studies are recommended to provide new and current data to the MoE and educators. Several international studies identified that 23% of parents of children on the autism spectrum reported that their children were excluded from the IE program compared to only 1.7% of parents of children with other disabilities (Mojoko, 2019). This is the second reason why we should further focus on students on the autism spectrum. Mothers from Kuwait felt that the IE

program for children on the autism failed to serve their children's basic needs (Mutabagani & Callinan, 2020). Therefore, those parents have a high prevalence in separate special education schools, which goes against the IE movement. Canadian students were also being excluded from IE. A report by the MoE in Ontario found that 5.3% of students were excluded for the 2006 and 2007 academic year (Mojoko, 2019). In Saudi Arabia, Alnemary (2017) reported that there were 167,000 students who were diagnosed with autism. However, the MoE reported that in 2019 there were 2896 students on the autism spectrum receiving their education in schools. This means that in 2019, only 1.7% of students on the autism spectrum were served by the MoE in the KSA (Alamri, 2019). By looking at the total number of diagnosed students on the autism spectrum and the number of students enrolled in the public education system, there is a clear gap that bears the question: where are these other students? A study by Alnemary et al. (2017) examined the services provided for students on the autism spectrum in the special education sector and found parents' answers regarding services greatly varied. This suggests that students on the autism spectrum may suffer from ineffective IE practices in comparison with other peers who have no disabilities or other types of disabilities (Mojoko, 2019).

In summary, there are strong arguments supporting inclusive education and there is a belief that inclusion for students on the autism spectrum in mainstream classrooms positively influences their behaviors and enhances their social skills (Gordon & Illinois, 2017). "Ideally, individualized education for all children is the correct model for education, so that all children learn at their own pace and this model would lead to inclusion" (Meynert, 2014, p. 9). Results from studies on students who on the autism from 2001 to 2012 found that the number of students who moved from special to general education increased by more than 56% (Carter et al., 2017). This increasing number reflects the advantages of being included in mainstream classrooms

(Alotaibi & Almalki, 2016; Carter et al., 2017). Allowing students with different abilities in one classroom to participate in one activity provides chances for students on the autism spectrum to learn via modeling, to receive peer feedback, and to be accepted by others (Carter et al., 2017). Gordon and Illinois (2017) stated that social inclusion provides a motivated environment for students on the autism spectrum and thus can help promote greater academic success.

For the purpose of including students with disabilities in general and on the autism spectrum in particular, preparing teachers' knowledge, experience and assurance about their competence in IE are important to be considered by policymakers and educators (Alharbi & Medhash, 2017). As well, to consider the constructions of the current education system including the IE (Alnahdi, 2020). In addition, explore parents' thought will be significant to listen to their reflection as way to improve the provided services and the applied programs (Al-Jabery et al., 2014).

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Chapter 2:

Manuscript # 1

**Implementations of Inclusive Education in Saudi Arabia: A Critical Systematic Review**

**Paper**

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**Abstract**

The global education system today allows students with disabilities to effectively learn through inclusive education classrooms (Meynert, 2014). Inclusive education seeks a better learning environment by minimizing challenges and maximizing the chances of receiving equal educational rights (Grynova & Kalinichenko, 2018; Imaniah et al., 2018). Education for students with disabilities in the Kingdom of Saudi Arabia (KSA) offers services in either special or inclusive classes to provide appropriate academic support for all students, regardless of their differences and needs (Aldabas, 2015). However, one of the potential benefits of an inclusive education for students with disabilities in Saudi Arabia may be undermined by some barriers of effective implementations (Alshenaifi, 2018). Therefore, the objective of the present paper is to provide a systematic critical review of the history of inclusive education in the Kingdom of Saudi Arabia (KSA), to determine the current state of inclusive education in the KSA, how inclusive education is effective in the KSA, and to identify the barriers to effective inclusive education in the KSA. Upon review of literature, inclusive education has not been effectively accomplished in the KSA. Based on the literature of effective practices, this paper will offer guidelines for policies and recommendations to overcome barriers that will help promote a successful practice of inclusive education in the KSA.

*Keywords:* inclusive education, students with disability, Saudi Arabia

**Background**

**Implementations of Inclusive Education in Saudi Arabia**

The educational system today allows students with disabilities to effectively learn through an Inclusive Education (IE) classroom (Meynert, 2014). The reality of teaching students with disabilities varies by country according to different factors (Hadidi & Alkhateeb, 2015). However, many countries such as Canada and the United States have legislation supporting students with disabilities in IE classrooms (Grynova & Kalinichenko, 2018). From early on, these countries started teaching students with disabilities in mainstream classrooms with specifically developed strategies and adaptive curriculums (Grynova & Kalinichenko, 2018). IE seeks to create a better learning environment by minimizing challenges and maximizing the chances of receiving equal educational rights (Imaniah et al., 2018). IE is also an evolving process (Thomas, 2013). This situation happens differently in the ME countries, where most students with disabilities still learn in special education schools (Alkhateeb et al., 2016). Education for students with disabilities in the KSA is composed of services in either special schools or inclusion in regular classrooms (Aldabas, 2015). However, potential benefits of an IE for students with disabilities in Saudi Arabia may be undermined by ineffective implementation (Alshenaifi, 2018).

Therefore, this paper followed a systematic critical review methodology to review the history of IE in the KSA, to determine the current state of IE in the KSA, how IE is effective in the KSA, and to identify the barriers to effective IE in the KSA. This review provided background on education and inclusive education followed by the methodology and results of systematic review. Then, based upon the review guidelines for policies and recommendations were included to overcome barriers and promote successful practices of IE in the KSA.

**The Approach of Inclusive Education for Students with Disabilities**

Based on the educational purpose of this paper, inclusion refers to, "the practice of providing equal opportunity by meeting the needs of all children within a mainstream setting" (Alshenaifi, 2018, p. 1) An IE classroom is for students who can learn from the regular curriculum, but with adaptations and modifications (Grynova & Kalinichenko, 2018).

There are some researchers in the field of education who believe that IE is not the most effective practice for students with disabilities (Alquraini, 2011; Ewing et al., 2018). "Inclusive practices have not necessarily led to children's rights to participate, to learn, and to nurture social relationships, especially where children have severe or multiple special educational needs" (Alshenaifi, 2018, p. 8). However, the current climate of education primarily supports an IE approach (Grynova & Kalinichenko, 2018). This paper is following the role of Saudi Arabia by using the term "student with disability" instead of "student with special need".

**History of Inclusion**

**History of Inclusion in The Western countries**

*Segregation Approach*

Before 1960, the Education for All Act was adapted, it was common for western societies to have separate schools for students with disabilities (Jahnukainen, 2015). In 2004, the United States government passed the Individualized with Disabilities Education Act (IDEA), which stated that equality in learning comes first (Aldabas, 2015; Jahnukainen, 2015). In education, segregation is an academic procedure that aimed to provide education programs for students with disabilities in separate academic environment that is designed to be special for them. These separate academic environment isolates students with disabilities from social interactions and any activities with other peers (United Nation, 2016). Segregation is a broad

concept that influences various parts of an individual's life and there is an umbrella of separate programs to cater to students with more varying needs, such as intellectual, physical and learning disabilities (Jahnukainen, 2015). As a result of these separate learning environments, The United Nations Educational, Scientific and Cultural Organization (1994) found these students with disabilities faced academic segregation (Finnvold, 2018; Jahnukainen, 2015). Thomas (2013) discusses the notion that even though they may be segregated, students with disabilities should be regarded as "separate, but equal" although this is not often the case and segregation has led to educational differences (p. 475).

*The Disability Rights Movement*

Kirakosyan (2016) explains, "Acknowledgment of disability as a fundamental human rights issue has developed slowly around the world during the past three decades" (p. 11). Due to impacts of segregation, such as limited academic rights and social interactions, the Disability Rights Movement (DRM) emerged in the United States in the 1960's (Mellifont, 2017) and was founded by individual advocates for individuals with physical and cognitive disabilities, in addition to national and local disability organizations such as the National Association for Retarded Children (NARC) (Rembis, 2017). In the 1960's there were about 62,000 parents in the U.S involved with NARC in creating an alternative approach to care and education for their children (Mellifont, 2017; Rembis, 2017). In 1962, Ed Roberts applied to the University of California, Berkeley. However, he was physically disabled and when he asked the university for handicap access, his request was refused so he protested and upon his story being published in newspapers, the university reversed their decision. Advocators of the American Disability Rights Movement agreed that this movement started when Ed Roberts enrolled at the University of California (Mellifont, 2017).

The goals of the DRM were to gain equal treatment and accessibility for students with disabilities (Mellifont, 2017). It also strived to make political and institutional changes (Mellifont, 2017). Advocators of the DRM believed by introducing inclusion in schools, students with disabilities would have a chance to participate more effectively and learn with adapted curriculums, amongst their peers in mainstream classrooms (Alur & Timmons, 2009; Grynova & Kalinichenko, 2018).

### *Policies of Inclusive Education*

Over the past 33 years there have been many acts that helped pave the way for more equitable educational rights. These acts include: The Convention on the Rights of the Child (1989), the World Declaration on Education for All (1990), the Standard Rules on the Equalization of Opportunities for Persons with Disabilities (1993) and the Salamanca Statement and framework for action (1994) (UNESCO, 2016). In 1994, 92 governments signed the Salamanca Statement. "The Salamanca Statement and Framework for Action on Special Needs Education calls upon member states to guarantee the implementation of IE to bring back children who are excluded into the mainstream educational system" (UNESCO, 2007, p. 7).

In 2006, at the United Nations Headquarters in New York, the Convention on the Rights of the Child (CRPD) was issued. There were 82 counties that signed the Convention, including some ME countries such as: the KSA (United Nation, 2016). The convention recognized that individuals with disabilities are entitled to their rights and freedoms without any discrimination or differences. Article 24 of the Convention recommended that students with disabilities receive their education in an IE environment, with full support to facilitate all the educational, social, and behavioral challenges (United Nation, 2016).

### Inclusive Education in the Middle East

*History and Development of Education for Students with Disabilities*

In 1938 in Jordan, students with visual impairments received their education through a special school run by volunteers (Melhem & Isa, 2013). In 1960's, the Ministry of Education in Jordan started to develop special educational programs for students with visual and auditory impairments in special schools. Slowly, other categories of disabilities, such as physical and intellectual, started to receive special education support in special schools or in resource rooms for students with learning disabilities in regular schools (Melhem & Isa, 2013). Literature from 2015 indicates that educational programs in the ME still used special education classes to educate students with disabilities (Hadidi & Alkhateeb, 2015).

Between the 1960's and 1980's special education programs in the ME were generally separated into four categories: intellectual disabilities, hearing impairment, visual impairment, and physical disabilities (Hadidi & Alkhateeb, 2015). It is worth noting that in a few countries like Iraq, who suffered from issues related to economic and social challenges, the educational support for students with disabilities was provided by members of society and volunteers. Melhem and Isa (2013) clarified the gap between educators and students with disabilities was wide and due to a lack of special needs training on the educator's behalf. Additionally, many families in the ME with children with disabilities did not send their child to school (Alkhateeb et al., 2016). Accordingly, many students with disabilities were prevented from receiving appropriate help and support and lost their chances to live a normal life as others. In addition, many parents found it difficult to acknowledge that their child have disability as part of their social value (Hadidi & Alkhateeb, 2015). This family attitude contributed towards "helplessness, dependence, home confinement, and a poor quality of life" (Alshenaifi, 2018, p. 36). Thus, the

norms of special education programs in the ME were previously characterized by social and behavioral support, with limited attention to academic success (Melhem & Isa, 2013).

### *Factors Influencing Inclusive Education in the Middle East*

Each country in the ME addresses educational needs in different ways as they each have their own social, economic, and policy factors (Hadidi & Alkhateeb, 2015; Weber, 2012). For example, the Gulf Cooperation Council includes several countries which have achieved high economic growth, which in return boosts several internal services for their populations. As a result of an increase in the economic state, these counties are able to financially better support their education system. Furthermore, students with disabilities in these countries are eligible to receive additional services free of cost (Hadidi & Alkhateeb, 2015). In contrast, some countries (such as Tunisia, Yemen, and Libya) are in a low economic state, especially due to a series of anti-government protests and uprisings (Hadidi & Alkateeb, 2015). As a result, students with disabilities there may face high costs of special education programs and face shortages in IE environments with suitable transportation (Hadidi & Alkateeb, 2015). Some countries concentrated their education programs on specific categories, such as students with visual and hearing impairments, while other countries extended its IE programs to students with physical and intellectual disabilities (Alharbi & Medhesh, 2018; Hadidi & Alkhateeb, 2015). Gaad (2010) states that IE in the ME is "still young" as there are still segregation programs and special institutions (p. 9).

### The History of Inclusion in the Kingdom of Saudi Arabia

In 1958 in Saudi Arabia, a non-profit group educated students with visual impairments using Braille in private institutions (Aldabas, 2015). The education for students with a visual impairment was characterized with a non-formal education (Aldabas, 2015). In 1962, the

Ministry of Education in Riyadh established the Special Education department to provide more formal education programs and services for students with visual and auditory disabilities. Later in 1970, the Ministry extended its special educational services to cover further categories such as intellectual disabilities by opening special schools to support their educational, behavioral and social success (Aldabas, 2015). During the 1990's in the KSA, education for students with disabilities were still limited for specific students based on their disabilities. Around 2000, there seemed to be an increase in educational services for students with disabilities such as resource rooms, the individualized educational plan, diagnosis services, and physical, occupational and speech therapy (Aldabas, 2015; Alharbi & Medhesh, 2017; Alquraini, 2011). These services were provided for students with learning, intellectual, physical, visual, and hearing disabilities. Meanwhile, the Ministry began to include students with developmental disabilities such as autism spectrum in their special education programs (Aldabas, 2015; Alquraini, 2011).

*Legislations and Policies of Education for Students with Disabilities*

With the passing of Disability Law in 2000, many educational supports were provided, such as an increase in the number of special schools and special classrooms in regular schools (Alanazi, 2012). Even though the Disability Law brought many changes, a separation approach was still the most prevalent in the education programs (Alharbi & Medhesh, 2018). To continue to develop policies for students with disabilities, the Ministry of Education worked collaboratively with specialized special education professors from the Department of Special Education of King Saud University (Alquraini, 2012). Together, they "reviewed the USA's special education policies, including the Education for All Handicapped Children Act (1976) and the IDEA (1990) (Alquraini, 2012, p. 170). In 2001, the Saudi Education Ministry authorized the first Regulations of Special Education Programs and Institutes of Saudi Arabia (Aldabas, 2015;

Alquraini, 2012). Then in 2008, the KSA ratified and signed the Convention of the Rights of

Persons with Disabilities.

<div align="center">**Factors Influence Inclusive Education in the KSA**</div>

Despite the efforts from the Ministry of Education to promote inclusion, students with

disabilities are still not included in their education programs under inclusion in mainstream

classrooms and the implementation of IE did not achieve the required level of success (Alharbi

& Medhesh, 2018). "There is an apparent inconsistency between the philosophy and the

implementation of inclusion" (Alshenaifi, 2018, p. 124).

**The System of Inclusive Education**

Since IE is new in the region of Saudi Arabia, many professionals and teachers are less

knowledgeable about the process of implementing IE (Alhammad, 2017). Alharbi and Medhesh

(2018) provided a parallel argument saying the IE policy does not include suitable guidelines of

how teachers should be involved or how the process will be implemented. Furthermore,

Alquraini (2011) stated that including students with disabilities in IE classrooms means there are

many changes needed in teaching strategies, instructions, planning, and evaluation.

There are various ways in which students with disabilities benefit from IE services in

public schools (Alshenaifi, 2018). However, Alquraini (2012) found some students with

disabilities were not included in inclusion classrooms and still received their education services

in separate classrooms or schools. Similarly, Alanazy (2012) highlighted the 2008 Ministry of

Education report, where more than 96% of students with mild to severe disabilities (e.g., autism,

physical and intellectual disabilities) were said to still be excluded in special schools. Usually,

the severity and the nature of the disabilities will define whether students will be accepted in

inclusion settings or if they will study in special programs (Alanazy, 2012). Often this decision

neglects to focus on the students' level of needs and abilities (Alanazy, 2012). Some teachers may have certain assumptions about students with disabilities, including that they cannot be accommodated in mainstream classrooms (Alshenaifi, 2018). Teacher's points of view and beliefs about students with disabilities influence their relationship and play a significant role in whether they are accepted in their inclusive classrooms or not (Alhammed, 2017). The education system has not yet been modified to the extent that it can be to provide clear guidelines to all stakeholders (Alshenaifi, 2018).

**Teachers' Understanding of Inclusive Education**

Early in 2017, Alhammad reported some teachers thought the definitions of IE were overlapping and confusing as to whether these students would be integrated in regular or special needs schools. Jahnukainen (2015) says that in the field of education it is important to differ between what is possible and what is not possible, especially when focusing on including or integrating students. Alanazi (2012) supports Jahnukainen's (2015) notion and stated it is crucial that all teachers are aware of the definitions, aims, and practices of both inclusion and integration to be successful! Jahnukainen (2015) goes on to further clarify that sometimes receiving a special education in separate schools or classes could be the most appropriate decision. It is all dependent on the student's abilities and it is crucial to consider all the educational options available (Alhammed, 2017; Jahnukainen, 2015). "Integration is the process of placing persons with disabilities in existing mainstream educational institutions with the understanding that they can adjust to the standardized requirements of such institutions" (United Nation, 2016, p. 3). Integration is considered part-time attendance in mainstream classrooms (Alhammad, 2017). In 2018, Alshenifi (2018) said sometimes students in an integration program will leave the inclusion class to be re-segregated in their special class for additional support. In the KSA, integrating

students with disabilities is achieved by applying the Least Restrictive Environment (LRE) approach (Alanazy, 2012). LRE is defined as "the educational setting which best meets individual learning needs of children with disabilities while educating them together with students without disabilities as much as possible" (Alanazy, 2012, p. 235). Within an LRE, students with disabilities are able to learn in mainstream schools but are simultaneously following a special education program. This approach of including students with disabilities prevents them from experiencing full inclusion in mainstream classrooms but does allow them to be included part time (Alquraini, 2010).

Comparative studies between special education programs and IE programs are still relatively separate (Jahenokainen, 2015). Academics and researchers in the field of education clarify there is a scarcity of research in this field, and it is complex and culturally diverse, as compared to general education. Thus, that is why educators from different countries use the same concept of IE, but in different ways (Jahenokainen, 2015).

**Teachers' Willingness and Attitudes**

By implementing IE in mainstream classrooms, teachers are required to understand the differences in all of their student's abilities, needs and learning styles (Srivastava et al., 2017). The literature from the KSA revealed a willingness to implement IE from teachers who work in inclusive classrooms (Alshenifi, 2018). However, Alquraini (2012) reported pre-service training is usually only offered at universities to prepare teachers for IE classes. Pre-service training positively enhances a teacher's role in an IE environment, as it increases their levels of confidence and competence (Alquraini, 2012). Alhammad (2017) stated that attending courses and training helps teachers become more aware about the social, behavioral, and academic characteristics of students with disabilities. These trainings also offer teachers the opportunity to acquire strategies

to overcome challenges associated with implementing IE (Alhammad, 2017). Aldabas (2015) pointed out that teachers are not exposed to these trainings since education programs in universities currently do not offer any pre-training services for general teachers. A study by Alshenaifi (2018) found that inclusion teachers have a low level of willingness to work in an inclusive classroom.

Meynert (2014) stated, "an inclusive education requires changes in attitudes on the part of teachers and administrators and teacher training programs" (p. 3). Both teachers who receive pre-service training and those who do not, still require training throughout their career to update their skills and knowledge about IE and to stay up to date with relevant information about students with disabilities (Amr et al., 2016). According to Alhammad (2017) there are low in-service training opportunities about IE in Saudi public schools during the school year for mainstream teachers.

In addition, Amr et al., (2016) found that teachers' attitudes are fundamental in the educational process since it is related to their behaviors, reactions, and responses in the classrooms. Thus, the way mainstream teachers respond to IE is affected by the information and practices that they acquire (Amr et al., 2016). Alquraini (2012) and Haimour and Obaidat (2013) found that some teachers have a positive attitude towards including students with disabilities in their inclusive classrooms and usually these teachers have sufficient knowledge, strategies, and activities to support these students. In contrast, some teachers have a negative attitude towards inclusion, coupled with a low motivation to teach students with disabilities. Therefore, they face difficulties meeting the standard level of teaching in inclusive classes because of their poor ability to manage the course instructions and activities (Alshenaifi, 2018). Researchers found these negative attitudes may be associated with a lack of experience (Alquraini, 2012; Alshenaifi, 2018). Furthermore, these teachers express a low level of willingness to adapt their

teaching approaches and strategies to overcome their challenges (Alhammad, 2017; Alshenaifi, 2018).

**The Future of Education in the KSA**

The 2008 Education for All Global Monitoring Report (UNESCO, 2008) noted that, "education in the ME region still faces great challenges" (Amr, 2011, p. 401). One of the Saudi government's current projects for this decade is the National Transformation Program (NTP) 2020-2030 (Saudi Vision, 2020). The NTP aims to develop education and is expected to include 200,000 students with mild to severe disabilities in the education system (Saudi Ministry of Education, 2019). The increase in the number of students with disabilities will require additional academic services (Forlin & Loreman, 2014). While the NTP encourages a change in education, many stakeholders are curious as to how the reality of the development will play out.

Saudi Arabia is planning to open more schools to effectively cater to students with disabilities. These schools will strive to provide a comprehensive education that focuses on life skills and includes special services.  Moreover, to help get these students into these schools, the government will support professional in the field of IE to contribute positively and rise its effective for individuals with disabilities (Saudi Vision, 2020).

In summary, there are noticeable differences in the history of IE in the Western countries and the ME. Western countries have achieved a more noticeable development and increased levels of implementation and inclusive practices. In contrast, the previous review demonstrates that inclusion in the ME is still in a planning and progressive stage, with limited practices actually implemented.

**Purpose of Present Study**

As noted above, IE is still new in the region of the KSA, and full inclusion is one of the objectives of the Ministry of Education in the KSA (Saudi Ministry of Education, 2019). The present paper aims to conduct a systematic critical review to evaluate the implementation of IE in public schools in the KSA by answering the three following questions. First, what is the current state of IE in the KSA? Second, is the current IE effective in the KSA?  Last, what are the barriers to effective IE in the KSA? The author will conclude with recommendations of how to implement IE effectively in KSA. These recommendations will be derived from Western literature since the Western countries began practicing inclusion in its schools earlier.

## Methods

### Search Strategy

This paper followed the methodologically rigorous systematically critical review approach that was developed by Newman and Gough (2020). It provided the stages on how to conduct a systematic critical review across the disciplines of education. The investigator conducted a search in the following electronic databases: ERIC, Google Scholar, ProQuest, SpringerLink, PsycINFO, EBSCO, Web of Science, and Scopes from 2009 to 2020. A visual for the search and data collection process is included (Figure 1). The search strategy was as follows: in English and Arabic, peer-reviewed, included Ph.D. theses and was not limited by study design, but limited within 13 years. The search strategy was broken down into seven stages.

#### *Stage One*

Identify the research questions: "First, what is the current state of IE in the KSA? Second, is the current IE effective in the KSA?  Last, what are the barriers to effective IE in the KSA?" Then, determine the conceptual framework that illustrates the significant issues and develop an awareness and understanding of the studied issue (Newman & Gough, 2020).

### *Stage Two*

This stage consisted of the selection criteria to decide which studies would be included in the paper by using an inclusion and exclusion criteria (Newman & Gough, 2020). The selection criteria were also determined based on the research question. Five inclusion criteria were used to select studies. The first criterion was that the studies were written in English or Arabic and be a peer-reviewed primary or secondary research study. Thirdly, Ph.D. theses were also included and fourthly, samples of students with disabilities, ranging from 7 to 18 years old were examined. The fifth criterion is IE programs in mainstream classrooms in public schools. In the current paper there are four doctoral theses included. These studies were included mainly due to a shortage in Saudi Arabian data and because these results were published in recent years, they more accurately describe the current reality of IE programs in the KSA. The exclusion criteria were the studies that focused on private schools or institutions and the study excluded students in kindergarten.

### *Stage Three*

This stage consisted of search strategies to identify relevant and appropriate studies. After consultation with the librarian to ensure a systematic procedure, five databases were selected (PsycINFO, ERIC, Scopus, ProQuest Dissertation and Thesis, and Web of Science). Additionally, the Campbell Systematic Review was checked for cross referencing to ensure no other similar reviews exist. After the databases were confirmed, key concepts were brainstormed and cross-checked with an expert in the field of IE and a McGill librarian. The key concepts were separated into four categories: "inclusive education", "inclusion", "mainstream classrooms" and "students with disabilities". These concepts focused on three regions: "Western countries", "Middle East countries" and "Saudi Arabia". For example, 1) Inclusive Education + (e.g.,

"inclusive setting", "inclusive environment", "inclusive classes", "inclusive approach); 2) school (e.g. "high school", "elementary school", "school districts", "middle school", "community school"); 3) Inclusion (e.g., "social inclusion", "education inclusion", "inclusion setting", "inclusion in mainstream classroom",) and 4) students with disabilities (e.g., "learning disability", "physical disability", "intellectual disability", "students on the autism"). For each database, there were some variations in subheadings depending on the availability of subheadings in each database.

### Stage Four

This stage consisted of study selection and involved two phases by the primary researcher and reviewer. The first phase was conducting a title and an abstract screening of 369 articles. The result after the first examination included 94 articles. The second phase examined the full text of 94 abstract results. Inclusion criteria at this phase consisted of the following three questions: 1) Does the article address IE and students? 2) Does the article focus on students with disabilities? 3) Does the article link educational support with information or outcomes for students in school settings? The end of the screening process resulted in 45 articles. All study designs were considered including qualitative and quantitative methods, such as methodology reports, empirical studies, experimental studies, literature reviews, commentaries, proceeding papers, and retracted publications.

### Stage Five

This stage involved data extraction and coding by developing a table covering the following information collected from each included articles: 1) study type (e.g., quantitative, qualitative, mixed), 2) origin of sample, 3) group sample size, 4) participants, 5) type of students with disabilities (Table 1).

*Stage Six*

This stage involved the quality assessment of the paper. At this stage, search keywords, databases, abstracts, and full-text abstractions were peer reviewed by multiple information specialists using the Peer Review of Electronic Search Strategies (PRESS) checklist (McGowan et al., 2016).

*Stage Seven*

In the final stage of the present paper the primary investigator with the reviewer integrated the information and outcomes from each included study to produce the research for the paper's main question (Newman & Gough, 2020). Results from the review and the codes were reviewed by the reviewer.

## Results From Selected Studies

### Description Overview

All databases and synonymous keywords were accounted for prior to the search of studies. After conducting the initial search, several screening processes were conducted to ensure a relevant selection of articles. During phase one in stage four, screening was achieved as the reviewer independently screened 369 article abstracts using a predefined relevance criteria form. After the independent screening, the author combined and resolved screening results and discrepancies. In phase two, the screening was achieved by reading the entirety of the papers and making sure the information related to the paper's questions followed the inclusion criteria.

This following section presents three main subjects that emerged from the selected studies on IE in the KSA to answer the three questions of this paper. These subjects highlight the essential aspects of the implementation of IE in the KSA: the current state of IE, the current effectiveness of IE, and barriers of implementation.

**The Current State of Inclusive Education in the KSA**

Studies that examined IE in the KSA showed major efforts by the government in recent years to support and develop the education for students with disabilities (Alharbi & Medhash, 2017). Eight studies that examined IE program in Saudi Arabia were analyzed to determine the current state of IE. The results of this analysis revealed that five out of eight studies showed IE is still not providing an appropriate level of practice and implementation in public schools. These results also revealed that IE needed more procedures to practice inclusive program appropriately and successfully (Alanazi, 2012; Alharbi & Medhash, 2017; Alnahdi, 2020; Alquraini, 2012; Alshenifi, 2018). Two out of eight studies showed satisfied level of the current state of IE, and it is worth noting that both studies gathered their samples from one similar city "Riyadh". (Alassaf, 2017; Alnahdi et al., 2019). Also, Alhammad (2017) study showed satisfied level with IE and it is important to mention that Alhammad (2017) study focused on one category of disability "learning disability". Aldabas (2015) reviewed all the published Saudi studies in the field of special and IE from 1989 to 2011. Evidence from Aldabas (2015) showed that IE in the KSA is still in its first stage and there is a need to develop the IE program for students with disabilities further. Similarly, Alshenifi's (2018) examined 423 teachers who worked in inclusive classrooms and the results indicated effective education for students with disabilities required more developments in order to be considered inclusive. Additional results from Alshenifi (2018) showed that the Ministry of Education in Saudi Arabia provided frequent support to IE programs through its policies. However, most students with disabilities are still educated in separate classrooms or schools.

In five of these studies, it was not mentioned which type of disabilities the student had and only focused on elementary schools (see, e.g., Alanazi, 2012; Alharbi & Medhash, 2017;

Alnahdi, 2020; Alquraini, 2012; Alshenifi, 2018). Additionally, most of the studies were based out of Riyadh and other regions in the KSA were notably absent.

**The Current Effectiveness of Inclusive Education in the KSA**

Eight studies that examined IE in the KSA were analyzed to determine the effectiveness of its implementations. Tow out of eight studies showed the implementation of IE is affective and teachers are satisfied with their practices (Alassaf, 2017; Alnahdi et al., 2019). The results from six studies showed that the implementation of IE is insufficient and ineffective (Alanazi, 2012; Alhammad, 2017; Alharbi & Medhash, 2017; Alnahdi, 2020; Alquraini, 2012; Alshenifi, 2018). More specifically, the results found the implementation of IE is a challenge for many teachers. Two of the challenging factors are the quality and lack of preparedness of the IE program (Aldabas, 2015; Alnahdi, 2020). The results from these studies showed a variation in the effectiveness, depending on the student's type of disability.  Evidence from Alanazi (2012) and Aldabas (2015) showed that practicing IE is different from one type of disability to another, especially when the IE classrooms includes students with cognitive disabilities. Parallel results were found in Alquraini's (2012) pilot study. Alquraini (2012) surveyed 300 teachers of students with intellectual disabilities in inclusive elementary classrooms across Riyadh. It revealed these students did not receive an effective education and most of the teachers showed less acceptance for these students. Thus, prompting Alquraini (2012) to conclude that more procedures to promote the implementation of IE for students with intellectual disabilities is a necessity.

**Barriers to Effective Inclusive Education in the KSA**

From the Saudi studies analyzed, there are three major barriers related to implementing IE in Saudi schools. The first barrier is the inclusive education policies in Saudi Arabia. The

second barrier is related to understanding the definition and the concept of IE. The third barrier is associated with the inclusive classroom teachers.

Welcoming all students in inclusive classrooms regarding their different needs and abilities requires organized IE programs and plans (Alnahdi, 2020). Additionally, it requires clear directions about correctly applying IE in classrooms by providing policies and guidelines (Alnahdi, 2020). The results from Alhammad (2017), Alharbi and Medhash (2017), Alnahdi (2020) and Alshenifi's (2018) studies reported a barrier in IE policies. The results also highlighted there is a lack of inclusive education resources, which in turn influences teachers' practices in classrooms (Alnahdi, 2020). Alharbi and Medhash (2017) stated that "the inclusive education policy in Saudi Arabia does not give proper guidelines on how teachers should be involved" (p. 953).

Furthermore, the results indicated a lack of clarity in the concepts of IE as a barrier to implementing IE successfully in Saudi schools (Alshenifi, 2018). Five out of six studies reported the concept of IE was challenging for many teachers and they generally expressed a low sense of understanding IE (Alanazy, 2012; Alassaf, 2017; Alharbi & Medhash, 2017; Alhammad, 2017; Alshenifi, 2018). Moreover, Alhammad's (2017) study showed that some teachers believed IE and integration are two sides of the same concept. Thus, the result showed a lack in teachers' confidence and level of experience with IE as a result of lack of clarity in concepts of IE (Alhammad, 2017; Alshenifi, 2018). Aldabas (2015) and Alshenifi (2018) agreed that the concepts of integration and IE are often used interchangeably by teachers and academics in the field, despite that each concept is different in its definition, aims, and process. Furthermore, a study by Alzahrani and Bringham (2017) revealed that some teachers understand IE only to be a means to provide opportunities for students with disabilities in regular schools to socialize with

their peers. In contrast, only one study by Alnahdi et al. (2019) reported that teachers acquired the meaning of IE. It is worth noting that participants in Alnahdi et al. (2019) study were selected from teachers who work in Riyadh.

The third barrier is associated with mainstream classroom teachers. It was highlighted in most of the Saudi literature that teachers are a main barrier to the implementation of inclusive education. The results found that some factors can be overcome through pre and in service training programs, teachers' willingness, and attitudes. Five studies found teachers are less willing to teach in inclusive classrooms (Alanazy, 2012; Alassaf, 2017; Alhammad, 2017; Alnahdi, 2020; Alquraini, 2012; Alshenifi, 2018). In considering the reasons for the results, a potential reason could be a lack of teacher training programs about IE. As well, the results found an absence of these programs in universities and the current programs only focused on preparing teachers to work in special schools or classes (see, e.g., Alnahdi, 2020; Alquraini, 2012; Alshenifi, 2018). In the other hand, one study found teachers are willingness and ready to teach in inclusive classrooms (Alnahdi et al., 2019).

In addition, the results of five studies highlighted teachers' negative attitudes toward teaching students with disabilities in inclusive classrooms (Alassaf, 2017; Alharbi & Medhash, 2017; Alnahdi, 2020; Alquraini, 2012; Alshenifi, 2018). In contrast, three studies showed positive attitudes from teachers towards students with learning disabilities (see, e.g., Alanazi, 2012; Alhammad, 2017; Alnahdi et al., 2019). Thus, there is a larger number of studies that reflect teachers' negative attitudes toward teaching students with disabilities. In considering the reasons for such negative attitudes, these studies suggested it could be related to teachers' experience, awareness about disabilities, or levels of acceptance and expectations of their students' abilities (Alassaf, 2017; Alnahdi, 2020; Alshenifi, 2018).

Age, years of experience, and educational background may be considered significant factors that influence a teachers' attitude and inclusive education practices. A (2012) study by Alquraini 2012 found male teachers expressed greater positive attitudes towards IE than females. Interestingly, a 2019 study by another Saudi researcher, Alnahdi et al. revealed female teachers significantly expressed more positive attitudes towards IE than male teachers. Given the limited Saudi literature where there are only three studies involving female teachers (see, e.g., Alanazi, 2012; Alassaf, 2017; Alshenaifi, 2018) and only one study with males (see, e.g., Alhammad 2017), gender was not examined in the current study.

With regards to years of experience, a significant finding in Alshenifi's (2018) study revealed teachers who had more years of experience were more likely to support students with disabilities in an inclusive classroom. These teachers also expressed positive attitudes towards IE. In contrast, in Alassaf's (2017) study, it showed teachers who had less experience were more likely to have positive attitudes towards IE. The differences in Alassaf's (2017) study could be due to these teachers more recent training they received while studying at university. This result illustrates the significance of pre- and in-service training for teachers. Factor of years of experience was not examined in Alanazi (2012), Alhammad (2017), Alnahdi (2020), Alnahdi et al., (2019) and Alquraini (2012) studies.

With regards to teacher's educational backgrounds (special education, general education), some evidence was found in Alassaf (2017), Alhammad (2017), Alnahdi et al., (2019), Alquraini (2012) and Alshenaifi (2018) studies. The result found that teachers who have special education backgrounds are significantly more willing to include students with disabilities in their classrooms and more likely to effectively support these students. As well, these teachers expressed positive attitudes towards IE than teachers with just a general education background.

Alanazy (2012) found there were no significant results according to the educational background. In Alnahdi's (2020) study, different educational backgrounds were not examined.

In conclusion, the approach of IE is still a relatively new concept. This systematic critical review aimed to examine the current state of IE in Saudi public schools, and to determine its effectiveness. Furthermore, the paper aimed to identify the relevant barriers that hinder effective IE in the KSA.

## Discussion

The purpose of this paper is to conduct a systematic critical review to evaluate the implementation of IE in public schools in the KSA. The analysis of the existing Saudi literature in the field of IE contributes to understanding and determining the current state of IE and its level of effectiveness. This paper also seeks to identify the relevant barriers to effective implementation of IE in the KSA.

Taking a deep look into the results found in this review about the current state of IE in KSA, it is indicated that there is not enough implementation among the KSA schools. In general, supporting students with disabilities in inclusive classrooms has not been accomplished yet. In other words, it is below expectations of what is necessary. Within this sense, the obtained results seem to support findings shown by different authors. For example, Alshenifi (2018) found that "inclusion has not been achieved" in the KSA (p. 168). Likewise, Alharbi and Medhash (2017) indicated that "IE has failed to move as quickly as other countries towards inclusive education" (p. 954).

The delay in accomplishing IE could explain why some students with disabilities are still not included in inclusive classrooms. This claim is consistent with Alquraini (2012), who reported many students with disabilities are still educated in special separated classrooms at a

time when some of them could learn in inclusive classrooms. This connects with the effectiveness of IE in the KSA. Given the major importance of the IE implementation, this present review suggests that IE in the KSA is not effective as needed and it should be actively fostered to serve students with disabilities in inclusive classrooms appropriately. Evidence from a Saudi author to support this suggestion is by Alshenifi (2018) who found variation in implementing IE with different types of disabilities. More specifically, students with physical and cognitive disabilities are less likely to be educated in inclusive classrooms (Alquraini, 2012).

Furthermore, the present paper found a need to revise and refine the policies of IE in the KSA and to develop stronger guidelines of practicing IE. The lack of proper policies could be one of the reasons why implementing IE effectively in the KSA is delayed. A recent study by Alnahdi (2020) gives similar findings where participant teachers provided their attitudes towards inclusive policies. Alnahdi (2020) findings found teachers need updated guidelines to help them practice effective inclusion.

More understanding of the IE concept is also needed regarding the quality of implementing inclusive education. It seems to be a challenge to differentiate between the concepts of integration and full inclusion, which in turn may also affect teachers' practices. In this case, teachers who do not have a clear understanding of the concept of IE are less likely to support their students with disabilities in inclusive classrooms. Therefore, we can conclude that the concept of IE is not discussed often enough in educational environments amongst teachers. Alnahdi (2020) stated that teachers need to increase their knowledge about IE to enhance their levels of teaching effectively in inclusive settings.

Teachers' attitudes play a significant role in implementing IE. Nevertheless, results of this paper indicated a negative attitude towards teaching students with disabilities in inclusive

classrooms. In general, teachers are less welcoming to students with disabilities in their mainstream classrooms. Some of these teachers believe that special classes are the most appropriate setting for students with disabilities (Alshenifi, 2018). Through analyzing teachers' attitude toward including students with disabilities in inclusive classrooms there is a strong relationship between their attitude and knowledge. To clarify this claim, Alhammad (2017) stated that prior knowledge about inclusive education and disabilities positively impacted teachers' attitudes. Alhammad (2017) continued saying that teachers who are well prepared and knowledgeable about IE most likely show a positive attitude to include students with disabilities in their classrooms.

In the area of teachers' training, results suggest that most teachers did not receive formal pre- and in-service training in IE. Teachers who did not receive pre- and in-service training are more likely to have low level of teachers' knowledge and willingness to influence and improve their practices. In contrast, additional training will influence a teacher's confidence level in teaching in an inclusive classroom. As well, improve their teaching quality. The absence in teachers' training can be seen in terms of the shortage of information that teachers receive regarding teaching students with disabilities (Alnahdi, 2020). Thus, this shortage highlights the need to include programs and courses on teaching students with disabilities in education preparation programs. To support this result, Alnahdi (2020) states, "teacher preparation programs should train teachers in the skills they need to become confident in their ability" (p. 191). Likewise, Alhammad (2017) reported the field of education needs to reconsider educational guideline in inclusive classrooms through the support of pre-service programs in universities in IE.

Regarding gender and years of experience factors, from the selected studies there was not enough data about gender and years of experience to consider the factors to be influential in implementing IE.  Thus, it is recommended for future studies to report such variables.

With regard to teachers' educational background -special education, general education-special education teachers are more likely than general education teachers to accept and effectively support students with disabilities in inclusive classrooms. This illustrates the significance of pre- and in-service training for teachers, as well as providing them with resources about IE.

**Recommendations for Future Implementation**

*Adjusting Education Policies to Support IE*

Studies revealed that creating effective IE in every classroom for each student is a challenge (Alshenaifi, 2018). Teachers will need to further clarify what effective practices of IE looks like (Haimour & Obaidat, 2013). In order to accomplish that, stakeholders and teachers should ensure this is implemented effectively in schools and make positive changes to support the development of effective inclusion (Forlin & Loreman, 2014; Smith & Tyler, 2011). Additionally, it is necessary to develop guidelines for teachers with more clear information about the definition, objectives and process of IE (Hehir & Katzman, 2012). As well as to "provide teachers with staff development designed to improve their skills in educating diverse students in the mainstream classrooms" (Hehir & Katzman, 2012, p. 155).

*Increase the Quality of Teaching*

Achieving an appropriate level of progress and success for students with disabilities is strongly associated with teacher quality (Hehir & Katzman, 2012). Thus, to implement IE, teachers need to acquire knowledge and experience to deliver quality learning practices for

students with disabilities (Srivastava et al., 2017). Developing teaching programs in universities could positively impact the quality of teacher attitudes and practices. It is time to prepare the next generation of teachers who will work in IE (Smith & Tyler, 2011). Additionally, it is highly recommended that universities "carefully rethink the systemic structure of the teacher education program, improving the key values and competencies that sustain and promote teacher beliefs about inclusive education" (Civitillo et al., 2016, p. 15).

*Enhance Professional Development*

The process of monitoring teachers' skills and information is not easy; however, it is an essential step towards guaranteeing the effectiveness in implementing IE in mainstream classrooms (Hehir & Katzman, 2012). There are two steps that help to promote teachers' professional development. First, policymakers should develop plans to keep teachers involved in the ongoing process of expanding their knowledge, strategies, and evaluations to teach students with disabilities in inclusive classrooms (Hehir & Katzman, 2012). Second, training programs help teachers minimize the challenges that inclusive classroom teachers have and can regularly provide new and appropriate resources to support teachers (Hehir & Katzman, 2012; McCrimmon, 2015).

## Conclusion and Implications

Inclusion in classrooms is the academic procedure to provide educational rights for students based on their needs and abilities (Gaad & Almotairi, 2013). This paper aimed to provide a critical systematic review of IE in Saudi schools. The education system in Saudi Arabia has taken great strides towards including students with disabilities in mainstream classrooms, although implementing full inclusion still requires greater efforts by policymakers in order to be accomplished successfully (Alquraini, 2012). A remarkable finding from the

reviewed studies found that integration is the more common approach used in the education system. Some teachers in inclusive classrooms have low levels of knowledge about IE and about students with disabilities. Overall, the readiness of the educational system for inclusion is not yet satisfactory and does not achieve the standard level of implementation (Alshenaifi, 2018). However, there are still lingering questions that do not address the effective implementation of inclusion. The investigator has provided suggestions and recommendations from Western literature to help facilitate the challenges of practicing IE successfully in schools in Saudi Arabia.

According to Hehir and Katzman (2012), to successfully apply IE in classrooms, it is essential to redevelop the inclusion approach and address relevant issues that influence the implementation. Mainly, there are a huge number of students with disabilities in mainstream classrooms that face many challenges, which results in additional work for teachers (Saudi Ministry of Education, 2019). It could be significant if teachers are more aware about the positive impacts of inclusion on the new generation of students in their community. Over time, hopefully the change in teachers' knowledge, experience, and attitudes will result in more positive changes in applying inclusion.

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**Figure 1.**

*Methods flow chart- Search strategy visually represented from phase one (research question) to*

*phase seven (data abstraction)*



PRISMA 2009 Flow Diagram
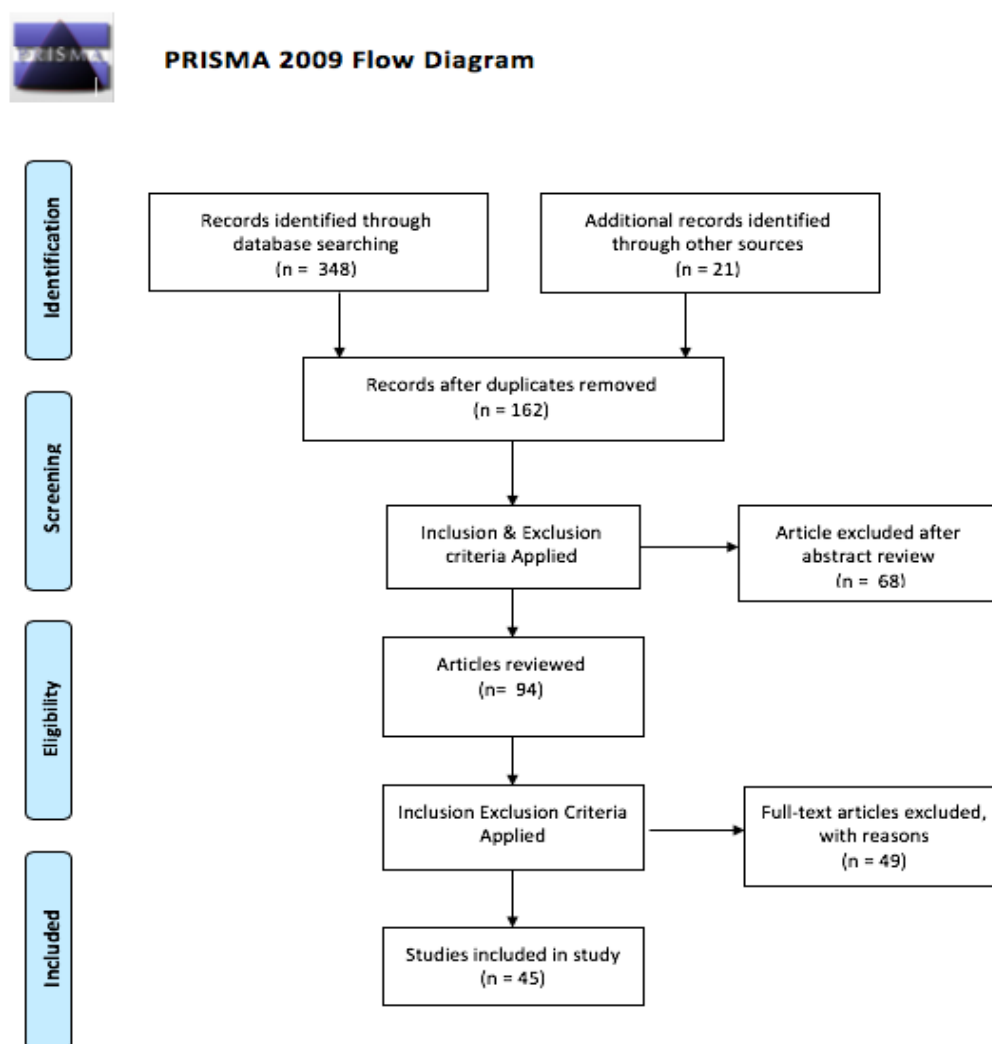
From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). *Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS* Med 6(7): e1000097. doi:10.1371/journal.pmed1000097

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**Table 1.**

*Description of the studies: Information collected from each included article*

| Author (s) Year | Origin of sample | Methodology Type | Data Collection "Instrument" | N | Participants | Area of Disability[*] |
|---|---|---|---|---|---|---|
| Alanazi, M. (2012) | Saudi Arabia | Qualitative study | Interview Observations and documentaries | 162 | Teachers, parents, students | All types of Disabilities |
| Al-Assaf, S. (2017) | Saudi Arabia | Quantitative study | Questionnaire | 59 | Teachers | All types of Disabilities |
| Alhammad, M. (2017) | Saudi Arabia | Qualitative study | Interview | 24 | Teachers | Learning disability |
| Alnahdi, G. (2020) | Saudi Arabia | Quantitative study | Questionnaire | 185 | Teachers | Behavior disorders |

**Table 1 (continued)**

*Description of the studies: Information collected from each included article*

| Author (s) Year | Origin of sample | Methodology Type | Data Collection "Instrument" | N | Participants | Area of Disability[*] |
|---|---|---|---|---|---|---|
| Alnahdi et al. (2019) | Saudi Arabia Finland | Quantitative study | Questionnaire | 306 186 | Teachers | All types of Disabilities |
| Alquraini, (2012) | Saudi Arabia | Quantitative study | Questionnaire | 300 | Teachers | Intellectual disabilities |
| Alshenaifi, (2018) | Saudi Arabia | Mixed study | Questionnaire Interview | 423 | Teachers | Learning disability |
| Alzahrani, &Bringham, (2017) | Saudi Arabia | Quantitative study | Questionnaire | 180 | Students' teachers | Autism Spectrum Disorder |
| Amr et al. (2016) | Jordan | Quantitative study | Questionnaire | 87 | Teachers | All types of Disabilities |

**Table 1 (continued)**

*Description of the studies: Information collected from each included article*

| Author (s) Year | Origin of sample | Methodology Type | Data Collection "Instrument" | N | Participants | Area of Disability[*] |
|---|---|---|---|---|---|---|
| Civitillo et al. (2016) | Netherlands | Quantitative study | Questionnaire | 139 | Teachers | All types of Disabilities |
| Finnvold, (2018) | Norway | Quantitative study | Questionnaire | 491 | Students | Physical disability |
| Haimour & Obaidat, (2013) | Saudi Arabia | Quantitative study | Questionnaire | 391 | Teachers | Autism Spectrum Disorder |
| Imaniah, et al. (2018) | Indonesia | Qualitative study | Case Study | 1 | students | Autism Spectrum Disorder |
| Jahnukainen, (2015) | Canada & Finland | Qualitative study | Interview | 12 | Schools' principals | All types of Disabilities |

**Table 1 (continued)**

*Description of the studies: Information collected from each included article*

| Author (s) Year | Origin of sample | Methodolo-gy Type | Data Collection "Instrument" | N | Participa-nts | Area of Disability* |
|---|---|---|---|---|---|---|
| Kirakosyan, (2016) | Brazil | Qualitative study | Interview | 7 | Leaders | N\A |
| Meynert, (2014) | Sweden | Qualitative study | Case study Interview | 5 | Teachers | All types of Disabilities |
| Srivastava et al. (2017) | India | Quantitative study | Questionnaire | 204 | Teachers | ADHD, Learning Disability, Intellectual Disability, Autism |
| Weber, (2012) | Turkey | Mixed method study | Questionnaire Interview | 11[*1] 11[*2] | Teachers Students' teachers | N/A |

*Note.* *Some studies examined inclusive education for students with specific type of disabilities.

*1 participant number how were participated in a questionnaire

*2 participants number how were under observation method

**Bridging to Study #2**

In study one, the systematic review tracked the history of IE in the Saudi educational system. Then it provided a baseline of the current IE in the KSA, while also examining whether its current implementations are effective in Saudi schools. As a result of this review, important barriers have been identified as influences on how IE is adapted in the Saudi educational system. Through the first paper, the review highlighted how the development of inclusive education in the KSA is still in its first stages and how this slow process is influencing the learning of many students with disabilities. Due to this delay, integration in separate special schools and classrooms still exists and students who can follow the general curriculum are still excluded. Thus, the Saudi Ministry of Education stated the need to redevelop its education system for students with disabilities, especially those still being educated in special schools. The results from study one suggested that IE is not effective in the way it is currently being implemented in the KSA and the findings indicated barriers related to teachers' qualifications in inclusion.

Allowing students to receive an inclusive education in mainstream classrooms opens the gate for students with disabilities to learn as equally as their peers. The Saudi MoE is working towards their goal of replacing the special education classroom model with an IE model. Therefore, teachers in the Saudi education system should be ready and fully qualified to contribute to this movement. Including students with disabilities in mainstream classrooms can help examine the importance of teachers' competence in including students on the autism spectrum in Saudi Arabia. It is generally believed that an effective environment for students with disabilities is highly associated with their teachers.

The Saudi Vision 2030 seeks to develop high-quality education for students with disabilities, including those on the autism spectrum. It hopes to create education programs that

provide appropriate services and address students' different needs. Additionally, promoting teachers' knowledge in IE is part of the vision. As a Saudi citizen, academic and researcher, I feel like one of my responsibilities is to positively contribute to achieving the goals of the Saudi Vision 2030. Thus, it has become crucial in my research to highlight IE for students on the autism spectrum as an aspect of the Saudi educational system and to provide new analyzed data which can be interpreted to improve the quality of the educational programs.

Given the findings from study 1, the Saudi Vision 2030 and the increase in the number of students on the autism spectrum in the KSA, it is significant to investigate teachers' competence in including these students in their mainstream classrooms. Whether or not teachers are able to provide effective IE will be investigated in chapter 3.

Chapter 3:

Manuscript # 2

**Inclusive Education in Saudi Mainstream Classrooms: Competence Level by Mainstream Teachers in Public Schools Across Saudi Arabia**

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**Abstract**

This study aimed to examine the competence level of mainstream teachers to identify their ability in including students on the autism spectrum in public schools in the KSA. The sample consisted of ($N = 166$ teachers) (72%) female; *Mean* = 2.41, *SD* = .946 (28%) male; *Mean* =2.03, *SD* = 1.12) randomly selected teachers from two groups: a group who had pre-service training in special education (n=106) and a group who did not have pre-service training in special education (n=60). An Arabic translation of The Teacher Efficacy for Inclusive Practices Scale was used to measure teachers' competence. This study used standardized measures and tested three independent variables: teachers' knowledge about IE practices, their attitudes and their beliefs towards including students on the autism spectrum in mainstream classrooms. The results revealed that teachers hold slightly low competence towards including students on the autism spectrum in mainstream classrooms. Between two groups of teachers, teachers with pre-service SE training showed slightly higher competence. Furthermore, this study showed that teachers' knowledge and beliefs are significant predictors of teacher's competence. Moreover, this study revealed that there is a strong association between teachers' knowledge and competence, and this relationship is significantly moderated and affected when teachers have a positive attitude. The explanations and implications of these findings for school personnel and future research are discussed in this study.

*Keywords:* Kingdom of Saudi Arabia, competence, inclusive education, attitude, pre/in-service training

**Competence Level of Mainstream Teachers in Public Schools Across Saudi Arabia**

The education system for students with disabilities in the KSA was built upon several policies and rules. These policies emerged from the law that all students should receive an equal right to learn, regardless of their disabilities or disorders (Ministry of Education, 2019). "In December 2000, a statement entitled, *Disabilities Care System*, was issued by the Saudi government that guaranteed welfare and habilitation services to persons with disabilities and their families" (King Salman Center for Disability Research, 2019, para. 6). This includes all phases of education -special and regular- that are suitable to students' abilities regardless of their disability and that are commensurate with their needs. This also includes the continuous updating of curricula and services provided in this field. Following this policy, some changes were implemented to provide appropriate environments for both students with disabilities and their teachers. The *Disabilities Care System* provided guidance about appropriate school and classroom organization, curriculum adaptations and pre-service and in-service training for teachers (King Salman Center for Disability Research, 2019). The National Strategy that was set out by the Saudi government aimed to evolve the structure of mainstream classrooms in a way to develop a successful inclusive education environment, while supporting students and teachers (Saudi Ministry of Education, 2019). The National Strategy set out guidelines to support effective inclusion under the equality goal, provided suitable classroom services for students with disabilities including autism, and provided teachers with knowledge about applying inclusive education (Saudi Ministry of Education, 2019).

## Background

**Teachers in Inclusive Education and Level of Competence**

Today, the field of inclusive education is rapidly evolving across the world (Saloviita, 2018). Therefore, preparing and keeping teachers up to date is the responsibility of the MoE who is preparing these programs (Alquraini & Rao, 2018). The quality of teaching is directly related to a teacher's teaching experience and their education (Schwab, 2019). For teachers, building a solid background in IE is a preliminary step before transforming their knowledge into real teaching experience (Alquraini & Rao, 2018). Studies that focused on teacher preparation programs in inclusive education explained the importance of a course design which allowed teachers to improve their skills and provide them with an opportunity to practice their skills through classroom experience (Schwab, 2019; Specht & Metasala, 2018).

Within the global movement towards inclusion and implementing IE in Saudi schools, it has become essential to promote the positive and vital role that teachers have in enhancing the education system (Alshuwaysh et al., 2021). Reviewing several literatures in the field of education has confirmed the fact that university preparation programs and in-service training for teachers are the avenue for enhancing their competence and skills in IE (Alquraini & Rao, 2018). In addition, findings from research have shown that the association of teachers' attitudes and knowledge are strongly correlated with their level of competence (Saloviita, 2018). Like many developed countries, Saudi Arabia is working strongly to advance their education system and to develop teachers' practices in mainstream classrooms (Alnahdi, 2020). The Saudi MoE is working intensely on exploring ways to enhance education programs for a new generation of competent teachers (Alquraini & Rao, 2018). The MoE began their efforts after several recommendations by Saudi educators and researchers to seek better services for students with disabilities, including those on the autism spectrum (Abunayyan & Aljaloud, 2016).

**Students on the Autism Spectrum in Saudi Arabia**

Students with disabilities in the KSA are one of the Saudi government's main focuses. Recent laws are now giving high importance to students with different needs including those on the autism (UNESCO, 2021). Although development in education services for students on the autism spectrum was limited and slow, researchers have praised the recent attempts by the MoE in modifying education programs (Sulimani & Gut, 2019). Education for students on the autism spectrum is struggling and requires more services, more academic interventions, and more inclusion in mainstream classrooms (Alnemary et al., 2017).

Considering the difficulties faced by students on the autism spectrum, they may require adaptations and accommodations to successfully meet classroom requirements (Rovira, 2014). When students on the autism spectrum are placed in a mainstream classroom, teachers need to provide more support, help minimize students' difficulties and aim to provide equal opportunities. Thus, policymakers and teachers should accommodate and respond to these differences (Sulimani & Gut, 2019; Sunardi et al., 2014). Additionally, literature review paper was conducted by Falkmer et al. (2015) that included studies that were conducted in the western world (North America, Europe, Australia and Hong Kong). The results found teachers believe that students on the autism spectrum are consuming a lot of their time, which should be invested in working with other typical students (Falkmer et al., 2015). Saudi teachers share a similar belief (Alquraini, 2011).

Sulimani and Gut (2019) found some teachers in the KSA were not in agreement with the idea of inclusive education for students with disabilities in general and particularly for those on the autism spectrum. These teachers found managing the behavior of students on the autism spectrum requires great deal of effort (Sulimani & Gut, 2019). Teachers' attitudes towards IE for

students on the autism spectrum could explain the small number, approximately 2896, of students on the autism spectrum enrolled in regular schools in the KSA (Alamri, 2019).

**Including Students on the Autism Spectrum in Mainstream Classrooms**

Following the current trend in education, IE is the appropriate approach to educate students on the autism spectrum in mainstream classrooms (Grynova & Kalinichenko, 2018). IE provides a more normalized academic environment for students on the autism spectrum and offers opportunities for academic success (Haimour & Obaidat, 2013; Rovira, 2014). Within the *Disabilities Care System,* the idea of inclusive education in the KSA was limited to specific students who only had either a learning difficulty or attention deficit hyperactivity disorder (Alshenifi, 2018). Of those services, most of them were provided for students with learning difficulties. There are limited amounts of data from the KSA concerning education for students on the autism spectrum and there is no agreed-upon approach toward the best inclusive education policy (Alnemary, 2017; Alzahrani & Brigham, 2017). Even though there is a universal positive attitude towards IE, some results reported low motivation by some teachers who tend to be less eager to include students with disabilities or students who are hyperactive in classrooms (Falkmer et al., 2015). Therefore, students on the autism spectrum in these categories have fewer opportunities to learn in inclusive education classrooms (Alquraini, 2011). Medhsh and Alharbi (2017) stated that even though inclusive education is already authorized in Saudi schools by the Ministry, most students on the autism spectrum still follow a special education program in special schools. The Saudi MoE provides special academic support for students on the autism spectrum in order to enhance their learning, which includes 112 autism centers and special classrooms across the Kingdom. However, results from some studies suggest that support is limited within these services and programs (Aldabas, 2015; Alquraini, 2012).

Haimour and Obaidate (2013) state, "increasing legislative demands placing an emphasis on teacher qualities raises questions about teachers who serve students on the autism" (p. 45). Thus, to meet the needs of the increasing number of students on the autism spectrum and to provide sufficient support in inclusive education environments, it is necessary to make sure that mainstream teachers are adequately prepared, competent and have received the required prerequisite knowledge and experience. As well, teachers should strive to have a positive attitude towards including students on the autism spectrum in their inclusive classrooms (Himour & Obaidat 2013; Sulimani & Gut, 2019; Rovira, 2014).

Alzhrani and Brigham (2017) clarified the shortage in inclusive education services for students on the autism spectrum was due to teachers' lack of sufficient knowledge and experience working in these classrooms. Teachers who work with students who have disabilities encounter difficulties which impede their learning process (Sulimani & Gut, 2019). It is hard for many mainstream teachers to work in an inclusive classroom environment when they are not qualified or experienced enough (Haimour & Obaidat, 2013). Mainstream teachers in Saudi schools may miss opportunities for exposure to IE during their pre-service training in university (Alhammad, 2017). As a result, Almasoud (2010) demonstrated that teachers do not acquire the basic skills and experience to include students on the autism spectrum in mainstream classrooms. Thus, teachers prefer to teach students on the autism spectrum separately in special classrooms or schools in hopes of achieving better academic outcomes (Alamri & Tayler-Wood, 2015). Himour and Obaidat (2013) found the following:

> "The rise in reported numbers of students on the autism spectrum in public schools, poor educational outcomes, increased litigation, and an expansion of knowledge of educational practices effective with this population has led to a sense of urgency among

educators and parents to ensure students are provided an appropriate education. This data presents a challenge to school teachers to become better prepared to serve children on the autism spectrum, both instructionally and socially" (p. 45).

It is necessary to increase the quality of teaching in inclusive environments and make teachers more confident about their competence (Alquraini & Rao, 2018). A summary from the limited literature review about inclusive education in the KSA reflected that teachers struggle with IE programs (Alquraini, 2011; Alzhrani and Brigham, 2017; Sulaimani & Gut, 2019). To gain a better understanding about teachers in Saudi Arabia, this paper examined their experience and level of competence in including students on the autism spectrum in public school classrooms. Specifically, this study explored the following three research questions: 1) do teachers' knowledge and beliefs contribute to their competence in teaching students on the autism spectrum in mainstream classrooms? 2): is the relationship between teachers' knowledge and level of competence including students on the autism spectrum in mainstream classrooms moderated by their level of attitude towards inclusive education? and 3): are there significant differences in teachers' self-reported competence based on how much special education training they have received? Do years of experience and pre-service training in IE affect one's competence to effectively teach students on the autism spectrum? In addition, this study aimed to explore differences in teachers' competence, knowledge, attitudes and beliefs from across Saudi Arabia. This study investigated the various aspects of online learning and the level of educational support teachers provided during the COVID-19 pandemic.

**Current Study**

The main null hypothesis is that no significant relationship exists between teachers' competence and their knowledge, attitude and belief towards the inclusive education programs.

The alternative hypothesis is that a significant relationship exists between teachers' competence and their knowledge, attitude and belief toward inclusive education programs. Saudi's research is scarce on the study of teachers ' competence in inclusive education programs, so this study will examine how teachers' are competent towards practicing and implementing IE effectively. In addition, including students on the autism spectrum in classrooms that apply for an inclusive education program is a new trend in Saudi's public schools, and it is still in its first stages. The first research question proposes the following hypothesis: teachers' knowledge and beliefs contribute to a high level in teachers' competence to successfully include students on the autism spectrum in mainstream classrooms. The second research question proposes the following hypothesis: the relationship between teachers' knowledge and competence to teach students on the autism spectrum will be stronger when this relationship is interacted by a positive attitude to include students on the autism spectrum in their mainstream classrooms. The third question was designed to be exploratory, therefore there is no specific hypothesis: are there significant differences in teachers' self-reported competence based on how much special education training they have received? Do years of experience and pre-service training in IE affect one's competence to effectively teach students on the autism spectrum? "There is no formal hypothesis, and perhaps the purpose of the study is to explore some areas more thoroughly in order to develop some specific hypotheses or predictions that can be tested in future research" (William, 2006, para.1).

## Methods

### Participants

One hundred and sixty-eight teachers agreed to participate in this study. Of these, three participants were removed as a result of incorrectly filled-in information. Therefore, the final

sample included ($N = 166$) participants. Teachers who participated in this study came from two different groups. One group included teachers who received special education training during their bachelor, diploma, or master's degree, and they were ($N= 106$). The second group included teachers who did not have special education training and only a general education background ($N= 60$). Most of the participants were female (72%), where male participants were 28%. In terms of their education, participants were asked to indicate their highest professional qualification in the field of special education. Most participants stated that they hold bachelor's degrees (77%). While 2 % of them hold diplomas and 21% of them have master's degrees. The ages of the participants were categorized as follows: 0.6% of the 166 teachers are under 25 years old and 14% of the participants are between 25 and 29 years old. Most of the teachers, with a percentage of 51%, identified their age between 30 and 39 years old. Where 30% of the participants are between 40 to 49 years old, 4% of them are between 50 to 59 years old and only 0.6% are 60 years old or older.

Participants were asked to list their city of residence and most of the participants with 24% were from Tabuk, followed by 22% from Riyadh, 16% from the Eastern Province, 11%) from Al-Qassim, and 10% from Jizan. The results also showed that 9% of the participants were from Makkah and 5% from Al-Madinah. Also, 1% of participants were from Al-Baha, Najran and North Borders each. Furthermore, most of the teachers are working in elementary schools (76%), where 13.2% of the participants stated that they are working in secondary schools, and 10.8% are working in high schools. The education system in the KSA has 3 levels: elementary grades 1-6, secondary grades 7-9, and high school is grades 10-12.

**Procedures**

Ethics approval was first obtained from the McGill University Research Ethics Board (see Appendix A). Then, the researcher (Arwa Alrawkan) emailed the Graduate Studies and Scientific Research Vice- Rectorate Deanship of Scientific Research in Princess Nourah Bint Abdulrahman university in Riyadh for ethics approval (see Appendix B). Once this permission was received, the researcher emailed the Saudi Ministry of Education as a third step for the consent form (see Appendix C). Once the approval form was obtained from the Ministry, all the school boardsand departments of education across the KSA were emailed with the consent and approval forms (see Appendix D). Then the school boards facilitated contacting school directors and teachers asking teachers to participate in the study (see Appendix E). The Principal Investigator (PI) Arwa Alrawkan collected data in two ways. First, the public school boards forwarded the participation letter to their teachers via email with a link to the study. By clicking the link, the teachers had access to the first page of the survey that included the consent form (see Appendix F). Teachers who consented to participate in the study, clicked on the "OK" button.  Then, teachers started the online survey via Google Forms.  Google Forms is a common application to conduct surveys in Saudi Arabia between teachers. Three winners from participating teachers were chosen randomly to receive a gift card of $40 for each.

The second way the Primary Investigator /researcher (PI) collected data is by hosting a two-hour remote workshop via Microsoft Teams for teachers in Saudi Arabia (see Appendix G for the consent form to the Ministry of Education to conduct the workshop; and see Appendix I for the Ministry of Education approval). The workshop focused on the implementation of inclusive education programs in Saudi Arabia.  The PI posted an invitation link via her personal account on Twitter to invite teachers across the KSA (see Appendix H). Since the sample was randomly selected, teachers who meet the inclusion critaria could join the workshops and then

participate in the study. The workshops were conducted for teachers to improve their knowledge with recent updates from the researcher's results (Arwa Alrawkan) on previous papers that focused on IE implementations and barriers in the ME and in the KSA. The workshops were optional for teachers across the KSA and the MoE in Saudi Arabia. Different school boards were interested in these workshops and asked teachers to attend it, which helped gather many participants. After posting the invitation on Twitter, the PI received more than 200 registrations for the workshop, but the number of attendees was less. Also, the researcher did the workshop twice because many teachers and school boards asked to conduct it again. At the end of the workshop, teachers were asked to participate in the teacher questionnaire and a link was shared via the Microsoft Teams chat. As well, teachers were asked to fill out their name and email to receive participations' certificate via email to thank them for their participation (see Appendix J). From both ways to collect participants that we followed in this study, 75% of the participants were teachers who attended the workshops, and 25% were teachers who participated via email invitation. In Saudi Arabia, teachers who work with students on the autism spectrum in inclusive education have special education or general education training programs. Therefore, in our questionnaire we asked participants to state their educational background and whether they have special education training. Accordingly, teachers who participated in this study were asked to sign themselves into one of two groups: a group of teachers who received special education training, and a group who did not receive special education training.

In addition, participants were asked to indicate their level of pre or/and in-service training in inclusive education. More particularly, pre-service training question included: undergraduate coursework, diploma coursework, graduate coursework, or no pre-service training were received. In-service training question included: supervised practicum / internship experience, inclusive

education workshops, or no in-service training were received. Additionally, teachers were asked to identify their years of experience working in inclusive education programs with students on the autism spectrum. Furthermore, teachers were asked to sort themselves into their current region in Saudi Arabia and the questionnaire included 13 regions.

**Dependent and Independent Variables**

One dependent variable was used to answer the research questions: competence of teachers in inclusive education practices. Three independent variables were used to answer the research questions: knowledge, attitude, and belief of teachers in inclusive education. Also included were demographic variables such as: type of education training, sex, city of residence, years of experience, and pre and / or in-service training.

**Measures**

The online questionnaire consisted of a consent form, followed by participant demographic questions, then questions about teachers' experience in inclusive education (see Appendix K). The set of the standardized questionnaires were used to evaluate the following four variables of interest in relation to inclusive education: teachers' competence (the dependent variable), knowledge, attitudes, and beliefs (the independent variables). Each scale was measured on a six-point Likert scale ranging from 1 to 6: *strongly agree, agree somewhat, neutral, somewhat disagree, strongly disagree, and prefer to not answer*. The questionnaire was translated to and completed in Arabic.

*The Teacher Efficacy for Inclusive Practice (TEIP) Scale*

As mentioned in the literature review (chapter 1), for the DV, we used competence rather than efficacy to examine teachers' level of competence in including students on the autism spectrum in public school. We used the *Teacher Efficacy for Inclusive Practice Scale* as Sharma

et al. (2012) developed this scale to examine teachers' competence and abilities in practicing IE in classrooms. The TEIP focuses on the classroom environment and the process of teaching. The current study used the TEIP to assess teacher's competence of including and teaching students on the autism spectrum in mainstream classrooms. The TEIP includes 18 items that start with positive phrases such as: I am able to…, I am confident to…, and I can make... It has been highly proven that the TEIP scale is reliable (Sharma et al., 2012). Three subscales are included with 6 items in each subscale: competence to use inclusive instructions subscale; competence in collaboration subscale; and competence in measuring behaviors subscale. Cronbach's alpha was computed to examine the internal consistency of the TEIP scale, and it was reported that the internal consistency of the overall TEIP scale was high (Cronbach's $\alpha = .89$). The Cronbach alpha for competence to use inclusive instruction sub-scale was high with $\alpha = 0.93$, competence in collaboration subscale was $\alpha = 0.85$, and competence in measuring behaviors subscale was $\alpha = 0.85$   In the present study, Cronbach alpha showed a high reliability with $\alpha = .977$.

### *Knowledge, Beliefs, Skills and Practice of Inclusion Scale*

The *Knowledge, Beliefs, Skills and Practice of Inclusion Scale* was developed by Agbenyega and Klibthong (2014) for the purpose of rating their knowledge of inclusive practices. The scale is divided into four sections (A, B, C, D) and has a total of 63 items. In the current study, the PI only used section B since this section measures teachers' knowledge and matches with the purpose of evaluating knowledge variables. The knowledge scale on the questionnaire included 13 items that rate the teachers' perceived knowledge of inclusive practices. The PI adapted the scale to fit with the Saudi educational system and the final Arabic version included 16 items. Item nine was divided into two items to properly evaluate the Saudi policy of inclusive education and the policy of teaching students on the autism spectrum. Item 10

was also divided into two items to evaluate pre- and in-service training of inclusive education teachers. Additionally, the PI added two new items to evaluate how much teachers were aware of support available to them. Cronbach's alpha was computed in Agbenyega and Klibthong's (2014) study to examine the internal consistency of the Knowledge, Beliefs, Skills and Practice of Inclusion Scale and the scale has been shown to have good internal consistency of (Cronbach's α = .75) (Agbenyega & Klibthong, 2014). The present study showed very high Cronbach alphas with α = .96.

### Teacher's Attitude to Inclusion Scale (TAIS)

The TAIS was used to assess teachers' attitude to include students on the autism spectrum in their mainstream classrooms. The TAIS was developed by Saloviita (2015) to evaluate pre-service and in-service teachers' attitudes towards accepting students with disabilities in mainstream classrooms. The TAIS scale includes three sections: cognitive, affective and behavioral. The scale has 10 items that measure teachers' expected outcomes, teachers' attitudes towards student's rights, teachers' workloads, and inclusion as a value (Salovitta, 2015). Cronbach's alpha was computed in Salovitta's (2015) study to examine the internal consistency of the TAIS, and it has been shown to have high internal consistency (Cronbach's α = .89). In the present study, Cronbach has an alpha of α .87.

### My Thinking About Inclusion Scale (MTAI)

The MTAI was developed by Stoiber et al. (1998) to examine teachers' beliefs about inclusive education. In the current study the scale was used to assess teachers' beliefs in Saudi Arabia towards including students on the autism spectrum in mainstream classrooms in public schools. The MTAI scale includes 28 items divided into three subscales. The core perspectives subscale consists of 12 items and aims to examine teachers' beliefs about students with

disabilities learning in mainstream classrooms. The second subscale has 11 items and focuses on the expected outcomes for students with disabilities (Kalyva et al., 2007). The last subscale is about classroom practices and consists of 5 items that assess how inclusion can affect the teaching process (Kalyva et al., 2007; Stoiber et al., 1998). The MTAI scale has been used in several studies such as: Avramidis et al. (2019); Civitillo et al. (2016); and Kalyva et al. (2007). In this study we only included the teachers core perspective and classroom practice subscales since it served our goals. The expected outcomes subscale was excluded because the researchers found this sub-scale did not correspond with the goal of this study and we were not interested in its results in the current study. Cronbach's alpha was computed in the Stoiber et al., (1998) study to examine the internal consistency of the MTAI scale and it was reported that the internal consistency of the MTAI scale was very high (Cronbach's $\alpha = .91$). In the present study, the result was a very high Cronbach alphas with $\alpha$ .96.

**Translation**

Translation from one language to another is generally a challenging task because of the differences in concepts, terms, and expressions. The PI, Arwa Alrawkan, is a native Arabic speaker, therefore the translation process was achieved seamlessly, and she was able to translate the scale with the correct grammar and expressions. Some small changes were made to the Arabic version to make sure that the meaning of the original items was kept. The questionnaire was developed in English and translated into Arabic, but obtained data and information were in Arabic and then translated into English. Thus, the analysis of the results was completed in English and this process required checking terms and expressions carefully with other experienced translators.

**Analysis**

All analyses were conducted using IBM SPSS 27. The dataset was first screened for accuracy, missing data, outliers, and normality. Descriptive statistics, correlations, t-tests, One Way ANOVA and multiple regression were conducted. The original dataset was used for initial analyses of participants' characteristics and missing data. To ensure validity (face validity), peer debriefing (Marilyn & Chad, 2000) was conducted with the second author. Moreover, results that we got from the questionnaire match what we are looking for and answers the research questions. The rich descriptions of the study's results have been provided (Marilyn & Chad, 2000).

## Results

### Data Screening

All data was analyzed with SPSS version 27. Out-of-range values, means and standard deviations, and univariate and multivariate outliers were first inspected to prepare data for analysis. The approach of addressing missing data relates to whether missing data are considered ignorable (Tabachnick & Fidell, 2013). Thus, we applied Little's MCAR test to this data. Results showed that there was no missing data and therefore The Estimation Maximization (EM) procedure was not computed since there was no missing data (Cox, 2017).

By analyzing histograms, we found that the distribution for the variables (knowledge, attitude, belief, competence, willingness) had a positive skew. Thus, these variables were therefore transformed in order to improve normality and to pull outliers towards the center of the distribution using the Box Cox Power (Olivier & Norberg, 2010).

Data was assessed for multivariate and univariate outliers. Univariate outliers were detected on the competence variable using the Box Plot method (Cox, 2017). To reduce its influence, they were all transformed to values that were one-unit higher or lower than the next highest or lowest value that was not an identified outlier (Cox, 2017). The multivariate outliers

were detected using the Mahalanobis Distance Test (Tabachnick & Fidell, 2013). Two

multivariate outliers were identified and removed from the four variables: knowledge, attitude,

belief, competence. All relevant assumptions were checked and verified, including the standard

residuals.

**Descriptive Statistic for Competence Scale**

The Competence Scale consisted of three subscales: competence to use inclusive

instruction, competence in collaboration, and competence in managing behaviors. According to

the results for competence subscales, mean scores for managing behavior had highest scores ($M$

$= 2.60, SD = 1.04$), followed by collaboration ($M = 2.58, SD = .98$). Competence in inclusion

instruction was the lowest mean score ($M= 2.4, SD = 1.04$). Despite the differences in means

between the three subscales, they were not statistically different from each other. The calculated

mean score for the competence scale could be between 1 and 6. A mean score of 3 would

represent a neutral attitude towards inclusion, while a score below 3 may be considered as low

competence (Sharma et al., 2012). A score higher than 3 is considered as high competence

towards inclusion. In the present sample, results found a mean score to be below 3 ($M = 2.31$)

for the total competence in inclusion, which indicates that teachers in this study held slightly low

competence towards including students on the autism spectrum in mainstream classrooms. Thus,

suggesting that they did not achieve the required level of competence to include these students in

their daily practices (Table 1).

A Pearson Correlation was conducted to examine the relationship between the three

subscales to examine its contributions on teachers' practices and skills. Results of the correlation

were found to be positive and strong ($r = .6$) and significant ($p < .001$) between instructions and

behavior management. As well, a positive medium correlation ($r = .51$) and a significant

correlation ($p < .001$) was found between instructions and collaboration. Correlation between collaboration and behavior management was positively correlated ($r = .47$) and significant ($p < .001$).

**Descriptive Statistic of Demographic Variables**

An Independent T-test and One Way ANOVA were performed to determine whether significant differences in competence existed between teachers of demographic variables. Results showed that there were significant differences in competence between teachers in terms of sex ($t(164) = -2.22$, $p = .027$), level of education ($F(2, 163) = 6.126$, $p = .003$), and the total number of students on the autism spectrum they have taught ($F(3, 162) = 3.389$, $p = .020$). (For more detailed information, please see Table 2 and 3).

**Main Analysis**

*Research Question 1*

Does teachers' knowledge and beliefs including age, sex, in-service training, total number of included students on the autism spectrum and level of education, contribute to teachers' competence in teaching an inclusive education to students on the autism spectrum in mainstream classrooms?

A hierarchical multiple regression with eight blocks (models) was conducted to determine variables of teachers' core perspectives and classroom practice that contributed incrementally to the prediction of teachers' competence scores above and beyond that accounted for by teachers' knowledge strength. Additionally, other relevant variables were examined as predictors of teacher outcomes "competence". These variables are age, sex, in-service training, total number of included students on the autism spectrum and level of education. Assumptions were checked and met, and variables were entered individually in each model. Age was entered

in the first model, followed by sex, then in-service training was entered in the third model. In the fourth model, the number of students on the autism that teachers had taught during their careers was entered. The fifth model examined teachers' level of education. Teachers' knowledge was entered as the sixth model, teachers' perspectives was the seventh model, and classroom practice were the last model. The substantial rationale of adding predictors of "teachers' perspectives" and "classroom practice " in order and at different steps, it offered incremental predictive power with the previous predictor "knowledge".

The results of models one, two and three showed no significant results for the variables of age, sex, and in-service training. In contrast, the other five variables indicated significant predictors. In the fourth model, the total number of included students on the autism spectrum made up *5.1%* of the variance *F(4, 161) = 3.96, p < .004,* and levels of education made up *3.3%* of the variance in teachers' competence *F(5, 160) = 4.47, p < .001*. Teachers' knowledge strength contributes to the incremental *23.8%* of the variance in teachers' competence. Thus, the change from model five to six reflects a significant increase *F(6, 159) = 14.91, p < .001*. In model seven, teachers' core perspectives demonstrated an incremental of *5.5%* which also reflects a significant increase above and beyond the variance accounted for by teachers' knowledge strength *F(7, 158) = 15.99, p < .001*. Classroom practice showed a further incremental of *2.5%* of the variance in teacher's competence scores above and beyond the variance accounted for by knowledge strength, thus reflecting a significant increase by this model *F(8, 157) = 15.39, p < .001* (Table 4).

Teachers' knowledge was the strongest predictor of teachers' competence ($\beta = .320$), followed by teachers core perspectives ($\beta = .232$), classroom practice ($\beta = .172$), level of education ($\beta = -.156$), and the total number of included students ($\beta = -.146$) (Table 4). Thus, we rejected the null hypothesis since the two variables (knowledge and belief) are significant

predictors of competence. Specifically, a strong belief that students on the autism spectrum can be included in mainstream classrooms explains incremental variance in competence scores beyond the variance explained by teachers' level of knowledge's strength.

### *Research question 2*

Is the relationship between teachers' knowledge and level of competence including students on the autism spectrum in mainstream classrooms moderated by their level of attitude towards inclusive education?

It is significant to examine the correlation between competence and knowledge scales since knowledge supports the level of competence (Sharma & Nuttal, 2016). A significant and a moderate positive correlation *(r = .62)* was found between competence and knowledge scales. Two positive correlations were found. First, a moderate correlation was found between teachers' attitudes and knowledge *(r = .56)*. Secondly, the correlation between attitude and competence was close to moderate (*r = .47*) All previous correlations were significant (*p = 0.01*).

Moderated Multiple Regression Analysis was conducted to examine the relationship between competence and knowledge scales and how this relationship becomes stronger when attitude is taken into consideration. More specifically, is there an indirect effect of the moderating variable (teachers' attitude) on the relationship of the predictor variable (teachers' knowledge) and outcome variable (level of competence)? In order to reduce the multicollinearity, we used the centering methods for the knowledge and attitude scales. Overall, the model results showed statistical significant interaction of attitude affecting knowledge and competence *$R^2$ =.048,* F*(3, 162) = 29.32, p < .001, b = .182, t(162) = 3.45, p = <.001,* with medium effect size *r = .22.* Therefore, the model results showed evidence that teacher attitude moderated the relationship between knowledge and competence. Thus, we reject the null

hypothesis and accept the alternative one that the relationship between the level of knowledge and competence of including students on the autism spectrum in mainstream classrooms is stronger amongst teachers who hold a positive attitude. The interaction is depicted in Figure 1.

### *Research question 3*

Are there significant differences in teachers' self-reported competence based on how much special education training they received? Do years of experience and pre-service training in IE interact with this self-reported competence to teach students on the autism spectrum?

This question aimed to assess how special education training adds significant differences in teachers' competence. To answer this question, four steps were carried out. First, an independent t-test was conducted to examine whether the two groups of teachers (106 teachers who have special education training during their bachelor's degree, diploma or master's degree, and 60 teachers who do not have special education training but a general education background), differ in their competence. The results showed no significant differences between these two groups with their levels of knowledge *t(164) =.289 p = .766.* Accordingly, we accepted the null hypothesis of no significant differences between teachers who did or did not receive SE training, however, there was a trend toward increased competence on the part of teachers who received special education training *(M= 2.33, SD = 0.9)* for the total competence toward inclusion scale.

Based on the results, the group of teachers who received SE training held a higher mean score in both the managing behaviors *(M = 2.62, SD =0.1)* and collaboration subscales (*M = 2.59, SD = 0.1)*. However, the teachers who received SE training had lower mean scores in competence to use inclusive instruction (*M = 2.33, SD = .10*) (Table 5).

Detecting the items on the competence scale, we found: "*I provide an alternative explanation when students are confused", "I use a variety of assessment strategies", and "I am*

*confident in my ability to get students to work together in pairs or in small groups"* got the lowest mean score. In contrast, the items, *"I am able to calm a student who is disruptive or noisy", "I am confident in designing learning tasks so that individual needs of students with disabilities are accommodated", and "I can assist families in helping their children do well in school"* were the highest mean scores (Table 6).

Two-way multivariate analysis of variance statistical tests "Two Way MANOVA" was used to examine the association between the type of education training and the number of years of experience in inclusive education programs as IVs. It was also used to examine the competence in inclusion instructions, collaboration, and behavior management subscales as DVs. The results revealed that there was a significant interaction between the education training and years of experience in inclusive education programs (Wilk's $\Lambda$= .829 $F =$ (15,420) 1.970, $p = 0.01$, $\eta 2 = 061$). This implies that 6.1% of the variance in teachers' competence in inclusion instructions, collaboration and behavior management could be explained by the interactive effects of special education training and years of experience. The results also showed moderate effects by the interaction (Notes: the univariate test did not show significant results). In this case, we rejected the null hypothesis and accepted the alternative hypothesis that the interaction of special education training and years of experience have a significant effect on teachers' competence.

A two-way repeated measure ANOVA was conducted to compare the effects of the type of education training and pre-service training in IE (IVs) on teachers' competence (DV). Pre-service training in IE has four levels: undergraduate coursework, diploma coursework, graduate coursework and no pre-service training. The main effect of the type of education training for teachers on competence was not significant ($F$ (1,158) =.173,  $p$ =.670). Also, the main effect of

pre-service training on competence was not significant ($F$ (3,158) = .410, $p$ = 746). However, the results found a statistically significant interaction between the type of education training for the group of teachers who received SE training ($M$= 2.33, $SD$= 093), those who did not receive SE training ($M$= 2.28, $SD$= 1.13) and those in pre-service training ($F$(3,158) =3.46 , $P$ =.01, $\eta2$ = 062) (Figure 2). Pairwise comparison using Least Significant Difference was a significant factor for teachers who received SE training between undergraduate and graduate courses ($P$ = .023), and between diploma courses and graduate courses ($P$ =.030). Based on the results, we rejected the null hypothesis and accepted the alternative hypothesis that special education training type and pre-service training in IE have an interaction that will have significant effects on teachers' competence.

*Exploratory question*

The exploratory question explores the differences in knowledge, attitude, belief, and competence between teachers from different regions across Saudi Arabia (Figure 3). The final part of the result explored and detected the differences and comparisons between teachers in different regions based on their competence, knowledge, attitude, and belief towards including students on the autism spectrum in mainstream classrooms in Saudi Arabia.

**Level of Competence by Regions.** This exploratory question is descriptive in nature and Means and Standard Deviations are reported. The descriptive statistics revealed that teachers in Najran held the highest mean score in level of competence (*M = 3.12 , SD = .45*), followed by teachers in the Al-Qassim region (*M = 2.84, SD =.97* ), then teachers in Al-Madinah (*M = 2.46 , SD = .91*). In contrast, teachers in Al-Baha held the lowest mean score in level of competence (*M =1.73, SD =.39*), followed by teachers in the Eastern Province (*M = 2.07 , SD = .96*), and then

teachers in Northern Borders (*M* =2.16 , *SD* = .47). (More details about the competence level for other regions are in table 8).

     **Level of Knowledge by Regions.** Teachers in the following regions held the highest mean score in knowledge about inclusive policies and practices: Al-Madinah (*M* =2.58, *SD* =.03), Jizan (*M* =2.4, *SD* =1.05), and Riyadh (*M* =2.42 , *SD* =.87). In contrast, teachers in the following regions held the lowest mean score in knowledge about inclusive policies and practices: Northern Borders (*M* =1.73, *SD* =.66), Al-Baha (*M* =1.76 , *SD* =.33 ), and Tabuk (*M* =2.09 , *SD* =1.11 ) (Table 8).

     Only 22% to 32.5% of teachers from all regions agreed with the following item: "*teachers' understanding of IE*".  On the next item, "*teachers' knowledge on IE policy*", 28% of teachers in Al-Qassim agreed that they have knowledge about IE policy, followed by 25% of teachers in Tabuk, 22.2% of teachers in the Eastern Province and 19% of teachers in Jizan. Teachers in Riyadh, Makkah, and Al-Madinah rated their knowledge on IE policy to be less than 13%, and teachers in both Al-Baha and Northern Boards did not agree with this item at all. Slightly more than half of the teachers in Tabuk (57.5%) agreed that they are knowledgeable in how to "*Create an effective learning environment*", followed by teachers in Makkah (53%), the Eastern Province (44.4%), Jizan (43%), Al-Qassim (38.9%), Al-Madinah (37%), and Riyadh (30%). One teacher in both Najran and in the North Borders agreed with this item. Next, we explored the item, "*Level of confidence to include students on the autism spectrum*" and the results indicated that teachers in Makkah (46.7%) agreed with this item, followed by teachers in Tabuk (45%), Al-Qassim (39%), Riyadh (33.3%), the Eastern Province (22%) and Jizan (18.8%).

**Level of Attitude by Region.** The Al-Baha region accepts including students on the autism spectrum in mainstream classrooms (*M= 2.92, SD =1.16* ), followed by teachers in both Riyadh (*M= 2.58, SD =.87*) and Jizan (*M =2.58, SD = .90*). On the other hand, teachers in Northern Borders held the lowest negative attitude (*M=1.47, SD =.88*), followed by teachers in Najran (*M= 1.60, SD =1.57*), and then Al-Madinah (*M=1.95, SD =.87*) (Table 8).

*Level of Belief by Region*

Al-Qassim held the highest mean score in belief about inclusive education for students on the autism spectrum (*M = 2.8, SD = .904*), followed Najran (*M = 2.66, SD =.1.4*), then teachers in the Eastern Province (*M = 2.49 , SD = .74*). In contrast, teachers in Northern Borders held the lowest level of competence (*M =1.73, SD =.13*), followed by Al-Baha (*M = 2.01 , SD = .26*), and Makkah (*M =2.16 , SD = .1.12*) (Table 8).

*Years of Experience*

Teachers in the Eastern Province held the highest mean score in their years of experience, followed by teachers in Najran and Al-Madinah. In contrast, teachers in Makkah showed the lowest mean score followed by teachers in Northern Borders and Riyadh (Table 8, Figure 4).

There was a somewhat parallel concurrence between the years of experience and teachers' knowledge, competence and belief scores. When the indicator years of experience increases, the indicators of the three scores also increase, and vice versa. In the Al-Madinah region, knowledge, competence, and belief indicators showed a slight increase compared to the years of experience indicator.  Indicators of experience and indicators of knowledge, competence, and beliefs in the Eastern Province presented a big gap, while it presented a small gap in Jizan (Figure 4).

Both attitude and experience indicators showed a large gap in the Al-Medina and Najran regions. Indicators for both attitude and experience for teachers in Riyadh, Al-Qassim, and Makkah regions showed a small gap. In the Eastern Province, Al-Baha, Jizan, Tabuk, and Northern Borders, teachers' experience indicators were high, however the attitudes were not.

In addition, the current study wanted to explore to what extent schools and school boards in different regions provide support and guidelines to implement IE in mainstream classrooms. The results found 33.3% of teachers in the Eastern Province agreed, followed by Tabuk (27.5%), Al-Madinah (26.7%), Makkah (22%), Jizan (19%) and Riyadh (13%). Only one teacher in Najran, Al-Baha, and the in the North Borders indicated that they received support. Also, teachers were asked whether they had *"a specialized inclusive education team from the school board".* Additionally, the results highlighted that 60% of teachers in Al-Madinah voted *yes*, followed by teachers in Al-Qassim with 61% and 55.6% in the Eastern Province. In contrast, 62% of teachers in Jizan voted no, followed by 60% of teachers in Makkah, 58.3% in Riyadh, and 50% in Najran, Al-Baha, and in the North Borders each.

### *Supporting IE During the COVID-19 Pandemic*

Teachers were provided with three questions regarding the COVID-19 pandemic. The first question was, "*In order to reduce the potentially negative consequences of the COVID-19 pandemic, teachers are working under a resilient education system".* The results showed 45.2% of teachers strongly agreed, while 27% of teachers somewhat agreed and only 9% teachers disagreed. The second question was, "*Despite the difficulties from online teaching, we are able to respond to the current challenges of improving our students' academic performance and social skills*". The results found 44% of teachers somewhat agreed, 23% strongly agreed and 12.6% disagreed. The majority of teachers agreed with certain limits to facing challenges in

helping students to achieve success. The last question was, "*Online teaching resources support students' academic and social needs*". The results were 44% of teachers somewhat agreed and only 16% strongly agreed. In contrast, 15% disagreed.

## Discussion

The purpose of this study was to examine the level of teachers' competence (competence in inclusive instruction, competence in managing behavior, and competence in collaboration) in implementing IE in mainstream classrooms for students on the autism spectrum across ten regions in the KSA. As well, this study investigated whether different factors such as teachers' knowledge, beliefs and attitudes contributed to a higher competence level. This study also aimed to explore teachers' perspectives towards potential consequences of remote (online) teaching during the COVID-19 pandemic in the KSA.

Our results indicated that teachers in the KSA hold considerably low competence in the overall scale as well in inclusive instructions, managing behaviors, and collaboration subscales. The calculated means were around 2.5 in 1-6 range scores. These results support Alnemary's (2017) findings that most teachers (55%) reported that they were not ready to teach students on the autism spectrum and provide them with appropriate interventions, because of their low exposure to specialized courses about students on the autism spectrum. A Japanese study by Yada and Savolainen (2017) reported low with slight increase of teachers' competence, which slightly resembled the result of this study. However, result by Yada and Savolainen (2017) is still not high ($M = 3.74$), which reflects the global trend of competence amongst teachers.

The present findings suggest that teachers in the KSA in mainstream classrooms did not achieve the required level of competence to include students on the autism spectrum with the experience they have. Youshitoshy (2014) illustrated the lack of opportunities for IE training

could be a potential reason behind this low competence score. Correspondingly, this study reported that mean scores of teachers who did not receive in-service training were almost the highest in the overall scale (*M= 2.45*) and in the three subscales around (*M= 2.66*).

Contrary to the present study about IE in the KSA, Alnahdi and Schwab's (2021) study reported high competence levels of teachers in the KSA, however their study was limited to teachers only in Riyadh. Results of the present study are important for many teachers in the KSA to potentially reconsider their levels of competence and readiness since the Ministry of Education in the KSA plans to increase the number of students on the autism spectrum included in mainstream classrooms.

Teachers' overall competence and competence in the three subscales in including students on the autism spectrum have found to be significantly associated with teachers' gender. The results are in line with previous studies that show female teachers were slightly more competent than male teachers (see, e.g., Kuyini et al., 2020; Specht & Metsala, 2018). Interestingly, a previous Saudi study reported male participants hold a more positive outlook towards IE than female participants (Alnahdi & Schwab, 2020). A potential explanation for the differences in competence is that female teachers could be more willing to work with students with disabilities and are more open to ongoing professional development, which may positively influence their competence (Alnemary, 2017). In addition, this study found teachers with higher levels of education are more competent in IE. Likewise, teachers who included more students on the autism spectrum in mainstream classrooms regularly and frequently are more competent. An explanation of our results shows that implementing inclusive education in daily practice gives teachers opportunities to improve their skills in IE, which in turn improves their competence (Schwab, 2019). Where a direct relationship between teachers' experience and competence in IE

has been found (Schwab, 2019). Similarly, in Specht and Metsala (2018) found that more teaching experience and work with students in IE delivers a more positive influence on their competence.

As for our study, it is reasonable to extrapolate a correlation between inclusive education practices, behavior management, and collaboration for students on the autism spectrum in mainstream classrooms. Thus, an increase in teachers' abilities to practice IE is associated with an increase in teachers' ability to manage students' behaviors and classrooms effectively. Furthermore, it associated with an increase in teachers' ability to cooperate with other teachers and parents of children in IE. Teachers who provide successful instruction and have effective classroom management have been proven to effectively collaborate and have positive relationships with their coworkers and parents. Given the collaboration between these three subscales, it is reasonable to understand why teachers in this study reported low competence in these subscales.

Among age, sex, in-service training, the total number of included students on the autism spectrum, level of education, knowledge, and beliefs, four variables were significant predictors of overall competence in the current study. Subban and Mahlo (2017) confirmed that older South African and Australian teachers were more competent in IE. They believe that age plays a significant role in competence levels, whereas older teachers have become more competent and have shown a greater willingness to include students in mainstream classrooms (Subban & Mahlo, 2017). Subban and Mahlo (2017) also found that older teachers are more professional in IE, are able to deliver effective IE practices, and are more active in their roles and responsibilities in supporting students in mainstream classrooms. Unlike Subban and Mahlo's (2017) study, the current study did not find age as a significant predictor. This may be explained

by the shortage of in-service training that teachers were missing in the KSA or by the low number of inclusion programs for students on the autism spectrum in the KSA. Gender was not a significant predictor in the current study; however, it has been a strong predictor of competence in previous studies (see, e.g., Scheer et al., 2015; Specht & Metsala, 2018). We found that in-service training was not a significant predictor of competence, which conflicts with previous results in a meta review by Van Mieghem et al. (2018), and in a Canadian study by Sokal and Sharma (2017). In-service training significantly affects teacher competence, as found in Finnish studies where teachers have had a long history of IE practices (Malinen et al., 2013). It is worth noting that in-service training is not officially provided yet by the Saudi Ministry of Education and the available training is limited and not mandatory.

Level of education and the total number of included students on the autism spectrum positively contributed to predict competence in mainstream classroom teachers. Our results support previous comparative study between teachers in Finland and South Africa (see, e.g., Malinen et al., 2013). Malinen et al. (2013) found that the level of education significantly increases teachers' skills and professional practices in supporting students with disabilities in mainstream classrooms. Where most Finnish teachers possess a master's degree and in contrast most teachers in South Africa only hold only teacher diplomas as their highest level of education (Malinen et al., 2013). Furthermore, a Canadian study found teaching students with a disability or disorder positively influences teachers' confidence and competence to include them and meet their needs (Specht and Metsala, 2018). Specht and Metsala (2018) believe that working with students who have different needs increases the likelihood of teachers' experiences in IE. In contrast, a Saudi study by Alnahdi and Schwab (2021) found the more years teachers spent working with students with disabilities did not predict competence. Results of this paper suggest

that achieving a higher level in education and including more students on the autism spectrum year after year gives teachers greater opportunities to increase their exposure to IE. As well, it can allow them to increase their experience working with and understanding the needs of students on the autism spectrum, which significantly influences their competence.

As we expected, knowledge is a significant predictor of teachers' competence in mainstream classrooms for their inclusion practice. To support our results, a recent Canadian study has evidence that there is a direct correlation between teachers' knowledge in IE and their competence in collaboration, behavior management and inclusion implementation (Friesen & Cunning, 2020). Also, our results mirror results from a Chinese study of more than 700 teachers which demonstrated that increasing teachers' knowledge in IE policy, instructions and strategies is a stronger predictor of competence in IE (Sharma et al., 2014). Results from the current paper and our sample, would help us understand the impact of the shortage of teachers' in-service training on their competence. Therefore, this study gave us the probabilities to link the absence of in-service teaching and the low level of competence as one probable cause and effect.

Both teachers' core perspectives and classroom practice beliefs are strong predictors and contribute incrementally to the prediction of teachers' competence. Previous Greek and German studies are consistent with this specific result (see, e.g., Avramidis et al., 2019; Scheer et al., 2015). A suggestion that teachers with beliefs towards inclusion, and in students' rights, to be educated with no academic or social difficulties are better to include these students in one academic environment. Teachers who continue to believe in IE for students are proven to be more effective and competent teachers. As a result, teachers' beliefs on students' inclusion would add more positive changes in the needed development toward effective IE.

Tracking the study's results in hierarchical regression has proven that both knowledge and belief can unite to produce significant results. This leads us to an interesting finding that when teachers hold appropriate knowledge in IE, in addition to strong beliefs, teachers become more competent in creating inclusive education environments for students on the autism spectrum. This is presented in two ways: firstly, our study has shown that knowledge and belief in IE is more likely to produce high competence. Previous results only examined the role of one predictor, knowledge or belief (see, e.g., Kuyini et al., 2020; Malinen et al., 2012; Yada & Savolainen, 2017). Secondly, there is no Saudi data about the correlation of knowledge, belief, high level of education and service training as predictors of competence. Thus, to our understanding, making our results the first attempt to provide new findings in this area.

Correlation coefficients provide interesting information. The highest competence score in teachers was found to be associated with a high score in knowledge, which proves a positive correlation. On the other hand, attitude also significantly showed a positive correlation with knowledge. Which in turn opened the door for us to investigate and seek whether attitudes are associated with competence too, and if positive attitudes have a significant effect on the relationship between knowledge and competence. This investigation has revealed a positive correlation between attitudes and competence.

Furthermore, our expectation that the strength of competence by mainstream teachers increased by receiving training programs in IE. Specifically, intensive training /workshops about IE policies, strategies and instructions (Schwab, 2019). Thus, a deep investigation on the effects of attitude on the relationship between knowledge and competence found a significant effect. Furthermore, our results demonstrated a significant increase in teachers' competence based on their knowledge and background in IE, however this increase becomes stronger and more

noticeable when teachers hold a positive attitude. Consequently, the results of the second question have proved a strong association between teachers' knowledge and competence and this association is moderated and affected by teachers' positive attitude. Some Saudi and international studies have confirmed the positive role of teachers' knowledge and attitude on their competence (see, e.g., Alnahdi, 2020; Alsarawi & Sukonthaman, 2021). This contradicts Ghana's study results that denied the relationship between teachers' competence and attitude in inclusive education (Kuyini et al., 2020). Even though previous research has studied the relationship between teachers' competence and attitude in IE, the results were not precise and specific (see, e.g., Alnahdi & Schwab, 2021; Alsarawi & Sukonthaman, 2021; Kuyini et al., 2020; Yada & Savolainen, 2017). Previous evidence from a Saudi study could be criticized for the limited sample of teachers that were only from Riyadh and that most participants had little IE training (Alnahdi & Schwab, 2021). On the other hand, the effectiveness of attitude on competence in international studies can be criticized for their different beliefs (Alsarawi & Sukonthaman, 2021; Kuyini et al., 2020; Yada & Savolainen, 2017).

The paper is unique in three ways. First, it studied the role of positive and negative attitudes on both variables -knowledge and competence- in contrast to previous studies which only examined the relationship and the effect of attitude on competence. Secondly, it is the first time the influences of attitudes on the relationship between teachers' knowledge and competence was studied. Thirdly, our results described the direction of teachers' attitudes on their practices in IE based on their knowledge. Consequently, this study contributes to the body of literature documenting the prospective influence of teachers' attitudes on their knowledge and competence.

Results of this study showed that teachers who hold positive attitudes and high knowledge show a sharp increase in their competence in teaching students on the autism

spectrum in mainstream classrooms. These teachers have more knowledge about inclusive education policies, strategies, instructions, and available resources. In contrast, teachers who hold negative attitudes show a slight increase in their competence in teaching students on the autism spectrum in mainstream classrooms. They receive more knowledge in inclusive education, but their overall competence level is lower than teachers' with a higher attitude. Subsequently, as the level of teachers' attitude to include students on the autism spectrum in mainstream classrooms increased, the strength of teachers' knowledge about inclusive education on their competence level increased too. From these results, we understand that teachers who voluntarily attend workshops in IE gain more knowledge about its instructions, policies, goals, and implementation. Moreover, these attendees also have a more positive attitude towards students on the autism spectrum and implementing IE. Thus, we can conclude the importance of the Saudi Ministry of Education designing official education programs in universities that promote IE practices and performances by teachers.

In addition, the current study aimed to investigate teachers' self-reported competence based on how much special education training they received. Our expectation is that teachers with special education training are competent in IE, more welcoming for students on the autism spectrum and more ready to work with them in mainstream classrooms than teachers with no special education training. Teachers with special education training have greater opportunities to interact with students on the autism spectrum and to understand their needs. Thus, these experiences feed their knowledge about IE policies, instructions, and implementation, which in turn can help effectively facilitate inclusion (Specht & Metsala, 2018). As we expected, the results found teachers with special education training showed a higher mean in overall competence *(M= 2.33),* managing behaviors *(M = 2.62*) and in collaboration (*M = 2.59).*

However, the results showed a lower mean in inclusive instruction for teachers who had special education training. This is a surprising result since the correlation between the three subscales was positive and strong. However, a lack of formal IE training combined with a low exposure to IE in mainstream classrooms, may be one reason behind the low competence score in inclusive instruction.

To support our findings, a low mean was found on the following items on the competency scale: "*Provide an alternative explanation when students are confused", "use a variety of assessment strategies ",* and *"I am confident in my ability to get students to work together in pairs or in small groups".* In general, our results indicated that special education training is an effective predictor for competence in inclusive education. This result also corresponds with Schwab's (2019) results which highlighted a strong association between special education training and competence in IE. Furthermore, different international studies from Ghana (see, e.g., Kuyini et al., 2020), Pakistan (see. e.g., Sharma et al., 2014) and Germany (see, e.g., Scheer et al., 2015) all have similar results to this study, and all reported a higher mean in competence for teachers with SE training. This study has proved the positive influence that special education training can have on teachers' skills and qualifications in practicing inclusion with students on the autism spectrum. As well, these results confirmed our hypothesis that previous knowledge in special education and experience in inclusive settings, is associated with competence in IE. A suggestion that training in special education improves teachers' skills to teach students with disabilities and enhance their knowledge about students' different needs and inclusion in general. Unlike our results, a previous Saudi study by Alnahdi and Schwab (2021) found teachers in Riyadh reported no significant relationship between the amount of SE training and competence in inclusive practices. A unique point about our study was that the results

included samples (teachers) from different regions in the KSA, thus the variation in our sample reflected a high likelihood of representation of competence in IE in Saudi teachers. Additionally, our sample targeted teachers who included students on the autism spectrum, in contrast to Alnahdi and Schwab's (2021) study where they did not focus on a specific disability or disorder.

Moreover, this study found a significant interaction between special education training and years of experience working in an inclusive classroom environment. Teachers who have special education training and experience working in IE environments are more competent in their implementation of IE. Contrary to this result, Kuyini et al. (2020) found that a teacher's years of experience are not associated with SE training and competence in IE. One reason for these findings may lie in the difference between the Saudi and the Ghana education training programs at their respective universities. The results of the current study must be taken into consideration by the Saudi MoE to enhance the competence of Saudi teachers towards IE for students on the autism spectrum.

Another significant interaction was found between special education and pre-service training in IE. We found that SE and pre-service training in IE are effective predictors of competence when these predictors interact together. Results from pairwise comparison showed that a group of teachers who achieved a diploma after their bachelor's degree are more competent teachers, thus highlighting the significance of SE training and the importance of holding a higher education. This result revealed that Saudi teachers are willing and ready to teach IE if they receive effective pre-service training. Furthermore, these results indicate that pre-service training in IE has advantages not only for students with disabilities, but also provides teachers an advantage. Indirectly, these more qualified teachers can have more positive influence in the Saudi community as well.

Based on our findings, education programs to prepare teachers for their professional careers are crucial to effective inclusion. In recent years, there has been a movement in Saudi education towards more IE. These developments include optional and free academic training opportunities. Prior to 2019, Al-Assaf (2017), Alzahrani and Bringham (2017) and Sulimani and Gut (2019) have pointed out there is a lack of IE training in the KSA. This 2022 study highlights improvements in educational training for teachers in the KSA. However, it is worth noting that these training sessions are still not mandatory and therefore teachers are looking for official pre-service training programs in IE. Consequently, this study's results can prove to the Ministry of Education that there is in fact a demand for this type of training for the current generation of teachers.

Interestingly, researchers of this paper have tracked teachers' competence, knowledge, attitude, and belief in 10 regions in the KSA. The significance of these findings reflects how IE has been implemented by different school boards across the KSA. Surprising results have emerged and showed variations between the regions. More specifically, teachers reported low levels of knowledge about IE policies and their ability to design effective IE classrooms for students on the autism spectrum. In addition, it was evident that teachers lack an understanding of the meaning and the goals of IE, which is a critical issue since understanding IE is key to implementing it (Alharbi & Madhesh, 2017; Subban & Mahlo, 2017). It is important to note that teachers in this study reported low confidence in their ability to include students on the autism spectrum. Out of all the participants who have taught students on the autism spectrum in mainstream classrooms, only 24% of them received an in-service training program in IE. The distribution of percentages in different items from the knowledge scale reflects how little teachers are informed about the basics of IE. Moreover, participants (teachers) reported

unsatisfactory levels of support and guidance from their school boards. This could be an important message for the school boards and educational departments across Saudi Arabia to take into consideration.

Like confidence levels, a diminished belief in students' rights was detected by teachers in most regions. By the same token, only a few teachers in some regions believe that students on the autism spectrum have the right to be educated in mainstream classrooms with other peers. Similarly, results in the attitude scale indicated that a few teachers have positive attitude towards including students on the autism spectrum in mainstream classrooms.

Consistent with a previous study, indicators of teachers' experience in inclusive education in figure 4 supports our results that experience in IE programs can result in more positive teacher outcomes (see, e.g., Specht & Metsala, 2018; Van Mieghem et al., 2020). The key point here is that the greater the experience, the more knowledge, competence, and positive attitude these teachers will have. Teachers who have more experience working in IE will be more motivated and confident to show their efforts towards effective inclusive education and to make an effort to include students with different needs. They also tend to be more competent in their inclusion method and willingness to help improve their students' performance.

Teachers in the Najran region achieved the highest mean score in the following three scales: competence, knowledge, and belief. Teachers in Riyadh held the highest mean scores in competence and attitude, while Al-Madinah held the highest mean scores in competence and knowledge. Teachers in Al-Qassim scored high in competence and belief. Additionally, teachers in Jizan and Al-Baha held only one high mean score in attitude, while teachers in Eastern Province held one high score in belief.

On the contrary, teachers in Northern Borders showed the lowest rank by holding low mean scores in the following four scales: competence, knowledge, attitude, and belief. Teachers in Al-Baha held low mean scores in competence, knowledge, and belief. Teachers in Najran and Al-Madinah held a low mean score in attitude and teachers in the Eastern Province held a low mean score in competence. Teachers in Tabuk showed low mean scores in knowledge and teachers in Makkah showed a low mean score in belief.

Since the survey took place during the Covid-19 Pandemic, these results have demonstrated that mainstream teachers who included students on the autism spectrum in Saudi Arabia faced difficulties that emerged from the COVID-19 pandemic. The education system in the KSA tried to minimize the consequences and challenges of online teaching. Results from this study reflect the support teachers felt they received from the Ministry of Education in providing academic and social support for their students on the autism spectrum while online. The results of this study indicate how the Saudi Ministry of Education help facilitate successful online learning. Even though a few teachers reported minor challenges, the majority felt that they were supported by the ministry and were able to provide effective online learning. This contrasts an Australian study which found that teachers experienced difficulties in providing effective online learning and difficulty keeping students with disabilities motivated (Page et al., 2021).

**Limitations and Recommendations**

The results in the current study are not without limitations that must be considered in understanding the results. Most participants in this study were female and future research should consider including more gender diversity. The second limitation of this study involved the aim if including teachers across the thirteen regions in the KSA; it was difficult for the primary researcher to find participants from Asser, Ha'al, and Al-Jofe, thus limiting the generalization of

the results into teachers in these three regions. Thus, future research may give attention to teachers in these regions. As well, it is recommended to use other methods or procedures to collect the data. Instead of collecting the data via online surveys, an in-person survey could be helpful to have the opportunity to work with and recruit teachers in different regions. A third limitation of this study was that the participants teach in public schools, so it is suggested to also include teachers from the private sector. Some private schools have more highly qualified teachers who have additional credentials. Thus, the results of competence may be different if those teachers from private schools were also included. Our recommendation is for future researchers to replicate this study with concentration on teachers from private schools or from both public and private to investigate the level of competence.

**Conclusion**

This study included four important variables (competence, knowledge, attitude, belief) in for educators in general and for Saudi educators. In addition, the significance of this study is to enhance the Saudi literature and data with more current results about IE. Results of this study provide an intense and deep understanding of teachers' current level of readiness to practice inclusive education in their mainstream classrooms. In addition, this study provides important information for policymakers, teachers and future researchers on the competence of teachers in inclusive education. Moreover, the results of this study have an essential message to policymakers in the MoE to give a high priority to pre- and in-service training for teachers since the results underpin knowledge as a main predictor of teachers' competence. As well, universities in Saudi Arabia should restructure their education programs to better prepare the next generations of teachers due to the strong relationship we found between teachers' knowledge and their level of attitude and belief in including students on the autism spectrum.

These results are ones that need to be considered seriously and urgently by the Saudi MoE because of the increasing number of students on the autism spectrum who need to benefit from general education, as well as because teachers have strong desires to increase their awareness about IE and are ready to acquire new experiences.

Teachers' roles and responsibilities have only increased during the Covid-19 pandemic, and the field of education is rapidly evolving, requiring ongoing learning by teachers. Competence is composed of a teacher's foundation of knowledge, attitudes, beliefs, and experience. Effective training for teachers about students on the autism spectrum emphasizes ways to successfully increase competence in IE by providing professional development in each of these areas. Previous recommendations highlighted by this study might fill the gap in teachers' awareness about IE practices and skills, especially for those teachers who did not receive special education training.

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**Table 1**

*Summary of Descriptive Statistics for the DV: Teachers Competence Scale and Subscales*

*(N=166)*

| Scales | Mean | Std. Deviation |
|---|---|---|
| Competence overall scale | 2.3124 | 1.01007 |
| Competence in _Instruction | 2.4001 | 1.04539 |
| Competence in Collaboration | 2.5862 | .98139 |
| Competence in Management | 2.6080 | 1.04118 |

**Table 2**

*Descriptive Statistics for the Teachers Competence Scale and Subscales by Sex (N=166)*

|  | Sex | N | Mean | Std. Deviation |
|---|---|---|---|---|
| Competence overall scale | Male | 46 | 2.0338 | 1.12276 |
|  | Female | 120 | 2.4192 | .94679 |
| Competence in Instruction | Male | 46 | 2.2671 | 1.08297 |
|  | Female | 120 | 2.4510 | 1.03070 |
| Competence in Collaboration | Male | 46 | 2.3777 | 1.05670 |
|  | Female | 120 | 2.6662 | .94336 |
| Competence in Management | Male | 46 | 2.3971 | 1.12628 |
|  | Female | 120 | 2.6888 | .99982 |

**Table 3**

*Summary of Descriptive Statistics for the Demographic Variables*

| Variable | Mean | SD | *T* | *P* |
|---|---|---|---|---|
| Sex | | | | |
| Male | 2.03 | 1.12 | -2.22 | .027 |
| Female | 2.41 | .946 | | |
| | | | *F* | *P* |
| Age | | | 1.56 | .174 |
| Under 25 | .82 | - | | |
| 25-29 years | 2.41 | .914 | | |
| 30 -39 years | 2.31 | .96 | | |
| 40-49 years | 2.41 | 1.13 | | |
| 50-59 years | 1.58 | .644 | | |
| + 60 | 1.19 | - | | |
| Education | | | 6.12 | .003 |
| Bachelor | 2.44 | .99 | | |
| Diploma | 2.63 | .56 | | |
| Master | 1.8 | .94 | | |
| Experience ** | | | .200 | .962 |
| 1-2 Years | 2.46 | 1.16 | | |
| 3-5 Years | 2.28 | 1.01 | | |
| 6-10 Years | 2.36 | 1.01 | | |
| 11-15 Years | 2.21 | 1.01 | | |
| 16-20 Years | 2.42 | 1.2 | | |

**Table 3**

*Summary of Descriptive Statistics for the Demographic Variables (continued)*

| Variable | *Mean* | *SD* | *F* | *P* |
|---|---|---|---|---|
| + 20 Years | 2.25 | .93 | | |
| Current Students *** | | | 1.86 | .138 |
| 1 student | 2.44 | 1.07 | | |
| 2 students | 2.40 | 1.04 | | |
| 3 students | 1.98 | .01 | | |
| 4 and + | 2.08 | .97 | | |
| Total Students**** | | | 3.38 | .02 |
| 1 student | 2.58 | 1.14 | | |
| 2 student | 2.40 | 1.1 | | |
| 3 student | 2.45 | .89 | | |
| 4 and + | 2.04 | .83 | | |
| Pre-service Training | | | .129 | 1.19 |
| Undergrad- Co***** | 2.38 | 1.0 | | |
| Diploma coursework | 2.46 | 1.0 | | |
| Graduate coursework | 1.74 | 1.0 | | |
| No training | 2.31 | .98 | | |

**Table 3**

*Summary of Descriptive Statistics for the Demographic Variables (continued)*

| Variable | Mean | SD | F | P |
|---|---|---|---|---|
| In-Services Training | | | 1.15 | .318 |
| Supervised practicum | 2.15 | 1.1 | | |
| IE Workshops | 2.27 | .96 | | |
| No training | 2.45 | .99 | | |
| | | | | |
| City of Residence | | | 1.03 | .414 |
| Riyadh | 2.31 | .85 | | |
| Makkah | 2.84 | .97 | | |
| Al-Madinah | 2.16 | .85 | | |
| Al-Qassim | 2.46 | .91 | | |
| Eastern province | 2.07 | .96 | | |
| Al-Baha | 1.73 | .39 | | |
| Jizan | 2.39 | 1.18 | | |
| Najran | 3.12 | .44 | | |
| Tabuk | 2.22 | 1.18 | | |
| Northern Borders | 2.16 | .47 | | |

*Note* * special education training, ** years of experience teaching in mainstream classrooms, *** current number of students on the autism in the classroom, **** total number of students on the autism spectrum were included, ***** undergraduate coursework.

**Table 4**

*Summary of Hierarchal Regression Analysis for the Teachers Competence*

| Predictors | | Cumulative | | Simultaneous | |
|---|---|---|---|---|---|
| | $R^2$ | $R^2$-change | *F*-change | *ß* | *p* |
| Model 1 | | | | | |
| Age | .004 | .004 | .582 | .-.059 | .447 |
| Model 2 | | | | | |
| Sex | .030 | .026 | 2.50 | .166 | .085 |
| Model 3 | | | | | |
| Training | .39 | .009 | 2.18 | .097 | .092 |
| Model 4 | | | | | |
| Level of Edu. | .90 | .051 | 3.96 | -..226**** | .004 |
| Model 5 | | | | | |
| Students (autism spectrum)* | .123 | .033 | 4.47 | -.189**** | < .001 |
| Model 6 | | | | | |
| Knowledge | .360 | .238 | 14.9 | .513** | < .001 |
| Model 7 | | | | | |
| Core Perspective | .415 | .055 | 15.9 | .297** | < .001 |
| Model 8 | | | | | |
| Class-Practice | .440 | .025 | 15.3 | .172*** | < .001 |

*Note.* * total number of included students on the autism spectrum.

** p value < .001,  *** p value < .01, **** p value < .005.

**Table 5**

*Summary of Descriptive Statistics for the DV  Teachers Competence by the Type of Education*

*Training (N=166)*

|  | Teachers who received SE training | | Teachers who did not received SE training | |
|---|---|---|---|---|
|  | M | SD | M | SD |
| Overall Competence scale | 2.33 | .091 | 2.28 | .146 |
| Competence in collaboration | 2.59 | .087 | 2.50 | .144 |
| Competence in management | 2.62 | .098 | 2.58 | .141 |
| Competence in instructions | 2.33 | .100 | 2.50 | .136 |

**Table 6**

*Mean and Standard Deviations for the TEIP*

| Item | Statement | Subscale | Mean | SD |
|------|-----------|----------|------|-----|
| 1 | I can make my expectations clear about student behavior | Management | 2.71 | 1.48 |
| 2 | I am able to calm a student who is disruptive or noisy | Management | 2.82 | 1.60 |
| 3 | I can make parents feel comfortable coming to school | Collaboration | 2.75 | 1.66 |
| 4 | I can assist families in helping their children do well in school | Collaboration | 2.77 | 1.66 |
| 5 | I can accurately gauge student comprehension of what I have taught | Instructions | 2.40 | 1.49 |
| 6 | I can provide appropriate challenges for very capable students | Instructions | 2.64 | 1.52 |
| 7 | I am confident in my ability to prevent disruptive behavior in the classroom before it occurs. | Management | 2.59 | 1.51 |
| 8 | I can control disruptive behavior in the classroom | Management | 2.57 | 1.46 |
| 9 | I am confident in my ability to get parents involved in school activities of their children on the autism spectrum | Collaboration | 2.54 | 1.52 |
| 10 | I am confident in designing learning tasks so that individual needs of students on the autism spectrum are accommodated | Instructions | 2.80 | 1.55 |

**Table 6**

*Mean and Standard Deviations for the TEIP (continued)*

| Item | Statement | Subscale | Mean | SD |
|------|-----------|----------|------|-----|
| 11 | I am able to get children to follow classroom rules | Management | 2.38 | 1.48 |
| 12 | I can collaborate with other professionals in designing educational plans for students on the autism spectrum | Collaboration | 2.30 | 1.38 |
| 13 | I am able to work jointly with other professionals and staff to teach students on the autism spectrum in the classroom | Collaboration | 2.37 | 1.50 |
| 14 | I am confident in my ability to get students to work together in pairs or in small groups | Instructions | 2.20 | 1.49 |
| 15 | I can use a variety of assessment strategies | Instructions | 2.16 | 1.45 |
| 16 | I am confident in informing others who know little about laws and policies relating to the inclusion of students on the autism spectrum | Collaboration | 2.71 | 1.57 |
| 17 | I am confident when dealing with students who are physically aggressive. | Management | 2.64 | 1.51 |
| 18 | I am able to provide an alternative explanation or example when students are confused | Instructions | 2.09 | 1.43 |

**Table 7**

*Descriptive Statistics for Competence overall scale by the Type of Education Training and Pre-Service Training in Inclusive Education (N=166)*

| Education Training | Levels of Pre-Service Training in IE | Mean | Std. Deviation |
|---|---|---|---|
| Teachers with SE | Undergraduate coursework | 2.5548 | .84721 |
| | Diploma coursework | 2.6680 | .92020 |
| | Graduate coursework | 1.4260 | .69817 |
| | No pre-service training was received | 2.2216 | .94352 |
| | Total | 2.3300 | .93762 |
| Teachers with No SE | Undergraduate coursework | 2.0422 | 1.22891 |
| | Diploma coursework | 2.0988 | 1.09572 |
| | Graduate coursework | 2.6062 | 1.48052 |
| | No pre-service training was received | 2.4578 | 1.04635 |
| | Total | 2.2813 | 1.13450 |

**Table 8**

*Summary of Descriptive Statistics for Competence , Knowledge, Attitude, Belief, Years of*

*Experience*

| Saudi Arabia Region | Competence | Knowledge | Attitude | Belief | Years of Experience |
|---|---|---|---|---|---|
| | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) | Mean (*SD*) |
| Riyadh | 2.31 (.88) | 2.43 (.87) | 2.58 (.93) | 2.43 (.90) | 3.06 (1.6) |
| Al-Qassim | 2.84 (1.2) | 2.21 (1.04) | 2.51 (.92) | 2.77 (1.0) | 3.22 (1.4) |
| Makkah | 2.2 (.98) | 2.29 (1.02) | 2.29 (.99) | 2.16 (1.1) | 2.93 (.88) |
| Al-Madinah | 2.46 (1.1) | 2.52 (.93) | 1.95 (.88) | 2.43 (1.0) | 4 (1.1) |
| Eastern province | 2.07 (.94) | 2.26 (.91) | 2.38 (.60) | 2.49 (.75) | 4.74 (1.7) |
| Al-Baha | 1.73 (.10) | 1.77 (.33) | 2.92 (1.1) | 2.01 (.26) | 4 (2.8) |
| Jizan | 2.36 (1.1) | 2.46 (1.1) | 2.58 (.94) | 2.39 (1.0) | 3.63 (.95) |
| Najran | 3.12 (.80) | 2.23 (2.5) | 1.6 (1.5) | 2.66 (1.4) | 4.5 (.71) |
| Tabuk | 2.22 (1.3) | 2.09 (1.1) | 2.5 (1.1) | 2.31 (1.0) | 3.65 (1.25) |
| Northern Borders | 2.16 (1.6) | 1.74 (.66) | 1.47 (.88) | 1.73 (.13) | 3 (2.82) |

**Figure 1**

*Interaction of Attitude Effect on Teachers' Knowledge and Competence*
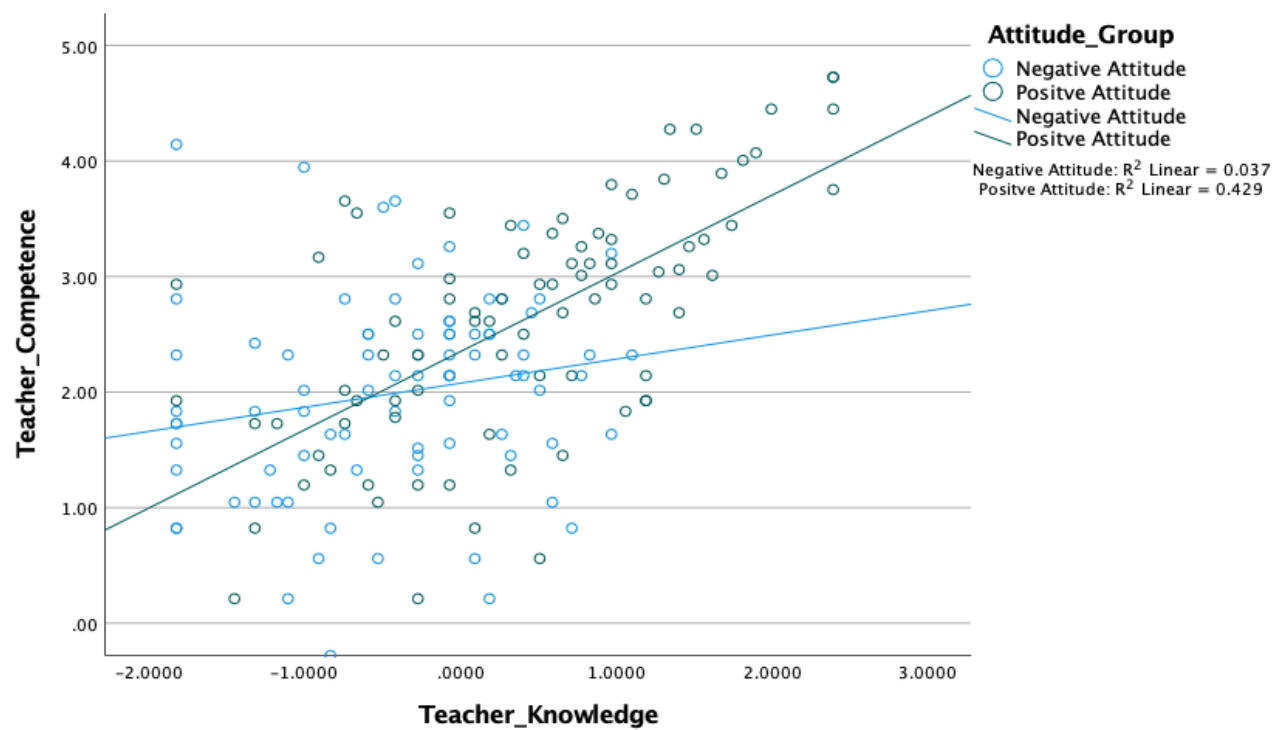
**Figure 2**

*Interaction Between Groups of Teachers, who received SE training and who do not, and all*

*levels of pre-service training in IE*



**Estimated Marginal Means of Teacher_Competence**
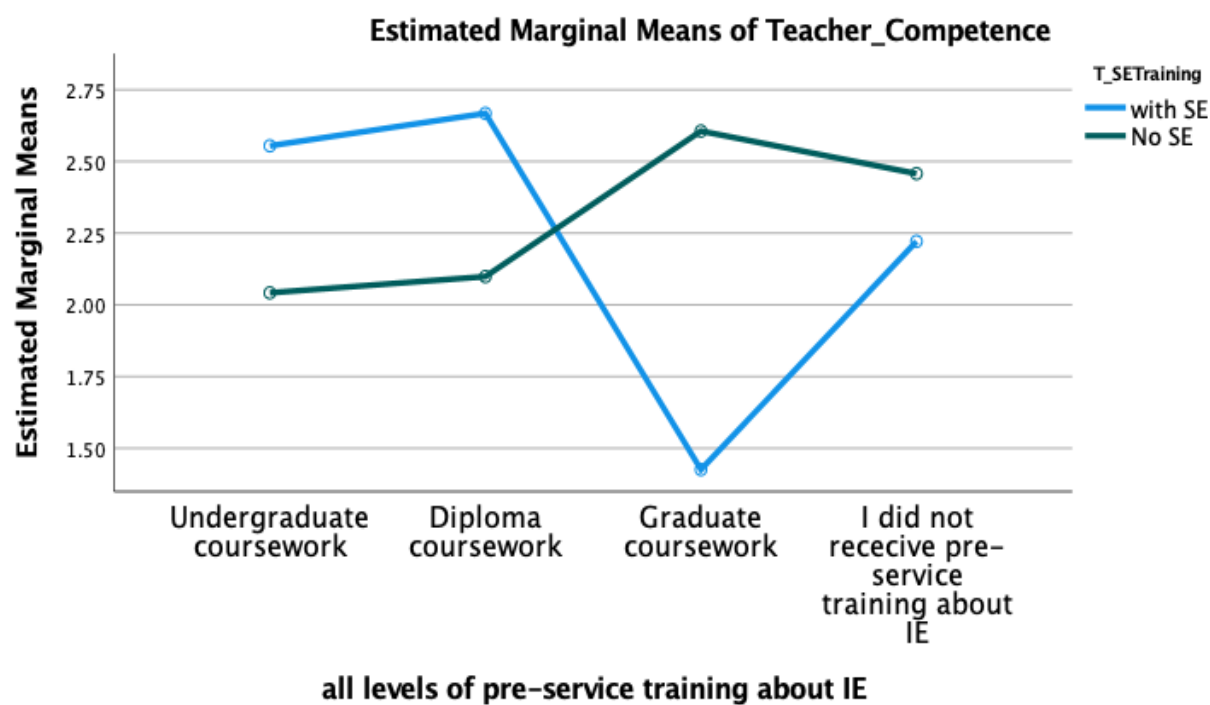
**Figure 3**

*Exploring differences between Saudi's regions in Competence, Knowledge, Attitude, Belief, and*

*Years of Experience*
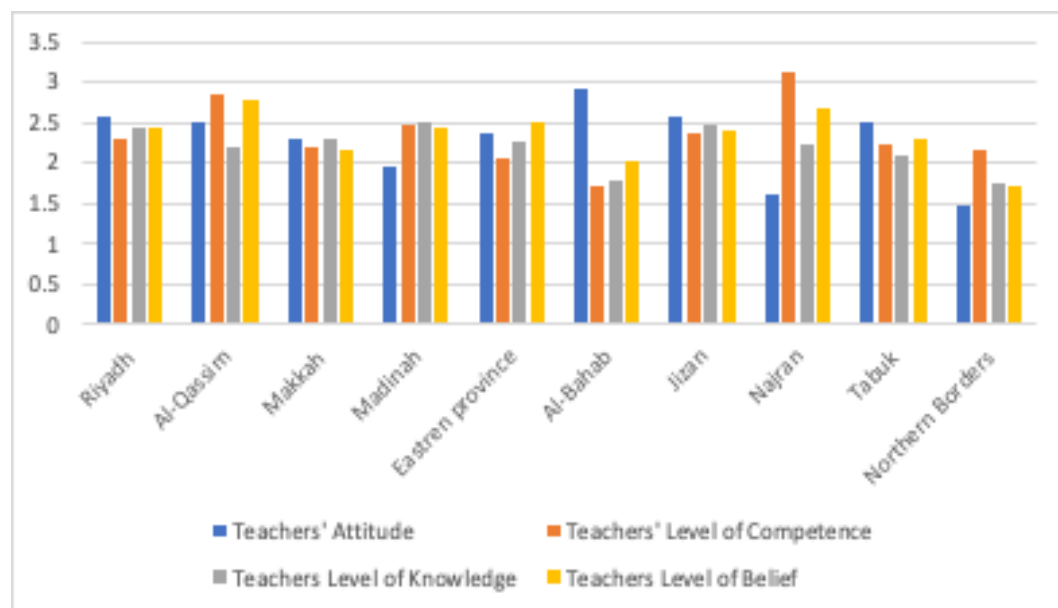
**Figure 4**

*Years of Experience and Teachers' Competence, Knowledge, Attitude and Belief*
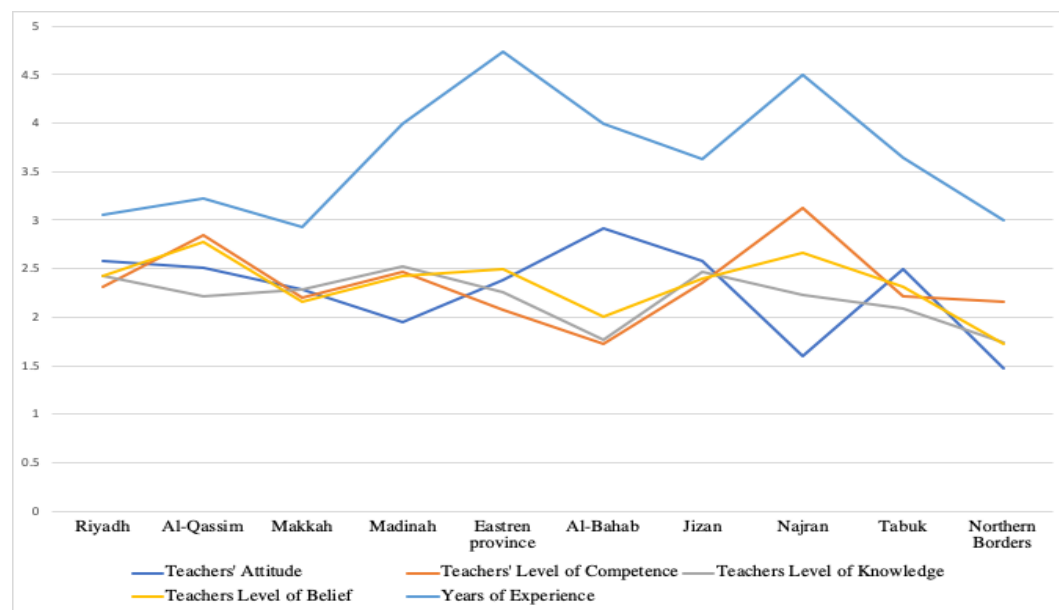
**Bridging to Study # 3**

Results from the study 2 provided an understanding of teachers' current level of readiness to practice inclusive education in their mainstream classrooms. Based on the represented mean, the results suggested that teachers' competence in including students on the autism spectrum are low. Furthermore, the analysis conducted in study 2 revealed that IE has been implemented by different school boards across the KSA and teachers showed variations in their competence, knowledge and attitudes. A conclusion from the study 2 was that teachers' competence and skills need further development because their readiness to include students on the autism spectrum is not enough to achieve a successful level of inclusion. These results reflect an idea of what we need in order to create an inclusive classroom environment. Due to the low competence level of teachers, they may fail to accomplish the goals set out by the Saudi MoE for inclusive education for students on the autism spectrum.

The Saudi MoE wants to increase parent participation by 80% in their children's school activities and for parents to have more effective communication and feedback with their children's teachers. The role of teachers in an inclusive education environment is essential and considered the core of successful IE. Besides teachers, parents bring many advantages to a successful inclusive education. Both parents and teachers' beliefs, attitudes, and understanding of inclusive classrooms play key roles in achieving effective educational support for students on the autism spectrum. Teachers need to understand that a child's low academic performance and atypical behavior may be a result of their disorder. Also, teachers need to believe that students on the autism spectrum can perform well in inclusive classrooms. Literature in this area agrees with the importance of involving both parents and teachers when students on the autism spectrum are experiencing an issue. Both parties have an important relationship and responsibility to the

student. Furthermore, both parties contribute towards a students' academic performance and can help increase their success. Reviewing the literature indicated that giving parents the chance to provide their perspectives should be taken into consideration. Given these results, study 3 will examine IE for students on the autism spectrum from parents' views. More specifically, we want to explore parents' perspectives and satisfaction with the current implementation of IE that is provided to their children on the autism spectrum. Study 3, about parent perspectives, will help contribute to the growth and subsequent success of IE in the KSA. Moving forward, we must recognize parents' perspectives about their children's IE.

Chapter 4:

Manuscript #3

**Education Movement for Inclusive Education: Saudi Parents' Perspectives, Satisfaction,**

**and Needs for Their Children on the Autism Spectrum**

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**Abstract**

The main purpose of this qualitative study was to explore parents' perspectives and to understand their views about the IE that is provided to their children on the autism spectrum in Saudi Arabia. Eight parents (100% mothers) were interviewed. Despite these parents having strong beliefs about IE, they reported a limited number of available IE classrooms, rejection from school staff towards inclusion and limited information about IE services. Accordingly, parents of this study showed low satisfaction with the IE provided to their children on the autism spectrum in public schools. Furthermore, parents shared some desires and suggestions for policymakers, teachers, and community members. This study is considered a baseline for future research on the collaboration and perspectives of parents about IE. The implications of this study and the recommendations for future research regarding parents' perspectives are also discussed.

*Keywords:* parents' perspectives, Saudi Arabia, inclusive education, students on the autism spectrum, challenges

**Saudi Parents' Perspectives, Satisfaction, and Needs for Their Children on the Autism**

**Spectrum**

Globally, the concept of inclusive education has been addressed as a contentious essential issue for students that focuses on many issues including social and educational progress of each student (Cologon, 2022). Consept of Inclusive education Mutabbakani and Callinan (2020) have confirmed "many experts assert that the director drivers of inclusion are [the] social justice directors; human rights issues; people with disabilities and their parents' advocacy, [and] research findings"'(p. 1198). Consequently, experts have considered parents to be a vital part of inclusive education (Mutabbakani & Callinan, 2020). Like Mutabbakani and Callinan (2020), Yu et al. (2017) stated that the majority of parents are highly concerned with the progress of their children's developmental stages. Parents give a lot of attention to their children from the time they are born, especially during their formative years. Due to this strong relationship, parents' attitudes, thoughts, beliefs, and behaviors strongly influence their children and they are considered the "backbone" of their children's development (Healy, 2022; Yu et al., 2017).

**Background**

Studying IE from multiple perspectives is not a new concept, however studying parents' perspectives of their children on the autism is a relatively new area of study (McKinlay et al., 2022). It is highly recommended to consider parent perspectives on their children's education (Majoko, 2019). Research in Saudi Arabia about parental involvement and their perspectives on education for their children on the autism spectrum is limited (Almalki et al., 2021). Education policies in the KSA stipulate that parents of children with disabilities, including autism, have the right to be involved and informed about their children's academic programs (Almalki et al., 2021). However, parents face difficulties being involved and receiving information. Thus, in

turn, parents may feel that they are disconnected from their children's educational program and from their teachers (Almalki et al., 2021). Teachers in this scenario are the driving force of a child's educational program and are the primary influence on children's academic progress. Teachers are the bridge between parents and the education program of their children (Almalki et al., 2021). According to Almalki et al. (2021), Mutabbakani and Callinan (2020) and Rice (2017), teachers report that there are multiple factors which influence a parents' level of satisfaction.

Ways in which parents can be involved in their children's education program include agreeing to Individualized Educational Plans (IEP) and participating in designing behavior modification programs. Parents' roles in their children's education can be seen in their communication with teachers about their children's progress. Attending parent-teacher meetings and partaking in frequent communication positively affect students' achievement (Bahdanovich Hanssen & Erina, 2021). Parents can help supplement their children's learning through direct or indirect contributions at home. Examples of support which parents can provide at home include helping with academic concepts and implementing behavior programs (Bahdanovich Hanssen & Erina, 2021). Meaningful parental involvement is likely to result in a child's success, which in turn makes parents satisfied with their children's outcomes (Bahdanovich Hanssen & Erina, 2021; McKinlay et al., 2022).

Parents in Saudi Arabia are motivated to be a part of their children's education, especially parents of children on the autism spectrum who are seeking better educational services and support (Alnemary et al., 2017; Alotaibi & Almalki, 2016). However, many parents reported a shortage of academic services addition to limited adaptations in their child's education (Alotaibi & Almalki, 2016). Similar to parents in Kuwait and Jordan, parents in Saudi Arabia believe that

there is need to provide more academic to support their children's needs (Al-jabry et al., 2014; Alnemary et al., 2017; Mutabbakani & Callinan, 2020). Therefore, their children failed to achieve appropriate academic and social progress.

The number of students on the autism spectrum is rapidly growing. In 2017, Alnemary et al. reported a huge increase in the number of students on the autism spectrum and stated that there were approximately 167,000 children on the autism spectrum in the KSA. From an educational perspective, this fast-increasing population should be met with a greater and more critical response from educators and policymakers to remediate its academic curriculum (Alzahrani & Brigham, 2017). In their study, Haimour and Obaidate (2013) found it is difficult for many mainstream teachers to provide effective teaching and appropriate social support for students on the autism spectrum. Further, a conclusion by Alshenifi is that teachers in the KSA need to acquire more advanced knowledge and skills to face this revolution successfully (2018).

Currently, most students on the autism spectrum attend special institutes or part-time integration (special education) programs (Alamri, 2019; Aldabas, 2015, Almalki, 2016). Within the movement of IE, many parents seek to place their children in a mainstream classroom and look for more academic opportunities (Alotaibi & Almalki, 2016). The delay in providing a more developed education program associated with IE for students on the autism spectrum may be due to two reasons. Firstly, due to cultural values, there is still a social stigma that influences the progress and the delivery of services for students on the autism spectrum (Sulimani & Gut, 2019). Secondly, IE itself is still a new concept (Alshenifi, 2018). There are some proponents who believe that IE should be more supported in the KSA for students on the autism spectrum (Alamri & Tayler-Wood, 2015).

At the forefront of parents' demands, they are concerned about the level of support provided, teachers' experience in IE, teachers' attitude towards their children, and the fear of their children being rejected by their peers. As well, parents are worried about their children's ability to participate in social activities (De Boernet al., 2010). A survey was conducted in (2011) by Almasoud, who examined 36 parents of students on the autism spectrum in the KSA. The study showed that 94% of the participants were not satisfied with the development of the education programs. As well, Almasoud found 97% of parents reported that their children were excluded from inclusive classrooms in public schools (2011). A study in (2017) found parents of children on the autism believed that most of the services in inclusive programs did not effectively target their children's needs (Alotaibi & Almalki, 2016). Additionally, the results of this survey found parents reported negative attitudes from some teachers towards including their children in inclusive education classrooms. Parents stated that their children received fewer benefits compared to other students with disabilities (Falkmera et al., 2015). Moreover, parents added that the education provided for students on the autism spectrum is better designed for students with other disabilities. Therefore, these parents are wondering if there will be new improvements to IE to specifically benefit those who on the autism spectrum (Alshenifi, 2018). As a result, many Saudi families move abroad looking for more appropriate educational programs for their children on the autism (Alnemary et al., 2017). From both Western and Saudi literature, the reviews similarly identified that the quality of IE is the main parents' concern (Alotaibi & Almalki, 2016; Falkmera et al., 2015; Simpson et al., 2011; Sulimani & Gut, 2019). Specifically, parents in the KSA are concerned about the academic progress of their children (Alnemary et al., 2017).

A growing body in education research emphasized the importance of parents' roles in their children's education (Alotaibi & Almalki, 2016). Parents of children on the autism spectrum tend to have high satisfaction with IE when they have better experiences with their children's teachers (De Boer et al., 2010). Given the review of literature on IE about students on the autism spectrum, we can conclude there is a lack of proper IE. Therefore, it is reasonable to continue to explore the current perspectives of parents of children on the autism spectrum in the KSA and their experiences.

**Current Study**

Since parents are the primary caretakers of their children, in this study it is important to examine their perspectives and levels of satisfaction of inclusive education programs offered to their children on the autism spectrum in public schools in the KSA. Exploring parents' perspectives in the meantime is necessary to discover whether parents' thoughts and satisfaction about their children's IE have developed and are more positive than before. Listening to parents and understanding their perspectives allow academics to better investigate the ongoing IE implementations. Additionally, this allows researchers to see IE from a different angle and discover related issues based on parents' feedback.

**Research Objectives**

The purpose of this study was to investigate parents' perspectives and levels of satisfaction of inclusive education programs offered to their children on the autism spectrum disorder in public schools in the KSA. This study included parents from different regions in the KSA to investigate different perspectives from different parent experiences, and to explore whether parents' satisfaction differs based on which region or city they come from. As well, another rationale of gathering data from parents in different regions is to gain deeper insight and further exploration

of the IE process and implementation. In addition, the conclusions from this research enable us to generalize our results. To support the primary objective, secondary objectives were included: a) to explore different perspectives about inclusive education from parents of children on the autism spectrum across different regions in Saudi Arabia; b) to explore parents' satisfaction with the inclusive education program for their children on the autism spectrum ; c) to actively listen to parents about how they feel about the inclusive education programs that are provided for their children on the autism spectrum ; d) to explore suggestions and needs from parents for more effective inclusive education programs. In addition, parents were asked about their perspectives on online learning during the COVID-19 pandemic. Four research questions were created to facilitate the objectives for our study:

1. What are parents' perspectives toward inclusive education for their children who are on the autism spectrum in the KSA?

2. Are there any differences in parents' perspective based on their region in the KSA?

3. Are parents satisfied with the inclusive education program for their children who are on the autism spectrum?

4. How do parents assess their children's academic progress in IE based on their children's needs?

This qualitative study is designed to be small and exploratory. It is designed for all parents of students on the autism spectrum who study in inclusive classrooms in public schools across Saudi Arabia. There are no limitations with the participants of this study, specifically with their ethnic, cultural, gender or sexual orientation. Since this is an exploratory qualitative study, no hypothesis will be stated, and participants' responses will guide the results of the research. The

aim of this study is to invite parents to provide their opinion and level of satisfaction about inclusive education programs in mainstream classrooms across the KSA.

## Methods

### Participants

Participants were ($N = 8$) parents of children on the autism spectrum between 7 and 17 years of age. Only mothers accepted to participate in the study, which could be expected given the cultural and gender dynamics in Saudi Arabia. Participants were recruited from different cities across the KSA and gave written informed consent to participate in the study. Details about parents' marital status and their highest level of education obtained are presented in the findings. The parents met the following participation criteria: speak Arabic as their mother tongue, live in Saudi Arabia at the moment of participation, and their child studies in an inclusive education classroom in regular public schools in Saudi Arabia.

### Measure

The sole measure in this study was a recorded, face-to-face semi-structured individual interview with each parent (see Appendix L). An individual interview was chosen in respect to the culture in Saudi Arabia and to respect the parent's privacy. With the relatively new topic of IE in the KSA, semi-structured interviews help to understand parents' perspectives and thoughts related to their experience and level of satisfaction. The open-ended interview also allowed researchers of this study to ask for more details, clarification, and explanations of certain information and events at any time (Daniel, 2008; Tillery et al., 2010).

Due to COVID-19, the interviews were conducted online via Microsoft Teams. Arabic was the sole language used in the interview. First, demographic questions were included in the interview, as well as 6 questions regarding participants' age, sex, marital status, educational

background, city of residence, and years of their child being in an inclusive education program. Next were 14 open-ended interview questions written and developed by the primary author. The themes of the questions were: parents' perspectives about the IE programs, challenges faced by their children in IE, parents' level of satisfaction with IE, current experience with the online classes during COVID-19 pandemic, and suggestions to provide a more effective IE program.

**Procedure**

Ethics approval was obtained from the McGill University Research Ethics Board (see Appendix M). Once this permission was received, the author (Arwa Alrawkan), emailed the Saudi Ministry of Education for the consent form (see Appendix N). Once the approval form was obtained from the Ministry, the author emailed school directors in different cities across the KSA seeking approval to recruit participants from their students' parents (see Appendix O for more details about the approval from the Ministry of Education). After approval was obtained from the schools' directors, including parents' email and phone number, the primary author sent the consent form to the parents (see Appendix P). After receiving the consent form from the parents, the primary author sent an email to them including all the details of the interview such as: date, time (based on their preference), and a link to an online interview via Microsoft Teams. The first 15 minutes of the interview were spent providing an overview about the purpose of the study, explaining the concept of inclusive education, and outlining the interview process. Then parents were asked at the beginning of the interview to answer demographic questions. The total interview time for each parent was approximately 90 minutes. At the end of the interview, a follow-up discussion about how parents felt took place for about 5 minutes. Afterward, they received their debrief form by email (see Appendix Q).

**Translation**

Translation from one language to another is generally a challenging task and this is because of the range of small differences between the use of concepts, terms, and expressions in both Arabic and English. The author, Arwa Alrawkan, is a native Arabic speaker, therefore the translation process was easy, and she was able to translate the questions, interview data, and information with correct grammar. She was able to conduct the interviews with the correct expressions and pronunciations. The questionnaire was developed in English and translated into Arabic, but the data and information obtained from interviews were in Arabic and then translated into English. Thus, the analysis and reporting of interview results were completed in English and this process required checking terms and expressions carefully with other experienced translators.

**Analysis**

The interviews were recorded via the Microsoft Teams application with participants' permission and saved to a special file on the primary author's laptop. In this study, pseudonyms were used rather than parents and their children's names. The interviewees were asked to add their perspectives and provide more details about their experience, attitude, knowledge, opinion, and level of satisfaction with IE programs for their children on the autism spectrum. I used my interpretation of participants' perspectives and asked them to elaborate more and reflect their thoughts. Listening closely and asking question to the participants helped me as a researcher to engage early in determining patterns of participants' responses.

Thematic analysis was used to analyze the interview data. Willig (2013) defined the thematic analysis as "particular, recognizable configuration of meanings which co-occur in a way that is meaningful and systematic rather than random and arbitrary" (p. 57). It aims to create a

specific pattern or group including significant knowledge that connects with the research question and main objective (Willig, 2013). Thematic analysis in this study followed the inductive approach. An Inductive Approach "works from the bottom up" to analyze raw data in qualitative research (Willid, 2013, p. 60). "The themes that emerge from such an analysis are firmly grounded in the data and do not reflect the researcher's theoretical commitments" (Willid, 2013, p. 60). Coding by using an Inductive Approach allows researchers to get a deep understanding of their details by grouping the data into different themes. Then, researchers can create connections between research questions, objectives, themes, and its results (Thomas, 2006; Willid, 2013).

To analyze my data, I applied the Braun and Clarke (2006) approach in thematic analysis in psychology research. Braun and Clarke's (2006) approach consists of a six-phase process. Braun and Clarke's phases are sequential and are built upon the previous phase (Braun & Clarke, 2006).

### Phase One

Phase one consists of familiarization with the collected data. To be familiar with my data and information, I listened to my recorded audio, transcribed the data, read my data many times, and took notes.

### Phase Two

Phase two consists of coding data. This phase works by highlighting important information from collected data that may be related to the research questions and objectives (Braun & Clarke, 2006). Then, codes were created for all interview transcriptions. Each code highlighted one idea, theme, expression, or meaning of the parents' responses. After, all codes

were collected together, and all relevant data was extracted into a table to be more organized and ready for the following phase (Willid, 2013).

### Phase Three

Phase three consists of generating themes. First, I reviewed and examined the codes and interview extractions to come up with related patterns. Then, these patterns led to themes (themes are a combination of codes) (Braun & Clarke, 2006). To complete this phase in a simple way, the primary author created a thematic map to make it more visual. (Willid, 2013; Braun & Clarke, 2006).

### Phase Four

Phase four consists of reviewing themes to double check that the chosen themes are accurate and correspond with the interview extracts (Braun & Clarke, 2006). "Reviewing themes means checking whether some could be further integrated into higher-order themes or whether some themes may not be relevant to the research question after all, and making further connections between themes" (Willid, 2013, p. 62). As a researcher, I examined my themes to determine which themes exactly represent my dataset and answered the research questions. I used my thematic map to go over the developed themes and interview extract.

### Phase Five

Phase five consists of defining and naming themes. In this phase as a researcher, I focused on naming the themes by formulating the meaning of each theme and finding out how each theme will help to understand the related data (Willid, 2013).

### Phase Six

Phase six consists of writing up the analysis of data. At the beginning I discussed both the research questions and the themes that related to the research objectives. Then, I developed the analytic details and dataset to come up with the final findings (Willid, 2013).

**Trustworthiness and Credibility of The Study / Validity**

Researchers in the field of education and psychology follow many attempts in order to achieve unique validity of their qualitative research (Eli, 2011). The quality of qualitative research can be assessed based on its trustworthiness, including four criteria: transferability, credibility, confirmability, and dependability (Korstjens & Moser, 2018). "Validity is concerned with whether the findings are 'really' about what they appear to be about" (Robson, 2002, p. 78). Checking the validity in qualitative research for the purpose of avoiding three types of bias that threaten the validity of the research. These three types of bias are: respondent bias from the participants, researcher bias, and reactivity.

In this study several steps were taken to ensure the validity. Trustworthiness was established through member checking, keeping an audit trail, and purposeful sampling (Korstjens & Moser, 2018; Robson, 2002). Member checking was used to enhance the credibility and validity of the research results (Eli, 2011). To do so, the primary author allowed the participant to provide a detailed perspective about their stories during the interview (Eli, 2011). Additionally, interviewed parents were asked to check the correction of the transcript and the written notes that were taken from the interviews. Another procedure, parents were asked to make sure if the results are exactly indicative of their opinion and what happened with them. Then the comprehensive transcript of the collected data allowed for the results to be more actual and richer (Eli, 2011).

Furthermore, the PI kept the interview records of all the raw interviews and the researcher's diary and the coding file (Korstjens & Moser, 2018). This procedure allowed me to check the conversations and confirm the transcripts. As well, I was responsible for conducting the interviews and transcribing and coding the data, so that provided me with a prolonged involvement and great understanding of the study's objectives (Eli, 2011; Korstjens & Moser, 2018). Finally, I implemented a purposeful sampling strategy to confirm that the results presented in this study were from parents who have experience with inclusive education programs (Lavrakas, 2008).

## Results

This qualitative study was designed to be small and exploratory Therefore, no hypothesis was stated, and participants' responses guided the results of the research. The analysis of the data began with showing the demographic questionnaire results. Then, each objective of the research was addressed individually, including identified and analyzed themes. In addition, to support the core of each theme related to the research question, quotes were involved.

### Background Information

Parents were asked to fill out demographic questionnaires to investigate relevant details such as: parents' age, level of education, city of residence, and the child's grade level.

### *Gender*

Parents were asked to determine their gender in the demographic questions. The results showed that 100% of the participants were mothers, even though both fathers and mothers were asked to participate. Some parents when they knew that the primer investigator (Arwa Alrawkan) was a woman, they preferred to not participate and instead asked to do the interview with the

mothers instead. This can be an example of how in the Saudi culture, some families respect the women by not involving themselves in long discussions with them.

*Age*

The ages of the participants were categorized as follows: 24 years of age or less, 25-29 years, 30-39 years, 40-49 years, 50-59 years, and 60 years old or older. The majority were aged 40-49 years old (50%), followed by 25% of the participants aged 30-39 years old. There were equal percentages of 12.5 % were in teachers who 24 years old and less, and teachers who 25-29 years old.

*Education*

Parents were asked to indicate their highest level of education. Most participants stated that they had a high school degree (50%), followed by 37.5% of parents who had a bachelor's degree. While 12.5% stated that they had a diploma. No participant indicated other qualifications.

*Marital Status*

The types of marital status of the participants were categorized as married or divorced. The majority are married (87.5%), and 12.5% are divorced.

*Geographic Location*

The Kingdom of Saudi Arabia includes 13 provinces with a land area of approximately 2,150,000 km². This study aimed to gather parents from different regions in the KSA. Thus, on demographic questionnaire parents were asked to indicate the city in which they live to examine the differences between the cities across Saudi Arabia. These provinces listed in the demographic questions were Riyadh, Makkah, Al-Madinah, The Eastern Province, Al-Qassim, Al-Baha, Al-Jawf, the Northern Borders, Ha'il, Tabuk, Aseer, Jizan, and Najran Province. Accordingly,

37.5% of parents were from Al Qassim Province. An equal percentage of 25% were found in Al-Medina and Eastern Province. The smallest percentage was found in Riyadh with 12.5%.

*Years Studying in An Inclusive Education Classroom*

In terms of how many years each child of the parents studied in an IE classroom. The options of years were as follows: 1-2years, 3-5 years, and more than 6 years. The results showed 50% of parents indicated that their children enrolled in an IE classroom for 3-5 years. Where 37.5% of parents say their children were studying in an IE classroom for more than 6 years, and 12% were in an IE classroom for 1-2 years.

**Analyzing the Research Questions**

As mentioned before in the method, this study included 4 main objectives and 4 questions. To investigate the main research questions, the researcher broke down the questions into fourteen sub-questions during the interview to guide the interview discussions and to motivate interviewees to provide essential details related to the main four questions. The findings here will be discussed based on the research questions, and the main themes and the sub-themes of each question.

**Study's First Objective: Parents' Perspectives Towards Inclusive Education**

The aim of the first research question was to explore different perspectives about inclusive education from parents of children on the autism spectrum across different regions in Saudi Arabia. Including their perspectives about the implementation of IE and its services. Additionally, parents reflected on the IE registration process beginning with the MoE until students were integrated into mainstream classrooms. The analysis of the parents' perspectives yielded the following themes:

*Challenges Presented with an Inclusive Education Program*

Parents were asked to provide their viewpoints and experiences based on what their child is currently practicing in an IE classroom. Participants differed in their attitudes and response, some of them giving details with interesting stories and reactions. while others took a broad view. Both scenarios were included as frame of reference to analyze the datasets.

**Limitation of Inclusive Education Classrooms.** Five out of eight participants stated that there is a shortage of mainstream classrooms that include students on the autism spectrum in mainstream classrooms. Most parents were complaining of the limited numbers of inclusive education classrooms that can support their children with a regular curriculum. "*I faced difficulties finding a school that included my daughter in mainstream classroom, ohhh!! There is only one school that offers an IE classroom in Al-Medina, which is too far from my neighborhood*" (Manahel's mother). Another mother shared her perspective about the shortage of schools that provide IE for students on the autism spectrum when they moved from a special education program and looked for a regular school providing IE services. *"The availability of inclusive education programs is limited which makes it difficult for us as a family to find an appropriate school close to our neighborhood"* (Adel's mother)

When discussing this point -a limited number of available IE classrooms- with participants, some parents shared their desire for their children who are on the autism spectrum to receive more academic chances as other peers in regular schools. Parents stated that it is part of their children's education to study in regular schools. *"It is my daughter's right to learn with other peers in the mainstream classroom with no challenge to finding a school providing IE"* (Lama's mother)

**School Director's Rejection.** Four participating parents were complaining of rejections from schools' directors for their children to study in regular schools. Some parents stated that they go

back and forth between school boards and schools many times to facilitate the process of registration and the difficulties come from the school's directors. Lamas' mother stated that:

> *"The school board accepted my daughter to study in a regular school, but when I asked the school's director for the final acceptance she refused. Not all school directors have a negative attitude towards accepting students on the autism spectrum, but some of them do".*

In addition, Khaled's mother added, *"the school board was accepting my son to be included in the mainstream classroom".* When school boards accept students on the autism spectrum to be included in mainstream classrooms, and then rejection comes from schools' directors, parents face a problem with their children's education of the differences in acceptance rules. In other words, there is an inconsistency of the acceptance guideline of studying in mainstream classrooms. Thus presented a major challenge for parents of children on the autism spectrum in Saudi Arabia. *"Despite my daughter being accepted by the school board to be included in mainstream classrooms, the challenge to study in an inclusive education program came from her school's director at the beginning"* (Nouf's mother). Another mother stated the negative feeling for her daughter from the school director. One participant complained of administrators in the school board in their region and she stated that *"the first and main challenge was from the administrator of the inclusive education program in the school board"* (Lara's mother). Another mother confirmed this rejection by stating that *"my child got rejected many times because the acceptance depends on the school director".*

On the contrary, parents from the Eastern Province were pleased about the school's directors welcoming their children into mainstream classrooms. *"My son has positive experiences studying in mainstream classrooms and he was fully accepted"* (Sami's mother).

**Schools' Teachers' Rejections**. Four parents added that despite the significant role of teachers to effectively support the inclusion of their children in mainstream classrooms, some teachers did not welcome our children in their classrooms. Parents said that their children were refused learning as the same time as their peers. It is their right to learn from regular curriculum besides their peers in mainstream classrooms. Khaled's mother said, "*even though my son is excellent in the academic side and his performance is appropriate, some teachers did not accept my son on the autism in a regular school*". Also, she added *"some teachers say we are accepting students with disabilities in inclusive classrooms, but the fact that they ignored our children and consider them in the classroom "as chair"*.

Furthermore, parents asserted that some teachers in mainstream classrooms felt they are not responsible for our children on the autism, even though including them is part of their job. Some parents interpret teachers' rejection as teachers cannot accept behaviors of students on the autism spectrum. Adel's mother added that *"some teachers rejected my child's inclusion because of his sounds and teachers feel annoyed with his sound"*.

*Weaknesses Related to an Inclusive Education Program*

As a part of the study's objective to listen carefully to parents' perspectives and views towards the IE for their children, parents provided an ample number of details. The following sub-themes will reveal common parents' perspectives about the weaknesses of the IE. Most of these weaknesses are related to IE services that are provided for students with disabilities based on their needs and differences.

**Absence of Teacher's Assistant.** Six parents in the interviews indicated how difficult it is sometimes for their children to learn in mainstream classrooms with only one main teacher. Some of the parents illustrated the need for teacher assistants given the high number of students

in one classroom. Furthermore, other parents stated that having students on the autism spectrum in the classroom requires more of the main teachers' time and work, which may negatively affect their performance. In turn, their children on the autism spectrum may not receive the attention and support needed from their teachers. *"I provided the academic support for my daughter because her regular teachers felt that they are not responsible for my daughter"* (Manahel's mother).

Parents also stated that some mainstream teachers in inclusive classrooms lack the essential skills to teach students on the autism spectrum, and these parents believe the assistant teachers will provide more help and support to effectively include students on the autism spectrum. If these teacher assistants have a special education background, they could be even more supportive since they know the needs for students on the autism spectrum. *"There are no assistant teachers in my son's classroom; assistant teachers help and facilitate inclusion"* (Kkaled's mother).

From a different point of view, some parents see assistant teachers as necessary in an inclusive classroom to help control students' behavior and help main teachers to distribute the efforts. *"My child's behavior sometimes makes regular teachers annoyed and accordingly I asked for an assistant teacher to help control my daughter and support the regular teachers, but that was difficult to make happen"* (Lama's mother).

**Missing the Individualized Educational Plan (IEP).** The interview revealed that four parents reported that the IEP is missing in their children's educational program, and it is up to the parents to draw up a plan suitable for their needs. Manahel's mother said, *"my daughter missed her right to receive her own IEP; I worked by myself on my daughter's IEP".* As well, parents stated that to support their children on the autism spectrum in studying a regular curriculum there is a need

to determine students' needs, weaknesses, and strengths in order to provide them with appropriate support. As well, they added that an IEP can define their children's learning ability in learning, so teachers will be able to accommodate and modify the regular curriculum accordingly. Adel's mother confirmed that "*a weak point in my son's inclusive education program is that he did not receive an IEP"*.

**Missing Behavior Modification Program (BMP).** One of the biggest results that is found from the parents' interviews is the need for the BMP's. The result found that seven parents agreed that their children strongly need a program that accommodates their behaviors. Parents also illustrated the need for BMPs to support common behaviors associated with autism. Some parents said that since their children are included in mainstream classrooms, the BMP and interventions have become necessary. *"I asked for a behavior modification program to modify my daughter's behavior and then to facilitate her inclusion. Regular teachers said they are getting annoyed by my daughter's behaviors (laughing), thus they asked to change my daughters' educational program from inclusive to special education*. (Lamas' mother).

Lama's mother in additionally added

*"The school teachers refused my daughter to be included in the mainstream classroom. As a result, I registered my daughter in a private school as a solution, but I found that my daughter should come back to the public school as it is her academic right".*

Another mother reported the following,

*"Nouf needs a behavior modification program to modify her behaviors, and because she did not receive it, her social skills are affected. Thus, teachers and peers sometimes get annoyed by her behavior, which forces them to not include Nouf in social interactions and activities"*

**Absence of Welcoming Classrooms.** (Welcome classrooms in this study refer to a classroom that serves as a bridge for students following an IE. These students begin in special education (separate special classes) and throughout the year work on integrating into inclusive education programs (mainstream classrooms). Four parents asked for a special plan or classroom to help their children be included in mainstream classrooms gradually. Parents explained the need to have specific steps to make the inclusion easier and more achievable because of the rejection that their children faced from some teachers and directors due to the child's behavior. Also, parents illustrated the need for a welcome class because sometimes their children on the autism struggle with changing in routine, environment, or habit. Manahel' mother shared that *"I asked to create a class in each school to facilitate the inclusion gradually".* Also, Nouf's mother shared similar perspective:

> *"Teachers did not accept my daughter to be in their classrooms because of her behavior. They said it is difficult for us to include her, so I asked to include her with a special plan to be included gradually starting from a special class to a more general inclusive one".*

### Strengths of An Inclusive Education Program

The interviews with parents also yielded some positive responses about their children's IE experiences. By analyzing the interview, two sub-themes emerged: a) equal academic opportunities and b) studying a regular curriculum.

**Equal Academic Opportunities.** Parents reflected on the benefits that are provided to their children in an inclusive education environment. Parents found inclusive education creates a supportive academic environment for their children to receive the same opportunities as their peers. Kaled's mother shared her perspective, "*my son receives the same benefits and rights as*

*his friends in an inclusive classroom"*. Sami's mother also shared her opinion stating that, *"I noticed the benefits of my son Sami studying in an inclusive classroom, he received equal learning opportunities like other students".*

Furthermore, some parents confirmed that inclusive education can minimize academic and social challenges for their children and maximize their opportunities. *"Being in a mainstream classroom is very helpful for my daughter to progress well since she is included with other peers in a regular school"* (Manahel's mother).

**Studying a Regular Curriculum.** Six parents agreed with the statement that their children benefit from being included in mainstream classrooms and studying the regular curriculum. Sami's mother shared her perspective, *"a strength of inclusive education is studying the regular curriculum, even though there is lack of modification"*. Manahel's mother also stated that *"my daughter is now able to study a regular curriculum".*

**Study Second Objective: Differences in Parents' Perspectives Based on their Region**

Researchers in this study wanted to investigate if there any differences in parents' perspectives, viewpoints about inclusive education given their regions of residence in Saudi Arabia. In different words, to examine if parents' perspectives about inclusive education services differ from city to city. In this study we interviewed 8 parents from different cities and the interviews revealed differences in inclusive education between cities. It is important to mention that the education system across the KSA is controlled by the MoE in the capital city of Riyadh and its school boards across the Kingdom. The analysis yielded the following themes:

*Differences in Inclusive Education Services*

Results from analyzing the interviews found differences in how schools offer services to students on the autism spectrum.

**Differences in Resource Room Availability**. A mother from Al-Madinah complained about the absence of a resource room. The mother found that special support from the resource room teacher for her daughter was necessary. She stated that *"my child cannot stay for a full day in the mainstream classroom with no special intervention in the resource room".* (Manahel's mother).

Some mothers in the interviews confirmed the importance of providing special education support to their children who may have behavior difficulties or who need further special instructions for one to two hours of the day. A similar experience was also noted in a different region. A mother from Al Qassim said that the lack of resource rooms in regular schools could influence the effectiveness of including students with disabilities.

On the other hand, mothers from the Eastern Province fully appreciated the school's efforts of education including services in resource room services for their children on the autism spectrum. "*My daughter is active and sitting on a chair for the whole day with no support from resource room teachers does not give her flexibility plan or space for her movements*" (Nouf's mother).

**Differences in Social Support Services**. Social support is one of the essential services that should be provided for students on the autism spectrum in inclusive education. Participants in this study believed that practicing social skills during daily activities in the classroom is necessary to help their children to improve their social skills. According to the study's findings, there are differences in social support between schools and cities. As an example, a mother from Al Qassim complained of a shortage in social activities in classrooms. *"Before starting the inclusive education program, the school board confirmed that my daughter will receive the academic and social support that she needs. However, in fact it was the opposite)* (Lara's mother).

By contrast, mothers from the Eastern Province fully appreciated the school efforts including resource room services for their children on the autism spectrum.

*"After being included in an inclusive education classroom, my son felt a sense of acceptance from the community. He found his teachers and friends supporting him in the classroom and even outside of the class while they have their lunch or when they have activities* (Khaled's mother).

Also, a mother from Al-Medina added that:

*"Being in the mainstream classroom is very helpful for my daughter to progress well since she is included with other peers in a regular school; Manahel loves her friends and the social life in school. She always refuses to be absent and feel like she is missing something)* (Manahel's mother).

### *Variations in Teachers' Attitude*

The results from the present study did not show any connection between teachers' attitudes and teachers' cities. There is nothing related to race, ethnicity, or cultures. The study is more about parents' perceptions, what they see from their children's teachers in inclusive education programs. The interviews revealed differences in parents' perspectives and how they reacted toward teachers' attitudes. A parent from the Eastern Province confirmed that teachers are welcoming and supportive to their children. Sami's mother shared her perspective:

*"Sami's teachers were supportive and kind. My son felt comfortable being a student in their class because his teachers' attitude and behavior are fully positive. They are also very skillful in teaching students on the autism spectrum and aware about my child's situation".*

Differently, a mother from Riyadh stated that:

*"Teachers always promote the effectiveness of an inclusive education, so I would say*

*teachers should accept and welcome my daughter who is on the autism spectrum. Thus,*

*after accepting my child, these teachers will teach her effectively. I believe that the level*

*of teachers' acceptance is part of their attitude towards my daughter and other students*

*on the autism"* (Sara's mother).

Other factors may also play a key role in affecting teachers' negative attitudes. Accepting

and welcoming students with different needs in classrooms depends on how these teachers

believe in those students with disabilities. As well, it is important about whether teachers hold

enough awareness about students' needs and abilities or not (Alnahdi & Schwab, 2020). Khaled's

mother said, "*low knowledge of autism and their ability to learn is a potential reason behind*

*teachers' negative attitudes towards my child's inclusion*".

**Study's Third Objective: Parents' Satisfaction Level with The Inclusive Education**

**Program for Their Children Who Are on The Autism Spectrum**

Another aim of this study was to explore parents' satisfaction with their children's

inclusive education program in public schools. The interviewer's questions were designed to

encourage parents to give more details and to feel engaged with the interviewer. Accordingly,

parents shared comprehensive information and reflected deeply on the questions. Question three

is broken down into three themes.

*Parents' Satisfaction Level with Inclusive Education Services in Classrooms*

Parents were asked about their satisfaction with inclusive education plans for their

children on the autism spectrum and their responses led two sub-themes.

**Satisfaction with Curriculum Modifications and Accommodation.** According to the analysis,

there were six parents who were not satisfied with their children studying a regular curriculum

with no modifications or accommodations. These parents said that their children on the autism spectrum are not able to study the same regular curriculum as their peers with no disabilities. Also, they said their children have different abilities and skills, and thus, the curriculum should be designed accordingly. *"I hope that the information in the regular curriculum is simpler and does not contain too many details. I would like teachers to make the curriculum easier by making accommodating and providing only the essential knowledge"* (Sami's mother).

Besides curriculum modification, the same parents also shared the need for accommodations when it comes to evaluation and assessment. *(Since my son benefits from studying the regular curriculum, there is a need for some modifications in the evaluation instructions, such as time and the amount of information"* (Khaled's mother).

**Satisfaction with Classrooms' Strategies and Instructions.** Six participants agreed that they are not satisfied with the current classroom strategies and instructions for their children following an IE program. The parents said that including our children in mainstream classrooms with other students who have different skills and needs requires teachers to be aware of various strategies to facilitate the learning process. "*I hope there is a plan to develop inclusive education by improving its services and plans, and providing more strategies or instructions from school teachers to include students on the autism spectrum and provide appropriate academic support* "(Nouf's mother). Sami's mother shared a similar response to Nouf's mother, *"it is important to use multiple effective strategies in inclusive classrooms to facilitate the learning process for our children on the autism spectrum"*.

The study's parents believe that inclusive education aims to support students' engagement and reduce their challenges. Parents in the interviews also stated that to achieve this goal, teachers are required to use multiple strategies to increase their abilities and maximize their

skills. Lama's mother stated that, "*teachers in inclusive education should be prepared and trained to provide more developed strategies".* Also, the parent participants believed that teachers are responsible for updating their knowledge and experience and remain up to date with new and effective classroom strategies. Parents in the interviews expressed that to achieve an effective inclusive environment in schools, teachers need to be taught new and current instructional strategies.

### *Satisfaction with Social Acceptance and Community Integration*

The interviews revealed differences in parents' satisfaction with the social skills and the amount of interaction that their children on the autism spectrum received in mainstream classrooms in regular public schools. According to the analysis, there were four parents who were satisfied with the development of their children's social skills. Parents stated that when their children in an inclusive education program, they get chances to learn social skills from their teacher and peers. Also, parents continued to explain that studying in mainstream classrooms allows their children on the autism spectrum to practice social rules and follow classroom instructions.

> "*I found that including my daughter in mainstream classrooms developed develop her social skills and helped improve her behaviors both in the classroom and out. As well, the inclusive education program helped my daughter to follow the school's rules more easily*" (Manahel's mother).

By contrast, the analysis found four parents were not satisfied with their children's social development. These parents said an inclusive class should expose their children to high quality inclusive practices, including chances to obtain social skills with their teachers and other peers. They expressed that their children are still not showing appropriate progress within their social

skills. Sami's mother said *"developing social skills is the biggest issue for my son in an inclusive classroom".* As well, the results found four mothers who were satisfied with their children's engagement in inclusive classrooms. These parents stated that an inclusive classroom is like a smaller community of the outside world, where children come from different backgrounds, needs, and abilities. It allows their children to participate in social activities and interact with other peers. *"One of the biggest benefits from an inclusive education program for my son is the interaction. His teachers and friends in the classroom helped him to facilitate the interaction and being part of the school community".* (Khaled's mother). Additionally, Manahel's mother reported that, *"Manahel has a positive experience of being included in an inclusive classroom. She found herself there, especially with some of her teachers who always support and encourage her in the class".*

However, the scenario was different with the other four mothers who were not satisfied with the level of social interaction and engagement of their children. Nouf's mother said "*Nouf missed her right to integrate in social activities and learn the school rules. The improvement in Nouf's social skills and getting involved with other peers was limited"*.

***Satisfaction with Teachers Communication and Student Feedback***

The interviews revealed that three parents were not satisfied and noted an absence of communication between the teachers and family. The analysis highlighted a significant lack of parents-teacher discussions about curriculum design, strategies, IEPs, and evaluation methods. *"The communication between teachers and family is absent. Sometimes we want to discuss our children's situation or progress, but the teachers refuse to meet us*" (Lara's mother). Additionally, the analysis found five parents were not satisfied with the amount of information that they received about inclusive education programs from both school boards and teachers.

Parents stated that they were not aware about their children's right to learn in inclusive classrooms. They continually said that despite teachers and school board being responsible to share information with them about inclusive education, they do not.  Lama's mother added further details about the absence of knowledge about inclusive education**:**

> *"The policymakers in the school board that I met has no experience with inclusive or special education programs; so, if the department of inclusive education in the school boards does not include professionals in the field of inclusive education, that is the biggest barrier for our children in mainstream classroom".*

**Study's Fourth Objective: Needs in Inclusive Education Program**

The aim of the fourth research question was to give parents a safe and comfortable space to share their desires or what they look for in their children's inclusive education program. More specifically, the fourth question aimed to give parents the space to provide recommendations or suggestions, based on their children's needs, to improve the inclusion program. The analysis of parents' perspectives yielded the following themes:

*The Need for Inclusive Education Guidelines and Policies*

Six parents in the interviews were wondering why there is no policy to make inclusive classrooms for students on the autism spectrum mandatory in each public school. Parents continually said that they are looking for a more easier registration process in public schools. Lama's mother stated that *"the inclusive education rule is absent and enrollment instructions for an inclusive classroom is not clear for us"* Furthermore, Khaled's mother believed that efforts to make inclusion easier should start from policymakers in the Ministry of Education.

> *"It is important that the Ministry of Education create a guide for schools' directors in order to include students on the autism spectrum, and for teachers to be experts with*

*previous knowledge and have some experience in knowing how to work with inclusive*

*classroom teachers" (*Khaled's mother).

To confirm this theme of guidelines absence, another parent from a different city in Saudi Arabia had said *"I believe the absence of an inclusive education guideline creates many challenges in order to facilitate the implementation of inclusion"* (Lara's mother).

### *Need For Teachers to Increase Awareness, Knowledge, and Skill in Working in An Inclusive Education School*

The interviews found six parents said teachers in inclusive classrooms may lack important knowledge about inclusive education practices with children who are on the autism spectrum. Furthermore, parents added that to create an effective inclusive environment, teachers should be more aware about autism as a disorder, different needs of these students, and strategies to teach them. Parents are aware about the importance of teachers' awareness of inclusion and the effective implementation in inclusive classrooms. Khaled's mother shared that "*teachers need more awareness about inclusive education programs and how to work with students who have disabilities".* Another reflection was added by Nouf's mother that *"I think teachers are lacking the knowledge of basic needs for students on the autism spectrum, it is important for teachers to be aware about autism and how to facilitate the process of inclusion".*

### *The Need to Increase Awareness* about inclusive Education for Peers

Parents were asked to share their perspective about peers in inclusive classrooms and to provide some recommendations for future implementations. There are five parents who complained about peers' rejections and peers' negative attitude toward their children in inclusive classrooms. Parents stated that negative peer's attitudes created social barriers in their children to be socially accepted from others in regular schools. Continually, these parents associated peers'

negative attitude and rejections to the peers' shortage in knowledge about autism as a disorder and IE.

> *"My son Sami faced difficulties in the classroom's activities by other peers. He was*
> *rarely included in these activities because of the social rejections from his peers. To*
> *reduce this difficulty, other students in the classroom need to understand my child's*
> *situation, academic needs, and behaviors and to be aware more about autism as a*
> *disorder"* (Sami's mother).

Also, Adel's mother shared that *"students in inclusive classrooms need to increase their knowledge and experience about autism and how students on the autism spectrum are different from others"*.

### Need to Increase Community Awareness

The analysis of the interviews found four parents complained about the low level of awareness about IE in their communities. They said that people surrounding them lack information about children on the autism, what does autism mean, and how students on the autism spectrum behave. Some parents complained about behaviors from other peers' parents when they asked their children to not get involved with their children who are on the autism spectrum. Accordingly, these parents want to raise greater awareness for families in their children's schools and communities. They also want other parents to know about IE as a right for many students. Khaled's mother said:

> *"It is not only teachers and academics who need to increase their awareness, but also*
> *other families should learn more about including their children in classrooms with students on*
> *the autism. One of my experiences is when other parents asked their son to not help and get*
> *involved with my son Khaled"*.

Another opinion based on previous experience from Lama's mother is that:

*"The comprehensive view, belief, and total image about our children who are on the autism spectrum were built upon a sense of compassion with underestimation. They may have the wrong stereotype that children on the autism spectrum can do nothing and are not able to benefit their community. Which is totally not true, our children can understand other peoples' feelings and expressions, are able to learn, and can be successful".*

**Experience of Online Learning During The COVID-19 Pandemic**

Education globally has been influenced by COVID-19 and as a result, parents were asked to reflect on two questions about the pandemic. One: to explore parents' experience about whether they felt like their children progressed during online learning. Two: to explore the relevant advantages and disadvantages of being educated at home.

***Experience with Their Children's Academic Progress During the COVID-19***

The interviews with parents found four parents had positive experiences with online learning. They stated that studying at home is less stressful for their children and simpler. Khaled's mother explained, *"Learning at home during COVID-19 was good for academic performance. I found learning at home is more flexible for my son, especially in terms of the amount of teaching and the process of evaluation".* Furthermore, two parents found learning at home using technology was very helpful and motivated their children to progress. Sami's mother shared that *"Sami loves computers, so studying at home and learning through computers was satisfying for Sami".*

On the other hand, four parents experienced the negative effects of online learning. The parents' experiences were built upon the difficulty for their children engaging their classrooms' activities. Studying in front of a computer screen for half a day with a low level of activities

influenced their children and they noticed they became more impatient. *"It was very tough for Adel to learn at home. Being in a chair for the whole school day and in front of the computer is very difficult for Adel. Sometimes he refuses to continue his class"* (Adel's mother).

### Advantages of Online Learning

Parents were asked to share the advantages of online learning during COVID-19 and the analysis found five mothers agreed that online learning allowed them to follow up more with their children's teachers. They found teachers were more motivated to provide feedback and share updates about their children's evaluations. Manahel's mother shared that *"learning at home helped me to follow up with teachers about my daughter's performance and get updated about her progress in classrooms"*.

### Disadvantages of Online Learning

Parents were asked to share the disadvantages of online learning during COVID-19 and the analysis of the interviews led to three sub-themes:

**Social Isolation.** All participating parents agreed that studying at home via online learning led to social isolation, which negatively affected their children. Parents stated that children on the autism spectrum need support with their social life and with the COVID-19 regulations, children on the autism spectrum did not progress well. Parents also said that their children vary in their social skills, and they may struggle to engage with online learning. Sami's mother explained that:

> *"As a result of studying at home, my son suffers from social distancing and isolation. Accordingly, I moved to another city to live with my sister's family to get some social support and help my son to practice his social skills"*.

Similar perspective and thought was found by Khaled's mother, *"I do not like learning at home. Learning at home isolated my child and prevented him from social interactions. I faced difficulty in engaging my child in social activities these days"*.

**Changing A Child's Routine.** There are six parents who found online learning influenced their children's routine. Parents believe that adjusting their children's routines may be stressful for them. Lara's mother explained that *"going from learning at school to learning at home, with different learning methods, impacted her routine"*.

**Social Activities.** Six parents in the interviews agreed on the limited number of social activities and interactions amongst children during online learning. These parents found online learning decreased the number of classes between students, which in turn affected their children's social skills. They stated that their children did not get the chance to learn from their teachers and peers. The results found Manahel's mother shared a prospective that *"online learning influenced social activities, so my daughter kept asking to meet her friends during the days"*.

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**Summary of Findings**

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The purpose of this qualitative interview study was to investigate parents' perspectives and levels of satisfaction of inclusive education programs offered to their children on the autism spectrum disorder in public schools in the KSA. Eight parents from different regions across the KSA were involved in this study. This section in this study has summarized the main findings that were presented from the analysis of the data from the interviews. Comprehensive results and information that was provided previously in this section of this study (result) answered the research questions, and these will be discussed in more detail in the following discussion. A total of 14 themes and 15 sub-themes emerged that addressed the four research questions and the COVID-19 inquiry. The first research question was about parents' perspectives towards inclusive

education. The main themes from the finding were discussed: 1) challenges presented with IE: a) limitation of IE classrooms, b) school director's rejection, c) and schools' teachers' rejection; 2) weaknesses related to IE program: a) absence of teachers' assistant, b) Missing the IEPs, c) need for BMP's, and d) absence of welcoming classrooms; 3) Strength of IE: a) equal academic opportunities and b) studying the regular curriculum. The second research question was about differences in parents' perspective based on their region. The main theme from the finding was discussed: 1) differences in IE services: a) differences in resource rooms availability and b) differences in social services; 2) variations in teachers' attitude. The third question was about parents' satisfaction level. The main themes from the findings were discussed: 1) satisfaction level with IE program: a) satisfaction with curriculum modification and accommodation and b) satisfaction with classrooms' strategies and instructions; 2) satisfaction level with social skills and interactions and 3) parents' satisfaction level with communication and sharing knowledge with teachers. The fourth question was about their children's needs in inclusive education. The main themes from the finding were: 1) need for inclusive education guidelines and policies; 2) need a teacher with awareness, knowledge, and skills in working in inclusive education, and 3) need to increase peer awareness; and 4) need to increase community awareness. Inquiry about the impact of online learning with the COVIDE-19 included the following themes: 1) experience of learning during COVID-19; and 2) advantages and disadvantages of online learning.

Parents who contributed to this study were very supportive to provide details about their children's IE. These parents came from different cities across the Kingdom of Saudi Arabia and their perspectives and experiences may be regarded as quite representative of the country. The parents provided detailed information and identified several disadvantages and advantages of inclusive education.

**Discussion**

The present study was designed to investigate parents' perspectives and their level of

satisfaction about inclusive education programs for their children on the autism spectrum. The

results from this study indicated that parents of children on the autism spectrum were not

satisfied with the inclusive education programs provided for their children in public schools in

Saudi Arabia. Furthermore, the results highlighted significant inclusion challenges for their

children. As well, the results found most parents had negative experiences involving inclusive

education programs, plans, services, and academic outcomes. Though exploratory, this data adds

to the limited research in the field about this topic and points to areas which can be further

explored. Significant results will be discussed below.

**Parents' Perspectives Towards Inclusive Education**

***Challenges Presented with An Inclusive Education Program***

Even though parents were familiar with the IE services available to their children, parents

experienced difficulties. Parents' perspectives about inclusive education services were reflected

through deep discussions and a questionnaire. The findings show that there are common

perspectives shared amongst these parents that highlight the challenges their children face. The

discussions show that the parents fully understand that IE is their child's educational right and IE

is facilitated by the Saudi MoE for students on the autism spectrum. However, the parents feel

their children are suffering due to a shortage of available IE classrooms, school directors'

rejections and mainstream classroom teachers not practicing inclusion. Based on parents'

discussions, the analysis of this research data shows that IE for students on the autism spectrum

is surrounded by challenges hindering its beneficial outcomes. As mentioned in the literature

review, the number of children on the autism spectrum in the KSA has increased gradually and

there is a need to multiply the number of IE classrooms to be effective at meeting students' needs (Sulimani & Gut, 2019).

Rejection from school directors and teachers was the main concern of parents. These results highlight that the impact of rejection may be greater for students on the autism spectrum as they often require greater support to develop their social skills. Like Saloviita's (2018) study, we found that there are still gaps in achieving effective inclusive education. Despite the Saudi MoE wanting to implement IE, school directors and teachers are struggling to follow the correct legislative guidelines.  Thus, to guarantee successful IE for students on the autism spectrum, the school boards must initiate and perform the correct protocols.

Moreover, analyzing the data reveals an overlap in registration in mainstream classrooms, the ability to receive IE services and the rejection of students on the autism spectrum in to be included in regular schools. This is consistent with previous results that teachers in mainstream classrooms rejected including students on the autism spectrum, especially those with challenging behaviors and atypical learning styles (Cook & Cameron, 2010). Another cause of teacher rejection could be that they faced difficulties in providing an appropriate type of teaching and specialized instruction (Cook & Cameron, 2010).

Reviewing literature in this field often highlights factors such as peer rejection. However, in this study, the results highlighted a new trend of rejection by schools' directors. The data indicated students on the autism spectrum need significant support from inclusive education services and the directors are not getting it for them. As well, teachers' level of preparedness to include students on the autism spectrum is significantly lacking based on the absence of IE training (Cook & Cameron, 2010). Another potential cause of rejection may be related to the lack of IE guidelines from academics in the Ministry of Education (UNESCO, 2021).

***Weaknesses Related to An Inclusive Education Program***

A consequence of limited IE in Saudi Arabia is a lack of academic services and support provided in mainstream classrooms (Ireri et al., 2020). Ireri et al. (2020) conclusion is in line with our results which also show weaknesses in IE services. The national strategy in Saudi Arabia emphasized the obligation of providing equal services for students with disabilities in mainstream classrooms. The goal is to facilitate the regular curriculum with the provision of special services, if needed (UNESCO, 2021). However, parents expressed that they feel like there is a weakness in providing services on IE in mainstream. There seems to be a disconnect between the MoE guidelines about IE implementation and the actual practices being implemented in the schools daily. Parents found it difficult to receive IE services -IE services that promote students' academic and social needs- and faced a lack of support from their child's teachers. More specifically, parents expressed weaknesses in IE services including IEPs, BMPs, curriculum modifications, accommodations and a lack of welcoming classes and teaching assistants.

Thus, these results indicate that the absence of support may influence students' academic and social development. Due to a shortage of teacher training in this area, parents felt like they lost the opportunity for their children to receive an IEP and achieve any goals that would be listed on it. This is consistent with another study's results from mothers in Kuwait (Mutabbakani & Callinan, 2020). Mutabbakani and Callinan (2020) also added that failing to provide students on the autism spectrum with the required services may push them to withdraw from school since they are lacking a sense of belonging (Mutabbakani & Callinan, 2020). These results from the Middle East are not in line with the current global movement towards inclusive education for all.

The analysis of the current results suggests that the participating teachers in mainstream classrooms are not presently practicing inclusive education instructions and strategies. Therefore, these teachers need to work on improving their teaching skills to better support and teach different students in one global environment- regardless of their differences.

### Strengths of An Inclusive Education Program

On the other hand, parents consistently highlighted two positive aspects of their children's IE program. Parents were satisfied with their child receiving the same academic opportunities and accessing the same curriculum as their peers. These results might be attributed to the fact that students on the autism spectrum are able to effectively learn in mainstream classrooms if their teachers recognize their needs with high quality IE practices (Al-Jabery et al., 2014). However, the relative emphasis of IE advantages placed on these areas are less highlighted in the parents' perspectives compared to their level of concerns. Like a previous UK study, these results also indicated how parents focused on their children's academic and social outcomes (Frederickson et al., 2004). Consistent with Frederickson et al. (2004) study, parents tend to look at IE only from one angle and may neglect other factors that can play a significant role in the effectiveness of IE. These neglected factors include organization of classroom environments for inclusion, multiplying the number and widening the type of resources, and instructional adaptations of curriculums and evaluations.

The desire to facilitate inclusion by the Ministry of Education in the KSA is rooted in its goal of meeting the individual needs of all students. However, this study suggests that the MoE's goal is not being met due to a weakness in teacher training. From the results, it is reasonable to understand that there is a gap between the planning of IE and the actual practices being implemented. Thus, IE is not being achieved and the services being provided are not at the

expected level of several international conventions, such as the Convention of the Rights of the Child by the UN. A previous study by Lynch and Irvine (2009) found similar results that show the current educational framework from the Western literature is also not implementing inclusion properly. Our results also align with Lynch and Irvine (2009) as both studies found that the level of concern amongst parents of children on the autism about IE is higher compared to parents of children with other disabilities. A possible explanation for parental dissatisfaction could be the trend of teachers using non-specialized educational approaches and not providing high quality IE instruction. The results suggest that there is a need to reconstruct the organizational structure of IE and to unite all students and eliminate feelings of rejection or exclusion. These results indicate the need for clear guidelines in many areas. These areas include understanding learning differences, trying different teaching styles and how to implement IE strategies in mainstream classrooms. Additionally, it would be important to consider changing teachers' perspectives towards students on the autism spectrum as an influential factor in their teaching practices.

**Differences in Parents' Perspectives Based on their Region**

*Differences in Inclusive Education Services*

Even though there is one Ministry of Education for the entire Kingdom of Saudi Arabia, there are still vast differences in parent perspectives across the regions. Parents from the Eastern Province reported high levels of acceptance, academic support in resource rooms, and social activities. Thus, the results suggest that parents in the Eastern Province feel more supported than other regions where parents reported lower levels of satisfaction.

This study's results also reflected parents feeling rejected by school directors. Parents in Al-Madinah and Al-Qassim had negative experiences involving their children in mainstream classrooms, compared to parents in the Eastern Province. More specifically, students on the

autism spectrum in Al-Madinah and Al-Qassim were refused by the schools' directors more than

once until they got accepted into the schools. Despite the recommendation by the MoE towards

inclusion, the results illustrate that some school directors still indeed have an influence on the

students they accept or reject in their schools. It would be advantageous if policymakers at the

MoE could take the results of this study under consideration and restructure the application

process for students on the autism spectrum. Similar results were found by Al Jabry et al. (2014)

study taking place in Jordan where students on the autism spectrum were excluded from IE for

extended periods of time.

*Variations in Teachers' Attitude*

Parent responses were generally mixed, but most parent responses concerning teachers'

attitudes to include students on the autism spectrum were negative. Compared to all the other

regions, the attitudes of mainstream teachers in the Eastern Province were more positive and they

were more open to accepting students on the autism spectrum in their classrooms. The results

from the Eastern Province may be attributed to the willingness and awareness of the Eastern

Province school board, as well their schools' directors, to include students on the autism

spectrum.

Knowledge about IE as an academic program, knowledge of the features of autism and

expectations from students on the autism spectrum have a direct impact on teachers' attitudes

(Haomiour & Obidate, 2013; Roberts & Simpson, 2016). Results of this study identified that

teachers' attitude was associated with their background, experience, and knowledge. This study

demonstrates that a strong relationship between knowledge and attitudes can allow teachers to

achieve the best practices in inclusive education. As with results by Lindsay et al. (2013),

parents' perspectives from this study demonstrate that training programs for teachers is a key

factor in influencing teachers' attitude about inclusion. Teachers without proper training

programs may not have had the opportunity to work in IE programs and to learn about resources

for children on the autism spectrum. Previous studies have emphasized the importance of teacher

training programs to improve their skills and competence in inclusion (see, e.g., Alnahdi, 2020;

Lindsay et al., 2013; Subban & Mahalo, 2011).

The results of this study also indicated the need to generalize IE policies and guidelines

in different school boards. It is important to acknowledge that IE is controlled differently by

different school boards in different regions. The most important thing we can draw from the

results is that students on the autism spectrum should receive similar educational opportunities

and benefits. Both policymakers and teachers in different regions should take more responsibility

in intensifying their efforts to implement effective IE. Our results demonstrate that there is an

association between providing strong school support and effective inclusion. A unique result of

this study is that it shows that inclusive education tends to have different structures in different

regions.

**Parent Satisfaction Levels with The Inclusive Education Program**

Parents ranked their satisfaction on the interviews in three different areas: IE instruction

and design, classroom social interactions, and communication with teachers. Regarding IE

instruction and design, most parents were not satisfied with the adapted curriculum and with the

instructions used in the classroom. They identified that teachers' ability to deliver an adapted

curriculum did not meet their child's level of understanding. Parents felt that adapting the

curriculum was the beginning of diversity in education and the first step in attempting to meet

the needs of all students. Previous literature review proved the importance of curricular

adaptations that contribute to new learning possibilities (see, e.g., Imaniah & Fitria, 2018). This

study's results indicated that responding to differences in students' needs is the way to achieve high quality inclusion and that curriculum adaptation is the primary challenge faced by mainstream teachers. Another suggestion from this study is that teachers must provide maximum efforts to address the diverse needs of the students in their class and to ensure that all students receive the appropriate knowledge (e.g., curriculum adaptation, strategies, instructions). This in turn will allow for positive changes in the learning process and help facilitate the best outcomes for all students. Another benefit is that students will also be included in the school community. These findings highlight the importance of understanding that a student's disability or disorder does not influence their ability to receive a proper education. School directors and teachers must believe that inclusion is a primary right.

Most students on the autism spectrum face challenges with developing social skills and therefore their parents are concerned about their social development in school (Falkmer et al., 2015). More specifically, parents are concerned with how their child's social skills are progressing and if they are being accepted in the school community. Parents in this study expressed their level of satisfaction in two areas: social interaction with peers and effective communication with their child's teachers. Four out of eight parents were satisfied with the IE their child was receiving and found that their child's school was accessible and provided appropriate opportunities for them to engage in social interactions. On the other hand, some parents perceived that their child's IE environment was not developed enough and as a result, did not serve their child's social needs. These results demonstrated that the level of satisfaction with social interaction in their child's IE environment is limited and more strategies to apply adapted activities are recommended. Neurotypical peers in mainstream classrooms may need greater awareness about the features of autism to better interact with their atypical peers. The parents in

this study expressed that, even though social opportunities in schools are lacking, their children

on the autism will be able to successfully interact with various groups of children. Therefore, the

results highlight the important role in which teachers can and should play with catalyzing the

interactions between all their students in an IE classroom.

Communication between families and teachers is identified as the key to effective

inclusion in mainstream classrooms (McGhie-Richmond et al., 2013). The overall findings in our

study suggest that there is a communication gap between most parents of children on the autism

spectrum and their teachers in mainstream classrooms. More specifically, regarding parents'

satisfaction with the level of feedback and communication from mainstream teachers, this study

found that parents were neither satisfied with the level of connection nor satisfied with the

feedback from their children's mainstream teachers. As well, parents ranked low satisfaction in

terms of the teachers' implementation and practices of IE. This study contrasts a previous study

by Tobias (2009) where they found parents reported a high level of satisfaction with the quality

and the amount of communication from their child's teachers. Tobias (2009) found that effective

communication with frequent feedback from teachers to parents is associated with positive

relationships, strong student outcomes and academic success. In this study, parents expressed

their desire for supportive and increased communication with school staff (e.g., teachers) to

better understand their children's progress, applicable interventions, learning strategies, and

relevant changes in their child's education plan. The analysis of this research data indicated the

importance of making parents a part of their children's IE program. An explanation of this issue

is that perhaps teachers may not fully understand just how beneficial parents' contributions are to

their children's academic progress. Similar results about teachers not communicating enough

with the parents of children with disabilities was also found in McGhie-Richmond et al. 's (2013) study.

While teachers have a primary role, they are not solely responsible. Parents also are responsible for asking about details regarding their children's academic and social performance. In line with previous results, there are multiple parties involved in facilitating a successful inclusive education environment (e.g., teachers, parents, and school directors) and they are not independent of one another (Falkmer et al., 2015). Hence, many of our findings can be addressed at both a school and ministerial level.

**Needs in Inclusive Education Program**

Besides teachers and an appropriate curriculum, a parents' role in their children's education is considered one of the vital factors in achieving positive outcomes in their children's academic success (Bahdanovich Hanssen & Erina, 2021; Falkmer et al., 2015; Ireri et al., 2020). Therefore, the parents' role should be taken seriously in helping to design and give feedback about certain elements of inclusive education (Bahdanovich Hanssen & Erina, 2021). Parents agreed that there is a need to put intensive care and work into developing policies supporting the inclusion of their children on the autism spectrum. As well, they expressed the importance of developing organized guidelines that facilitate the process of inclusion in mainstream classrooms. Furthermore, parents felt that teachers, their child's peers, and the community at large, all need a more thorough understanding of students on the autism spectrum for them to be more included in the school community.

Six out of eight parents believed in providing more guidelines about IE's services, in addition to more details about the IE registration process. Like this study, Ireri et al. (2020) found there is a lack of detailed guidelines and a lack of structured education to facilitate the

successful implementation of IE. The analysis revealed a high need from parents for more updates about IE policies and a request for schools to provide greater facilitation of IE and fewer barriers to accessing IE. The above analysis is also supported with similar findings from Alharbi and Madhesh (2018); Almousa (2010); and Alshenifi (2018). These findings argued that despite the concept of inclusive education being supported by the MoE in the KSA, inclusion is still far from being practically applied in some schools today. The findings from our study are unique because: 1) this study focused on parents of children on the autism spectrum which is considered the first of its kind in the KSA; 2) we included participants from different regions in the KSA and not only one city as a previous study did, and 3) this study examines the practical side and not just the planning of IE. These results can be sent as a message to the policymakers to redevelop IE policy about inclusive education practice, they can help continue the educational movement in the KSA and allow teachers to spearhead this new movement.

On the survey parents expressed that they would like teachers to increase their awareness about students on the autism spectrum and about inclusive education in general. Six out of eight parents suggested that the level of awareness by teachers about inclusive education for students with disabilities in general and for students on the autism spectrum is particularly low and not at the desired level to practice inclusion. These results demonstrated that for teachers to facilitate proper IE, they must begin to learn more about the features of students on the autism spectrum. Our results support previous work by Falkmer et al. (2015). Additionally, our results are in line with previous Saudi studies that show that teachers have a low level of knowledge in providing appropriate educational support to students on the autism spectrum, which in turn influences their attitude (see, e.g., Lindsay et al., 2013). This study demonstrates that teachers with a high

amount of knowledge and awareness in IE will contribute positively to students' academic performances and they will be able to provide parents with a positive impression.

Parents identified that peers in mainstream classrooms and community members are also influential in terms of a child's inclusion. Five out of eight parents in this study believed that peers in mainstream classrooms, school and community members are not familiar with inclusion and the features of children on the autism spectrum. These results suggest that acquiring knowledge about the nature of specific disabilities or disorders, as well as existing social difficulties, enables peers in schools to better understand how to interact appropriately with students on the autism spectrum. A previous study examined the awareness of IE in communities and found that peers in classrooms, school staff, and community members have a strong impact on spreading information, values, and perspectives about including students with disabilities in general and those on the autism spectrum (see, e.g., Mutabbakani & Callinan, 2020; McGhie-Richmond et al., 2013; Yu, 2021). Hence, there are strong effects of communities both inside and outside a school that can greatly affect IE (Bahdanovich Hanssen & Erina, 2021; Falkmar et al., 2015; Mutabbakani & Callinan, 2020). Given all these findings, the awareness of inclusive education for students on the autism spectrum is always evolving. Teachers' background and knowledge should also be evolving with the development of this diversity movement. We should also be focusing on community awareness about education rights and social acceptance of all.

**Experience of Online Learning During The COVID-19 Pandemic**

Due to the COVID-19 pandemic, education worldwide turned Online. The sudden change in learning style included changes in education plans and services. Inclusive education merged into home learning and accordingly many consequences arose, including changes in social interactions and learning activities. This study asked parents to provide their experiences and

perspectives on online learning for their children on the autism spectrum. Consistent with a German study (see, e.g., Nusser, 2021) the overall findings of the current study suggest that parents were satisfied with the increased level of teacher flexibility that online learning provided. The results also found that learning at home gave parents the opportunity to communicate and receive frequent feedback with teachers and to better track their children's progress. Therefore, parents felt like online learning allowed them to build a better connection with their children's teacher. In turn, this suggests that online learning gives teachers more time to communicate with parents and include them more in the education process. During online learning, parents were part of their children's education, if not the primary denominator of their children's education (Page et al., 2021). Similarly with previous studies, parents had a strong impact on the success of online learning for their children with disabilities (Page et al., 2021; Nusser, 2021).

On the other hand, parents reported some challenges due to online learning. According to parents' reports, social interaction, changing of students' routines, and social isolation were the major challenges. In line with a German study by Page et al. (2021), it was difficult for students to practice social activities with other peers or at least be involved in online group discussions. Online learning created social barriers that influenced students' engagement with other peers. As well, difficulties arose in terms of accessing adequate equipment and devices for students at home. From these findings, we can see how difficult it is to create effective social and academic environments via online learning for students on the autism spectrum. Since we believe in the rapid evolution of education, these results can highlight the importance of planning for the future and for developing contingency plans for online learning for students on the autism spectrum. Since peer engagement is a pillar of IE, this should be an important goal for teachers of students on the autism spectrum to try and meet during online learning.

**Limitations and Future Directions**

Given that this is a qualitative study, it needs to be contextually bound. The study was bound by its geographical location and by the criteria of the study sample. Therefore, the generalisability of the findings is limited to parents in the KSA. The study sample was taken from multiple regions and other regions were not included simply because the researchers were not able to find participants from those regions. In this case, a recommendation for future research is to include parents from the other regions in the KSA that were not covered in this study. The biggest limitation in this study was the significant challenge of recruiting participants from each region in the KSA because the practice of IE is still not implemented in some cities for students on the autism spectrum. Since IE is still limited, it was challenging to recruit parents to discuss this topic because many of their children on the autism spectrum were still studying in special education classrooms.

All the participants identified as mothers, thus posing another limitation. Thus, this study suggests including fathers and mothers and other caregivers in future research. Moreover, the participants were parents of children who were attending public schools and did not include any parents whose children attended private schools. Since IE is still in the beginning stage in the schools, the results may reflect that, and future research is recommended to re-explore parents' perspectives after IE has been practiced for a longer period.

**Conclusion**

Parents are stakeholders in their child's education, and today, parental perspectives are considered while discussing inclusive practices (Simpson et al., 2011). By taking parent comments into consideration, educators may be "better able to address parents' inclusion concerns and thereby develop strategies to improve inclusion in mainstream schools" (Falkmera

et al., 2015. p, 1). The current study serves as a comprehensive investigation from parents for policymakers and teachers to better understand parents' perspectives. As well, this study is a baseline for future researchers who are interested in exploring parents' perspectives on the inclusion of their children on the autism spectrum in mainstream classrooms.

In this study, we had the opportunity to understand the perspectives of parents in the KSA about IE. Their thoughts about IE may reflect the struggle of many parents who seek better educational programs for their children. It was evident from the study that parents were noticeably unsatisfied with various academic and social aspects of IE. Even though these parents were dissatisfied, they are motivated to help make positive changes in future IE practices. Parents help convey their children's desires and needs, and as researchers it is our job to help our participants express their beliefs. In this case, the messages from parents should be given to the policymakers and teachers in the KSA. Based on studying the benefits of IE for students on the autism spectrum in mainstream classrooms, it is necessary for all stakeholders (e.g., teachers, policymakers, school directors, student population and school community) to increase their awareness about the IE movement.

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**Chapter 5: A comprehensive Scholarly Discussion of All the Findings**

This dissertation mainly focused on *"inclusive education"* in the education system in the public schools in Saudi Arabia. The purposes of this dissertation were to conduct an intensive examination of the current implementation of IE and assess if teachers are competent in reaching a high level of IE practices in their mainstream classrooms for students on the autism spectrum. To gain a deeper understanding, parents were included as part of this dissertation to listen to and learn about IE from their perspectives. Since IE is still a relatively new concept in the KSA this study examined the competence of teachers facilitating inclusion in ten regions to gain insight into the underlying gaps in the literature review.

The current researchers intensively studied and thoroughly examined the underlying issues behind these gaps in IE. Therefore, this thesis aimed: a) to conduct an exploration of the current implementation of IE in Saudi Arabian public schools (study 1); b) to respond to the increased number of students on the autism spectrum by exploring teachers' self-reported competence in using IE practices for these students (study 2); c) and to explore parent perspectives and satisfaction with their children's performance in IE settings (study 3).The following sections will be discussed in the context of the above areas: main discussion, limitations, and future directions.

Majoko (2019) states that "there was a worldwide paradigm shift from exclusion to inclusion in education in 1994" (p. 916). At this time (1994), the Saudi MoE sought for appropriate educational programs for students with disabilities and disorders, including students on the autism spectrum (Alharbi & Madhesh, 2017). These efforts by the MoE consisted of policies, legislation, and access to schooling. However, in reality, "special education" consisted of resource rooms and the least restrictive environment for students who had disabilities (Aldabas, 2015).

The results from all the three studies point to a clear delay in providing IE in mainstream classrooms in the KSA. A closer look into the results suggest that the IE being provided was not effective because according to their parents, the needs of the students on the autism spectrum were not being met. The slow development of IE was presented as barriers in study one and challenges and weaknesses in study three. A lack of policies and clear guidelines for the implementation are still the major barriers to IE. One conclusion that comes from this research is that a paradigm shift towards IE guideline is needed. This shift must include clear instructions - for all stakeholders- and one protocol for the whole teachers to follow to implement IE.

Since there is not yet one protocol for all teachers, the implementation of IE is left to the individual teacher in their mainstream classroom. However, since teachers are not provided with guidelines, they are likely to misunderstand what IE is and how to practice it (Alnahdi & Schwab, 2021). These three studies found that teachers showed a poor understanding of the definition, the main goals and the rules about IE in mainstream classrooms. The results suggest the gap in teachers' practices is due to their low knowledge and missing policies. The gap presents clearly in teachers' competence, knowledge, and skills; which in turn insufficiently meets students' needs and results in parental dissatisfaction. Furthermore, parents also lack proper knowledge about the IE that should be provided to their children.

Furthermore, the three studies agree that teachers are confused by definitions of inclusion and integration, and when they practice integration in the classroom, they think it is IE. The overlapping of these terms (integration and inclusion) is presented clearly in the systematic review in study one, from teachers' knowledge scale in study two and from parents' perspectives in study three. This suggests that some teachers in the KSA are not able to differentiate between IE and special education in their teaching practices. As well, some teachers are not able to

distinguish between the meaning of IE in mainstream classrooms and integration in regular schools.

Teachers feel like they are not responsible for some of the challenges they are presented with, and some of these barriers are beyond their control (Saloviita, 2018). For example, one barrier out of teachers control is the guidelines that policymakers make. Another example of a challenge that teachers face is the awareness about IE and the subsequent opinions of families and communities. Despite that, the results of this study highlight the important role that teachers have in trying to minimize the challenges and barriers to effective implementation of IE. The results of the three studies demonstrated the challenges teachers face to implement IE effectively are: awareness about IE guidelines and instructions, their competence to practice IE effectively, and their levels of attitude in welcoming students on the autism spectrum.

Findings from these three studies were not only confined to the previous results. The three studies are all in agreement that exploring IE is not limited to teachers' implementation, it also considers their attitudes and beliefs. In study one, the teacher's attitudes towards IE were mostly negative. The type of students' disabilities, teacher's experience and knowledge, and their level of belief in the students' academic progress are all factors which shape a teacher's attitude. In study two, teachers' positive attitudes were associated with a high level of competence and knowledge. A teacher's positive attitude increases their competence in teaching students when they have more knowledge about inclusive education policies, strategies, and instructions. In study three, parents shared their thoughts and feelings about teachers' attitudes. Parents found their children were not welcome and accepted in mainstream classrooms, which in turn, forced parents to feel like their children's teachers had a negative attitude towards their children. These results suggest that teachers can have a more positive attitude towards these students when they

receive more knowledge about IE and are better prepared to practice it. Thus, in turn, this may increase their competence and confidence to include students with disabilities in general and students on the autism spectrum in their mainstream classrooms. An interpretation of the negative attitude by some mainstream teachers may be due to them not ever receiving special education training and due to the absence of IE training.

The topic of teachers' pre- and in-service training emerged in the results of studies one and two. The results suggested that teachers' competence and experience in IE are associated with their training or a lack of training, thus creating barriers for them to effectively practice IE. A main conclusion from study two found that most mainstream teachers who included students on the autism spectrum unfortunately lack this pre-service training from their teacher preparation programs at universities. Therefore, we can also conclude that teachers are in need for intensive pre- and in-service training in IE. These trainings must be provided by universities as a mandatory part of teachers' preparation program. It would benefit teachers to receive training workshops to learn about relevant barriers, definitions, and goals of IE. This training can also be extended to student teachers to enhance their knowledge about IE skills and strategies to become more confident in including students with disabilities.

Despite the three studies having shared some similar results, each study also has its own important results. In study one, our goal was to examine the current implication and effectiveness of IE. We examined how IE is different in the KSA from other Middle Eastern countries. Parallel with previous results from Hadidi and Alkateeb (2015), our study found that countries in the ME have not made appropriate progress in achieving IE. More specifically, the development of IE in Saudi Arabia was very gradual and minimal increases were detected. Saudi Arabia highly values its education system, however the current concentration by teachers is not on IE and little efforts

are spent on enhancing the IE program. While we were conducting this research, we found that many teachers were interested in developing their knowledge about IE. Consequently, it is fundamental for policymakers to provide effective IE training for teachers. This result should be taken the most seriously by policymakers and teachers because it raises the fundamental issue that IE must be addressed!

In study two, we found the competence level of teaching IE in teachers is relatively low. However, a group of teachers who did receive special education training had a slightly higher level of competence than their peers. It is hard to explain why teachers with special education training reported a higher level of competence in inclusion. But perhaps, their previous training is consistent with their knowledge and experience working with students with disabilities in general and on the autism spectrum in particular. Findings of this study supported previous results (Scheer et al., 2015; Specht & Metsala, 2018). Our findings demonstrated that knowledge, experience, and beliefs are some of the factors in predicting teachers' competence. These results emphasized the positive role of training on teachers' skills and their willingness to implement IE. It can be inferred that with well-developed teacher preparation programs, teachers can improve their competence level and learn to better apply effective IE, thus better meeting the needs of students on the autism spectrum (Malinen et al., 2013).

This study also demonstrated differences in teachers' competence, knowledge, attitude, beliefs, and experience in IE in different regions across the KSA. These differences are a result of the barriers in IE guidelines. Hence, it is evident that because of the absence of clear guidelines, it is difficult for teachers across the KSA to align their application of IE, and consequently, they are using instructions, strategies, and practices of special education.

What little we know from the literature about educational programs and services for students on the autism spectrum indicates that the performance of these students is not on the expected levels (Motabbakani & Callinan, 2020). Parents in the third study are aware of the benefits IE can have on their children's academic and social development. Most parents rated a low level of satisfaction with the IE services provided for their children in mainstream classrooms. Most parent concerns were related to the availability of IE programs in general schools, accessibility to mainstream classrooms and rejections from school staff. Such challenges conflict with the goals of the global movement toward IE. This study suggests that when students on the autism spectrum are rejected from IE services, they are unlikely to progress in both their academic performance and social growth. This study demonstrates the challenge which parents face when they are trying to find IE program because the number of schools offering IE is limited.

Over time, the education system has come a long way for students on the autism spectrum to be more 'included' in mainstream classrooms (Roberts & Simpson, 2016). Community members are becoming more open to the notion that equitable learning should be for all (Roberts & Simpson, 2016). However, there are still limitations and challenges that hinder the inclusion of children on the autism spectrum today.

**Limitations and Directions for Future Research**

This research is a baseline of future researchers in Saudi Arabia and from different countries. The shortage in the number of Saudi papers published is the main limitation faced in the research. As well, we should consider that IE is still a relatively new practice in the KSA. Therefore, some areas of this research rely on the Western literature to track the history and policies of IE and to provide recommendations to minimize barriers to IE. Research in Saudi

Arabia is growing and results from this research generate a lot of information that can open the gate for many researchers to conduct more research. Furthermore, the COVID-19 pandemic beginning in 2020 greatly affected education in all the schools. These impacts of the pandemic affected collecting data from teachers for this survey due to the many changes they were facing and detachment from their typical education practices. Therefore, collecting the data took longer than expected. The online surveys helped us achieve our goal of obtaining enough participants. An online survey was a helpful and useful tool to overcome the effects of COVID-19 and allowed us to collect data from different regions more easily. However, in-person surveys, workshops and training programs are all recommendations for future research. It would also be interesting for future researchers to conduct pre and post training questionnaires to better examine a teacher's knowledge, attitude, and belief.

Drawing on Western research, it would be interesting to try and remove some of the social barriers, if policymakers would organize workshops on inclusivity to promote more inclusive ethics for teachers. Also, it would be extremely beneficial if they could develop an inclusive ethics curriculum that targets the students themselves (Gajewski, 2017).

Contacting parents and teachers from some regions was difficult because IE is simply not applied in some schools in certain regions. This limitation makes it difficult to explore the effectiveness of IE in these regions and to explore the perspectives of parents living in these regions. Another limitation of the research is that there is a shortage of mainstream teachers who apply IE in their classrooms. Given these limitations, it may be helpful if researchers could further study IE in certain regions. Furthermore, it would be of practical value to conduct a detailed study of further additions to IE by policymakers.

**Conclusion**

This research focused on inclusive education in Saudi Arabia and aimed to examine three main areas. The first area is the effectiveness of IE implementations, and the second area is the competence level of mainstream teachers in including students on the autism spectrum. The third area examined was parents' perspectives, satisfaction and needs for their children on the autism spectrum in inclusive education. The combined body of the three studies can contribute to the literature on inclusive education implementation, services, and factors which contribute to enhancing teachers' competence and skills. As well, these studies provide meaningful suggestions to help teachers to find ways to minimize barriers to IE and consider the needs of parents whose children are on the autism spectrum. Furthermore, the results of this study include important messages for policymakers and educators in the MoE regarding the current state of IE. Lastly, the results of this research have important implications for mainstream teachers and school directors.

This study also strives to help community members increase their awareness about inclusive education and to learn more about students on the autism spectrum who will become part of the community one day. Inclusive education for students on the autism spectrum in Saudi schools is a relatively new approach and implementation of its practice is still growing (Aldabas, 2015; Alnahdi, 2020). Thus, these results demonstrate the urgent need by the policymakers and teachers to look deeply into teachers training programs and work in collaboration with universities to ensure that preparation programs are designed to include IE. Following the recent gradual increase in the number of children diagnosed with autism in the KSA, academic and teachers in the education system should establish more clear and organized guidelines in order to

facilitate the inclusion of students on the autism spectrum and make IE programs available in almost every school across the KSA.

Establishing effective inclusive learning environments will help a whole new generation of students who will go on to work in the community. To set the next generation up for success, this task requires multiple efforts from educators and other stakeholders in education and the community. Community members must understand that the development of IE happens gradually and in conjunction with other changes. Teachers and schools across the KSA can collaborate and work together to facilitate IE for all students regardless of their needs and disabilities. We have a collective responsibility to complete the journey to successful inclusion.

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**Appendix  A**

Ethics Approval Study- 2

**McGill**

**Research Ethics Board Office**                    Tel: (514) 398-6831
James Administration Bldg.
845 Sherbrooke Street West. Rm 325        Website: www.mcgill.ca/research/research/compliance/human/
Montreal, QC H3A 0G4

**Research Ethics Board 2**
**Certificate of Ethical Acceptability of Research Involving Humans**

**REB File #:** 21-01-023

**Project Title:** Inclusive Education: A Mixed-Methods, Systemic Approach to Understanding the Current
Implementation of Inclusion in Saudi Arabian Public Schools for Students with Autism
Spectrum Disorder (#1 Teachers)

**Principal Investigator:** Arwa Abdullah Alrawkan

**Department:** Educational and Counselling Psychology

**Status:**  Ph.D. Student

**Supervisor:** Professor Tara Flanagan

**Approval Period:** <u>April 5, 2021 – April 4, 2022</u>

The REB 2 reviewed and approved this project by delegated review in accordance with the requirements of the
McGill University Policy on the Ethical Conduct of Research Involving Human Participants and the Tri-Council
Policy Statement: Ethical Conduct for Research Involving Humans.

Georgia Kalavritinos
Ethics Review Administrator

_____

\* Approval is granted only for the research and purposes described.
\* Modifications to the approved research must be reviewed and approved by the REB before they can be implemented.
\* A Request for Renewal form must be submitted before the above expiry date. Research cannot be conducted without a current ethics
approval. Submit 2-3 weeks ahead of the expiry date.
\* When a project has been completed or terminated, a Study Closure form must be submitted.
\* Unanticipated issues that may increase the risk level to participants or that may have other ethical implications must be promptly reported to
the REB. Serious adverse events experienced by a participant in conjunction with the research must be reported to the REB without delay.
\* The REB must be promptly notified of any new information that may affect the welfare or consent of participants.
\* The REB must be notified of any suspension or cancellation imposed by a funding agency or regulatory body that is related to this study.
\* The REB must be notified of any findings that may have ethical implications or may affect the decision of the REB.

## Appendix B

Ethics Approval from the Faculty of Graduate Studies and Scientific

Research in Princess Nourah Bint Abdulrahman University



Kingdom of Saudi Arabia
Ministry of Education
Princess Nourah bint
Abdulrahman University
(048)
Graduate Studies and Scientific
Research Vice- Rectorate
Deanship of Scientific Research

المملكة العربية السعودية
وزارة التعليم
جامعة الأميرة
نورة بنت عبدالرحمن
(٠٤٨)
وكالة الجامعة للدراسات العليا والبحث العلمي
عمادة البحث العلمي

الموضوع بشأن: قسما: عمة (الباحثة) أروى الروكان.

سعادة مدير إدارة البحوث والتخطيط بوزارة التعليم        حفظه الله

السلام عليكم ورحمة الله وبركاته، وبعد:

نفيد سعادتكم بأن الباحثة/ أروى بنت عبدالله الروكان، طالبة دكتوراة مبتعثة في جامعة ميشيل بكندا ومحاضر في قسم التربية الخاصة بكلية التربية بجامعة الأميرة نورة بنت عبدالرحمن، وبصدد إعداد بحث بعنوان: (توجه وتصور المعلمين والمعلمات ومدى معرفتهم ببرنامج التعليم الشامل المقدم للطالب من ذوي اضطراب التوحد في مدارس التعليم العام بالمملكة العربية السعودية).

ونأمل من سعادتكم التكرم بتسهيل مهمة الباحثة أعلاه بنشر الاستبانة الإلكترونية على معلمي ومعلمات مدارس المملكة العربية السعودية، وذلك حسب الأنظمة المتبعة لديكم.

https://forms.gle/7fDiyUdsA6MsAgma7

ولسعادتكم بالغ الشكر والتقدير.

عميدة البحث العلمي
د. فدوى بنت محمد الرويس.

الرقم: 10420        التاريخ: 26 / 12 / 42هـ        المشفوعات: لفة

# Appendix C

## Saudi Ministry of Education Consent Form Study-2

Ministry of Education Consent Form

| | |
|---|---|
| Faculty of Education McGill | Faculté des sciences de L'éducation |
| University 3700 McTavish | Université McGill     (514) 398- 6968 |
| Street Montreal, QC, Canada | 3700, rue McTavish |
| H3A1Y2 | Montreal, QC, Canada H3A 1Y2 |

**Researcher:**

Arwa Alrawkan, PhD student, McGill University, Department of Educational and Counselling Psychology, (514) 569-6599,*arwa.alrawkan@mail.mcgill.ca*
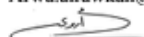
**This letter is being sent to you on behalf of Arwa Alrawkan and Dr. Tara Flanagan at McGill University.**

We are currently conducting a study exploring teachers beliefs and attitudes towards inclusive education programs for students with autism in public schools in the Kingdom of Saudi Arabia. We would like to survey approximately 170  teachers who are currently teaching in mainstream classrooms in various grades and have students with autism. The goal is to be able to identify any differences between teachers' knowledge and levels of experience across the country.

Please be advised that the information collected in this study will be held in the strictest confidence and will only be used for research purposes. All disseminated results to scholarly journals and conferences will remain confidential with no identifying information.

Best,

Arwa Alrawkan          PhD Candidate
McGill University          (514) 569-6599 - 00966555606657
Arwa.alrawkan@mail.mcgill.ca

Dr. Tara Flanagan          Assistant Professor
McGill University          Department of Educational and Counselling Psychology

**Appendix D**

Example of the Ethics Approval from the Ministry of Education Study-2

الرقم :

التاريخ :

المرفقات :

المملكة العربية السعودية

وزارة التعليم

(٢٨٠)

الإدارة العامة للتعليم بالمنطقة الشرقية

إدارة التخطيط والتطوير

**PD**

| القيم: المواطنة-الإتقان-العدل-العمل بروح الفريق- التنمية الذاتية-المسؤولية الاجتماعية | الرسالة: تقديم خدمات تربوية وتعليمية ذات جودة عالية وفق معايير عالية بمشاركة مجتمعية | الرؤية: الريادة لبناء جيل مبدع |
|---|---|---|

الموضوع: تسهيل مهمة الباحثة أروى الروكان

مديري/ ات مكاتب التعليم                                           حفظهم الله

السلام عليكم ورحمة الله وبركاته

بناءً على إحالة سعادة المدير العام برقم ١٢٦٤١ وتاريخ ١٤ رمضان ١٤٤٢هـ والمبنية على خطاب الملحقية الثقافية في كندا.

آمل منكم التكرم بتسهيل مهمة الباحثة/ أروى بنت عبد الله بن سعود الروكان طالبة الدكتوراه والتي تقوم بإجراء دراسة بعنوان " توجه وتصور المعلمين والمعلمات ومدى معرفتهم ببرنامج التعليم الشامل للطلاب ذوي اضطراب التوحد المنضمين في مدارس التعليم العام في المملكة العربية السعودية "، حيث تتطلب الدراسة استيفاء استبانة من قبل معلمي ومعلمات مدارس التعليم العام للمرحلة الابتدائية والمتوسطة والثانوية على الرابط أو QR-code التالي:

https://forms.gle/4h1BcVedtsUinWhP7

شاكرين لكم تسهيل مهمتها وفق اللوائح والأنظمة المنظمة لذلك.

والسلام عليكم ورحمة الله وبركاته

مديرة إدارة التخطيط والتطوير

غزيل بنت عبد المحسن العتيبي

م/ البير
١٤٤٢/٩/٢١هـ

**Appendix D(continued)**

Example of the Ethics Approval from the Ministry of Education Study-2



الرقم: ١٤٠١٩١

التاريخ: ١٤٤٣/١/٢٩هـ

المشفوعات:

المملكة العربية السعودية

وزارة التعليم

وكالة التخطيط والتطوير

مركز بحوث سياسات التعليم

الموضوع: بشان تسهيل مهمة الباحثة/ أروى بنت عبدالله الروكان

سعادة مدير عام التعليم بمنطقة الرياض وفقه الله

السلام عليكم ورحمة الله وبركاته

نفيد سعادتكم بأن طالبة الدكتوراه بجامعة (McGill) في كندا/ أروى بنت عبدالله الروكان، تقوم بإعداد بحث بعنوان "توجه وتصور المعلمين والمعلمات ومدى معرفتهم ببرنامج التعليم الشامل للطلاب ذوي اضطراب التوحد المنضمين في مدارس التعليم العام في المملكة العربية السعودية".

وترغب الباحثة في إقامة ورشة عمل (عن بُعد) ـ لمن له الرغبة في المشاركة ـ من المعلمين والمعلمات الذين يُدرِّسون في فصول التعليم العام للمراحل الثلاث ولديهم طلاب من ذوي الإعاقة أو من ذوي الاضطرابات السلوكية خصوصاً التوحد "مرفق محاور الورشة".

آمل من سعادتكم التكرم بالتوجيه بتسهيل مهمتها.

وللاستفسار يمكن التواصل مع الباحثة على بريدها التالي:

Arwa.alrawkan@mail.mcgill.ca

وتقبلوا تحياتي وتقديري

مدير عام مركز بحوث سياسات التعليم

أ. د. عبدالرحمن بن عبدالكريم مرزا

**Appendix E**

Example of consent form to school boards and to schools Study-2

نوع المعاملة: معاملة داخلية
رقم المعاملة: ٤٣٠٠٠٩٧٥٠٣
تاريخ المعاملة: ١٤٤٣-١-٢١
المرفقات: لا يوجد

بسم الله الرحمن الرحيم

وزارة التعليم
Ministry of Education

المملكة العربية السعودية
وزارة التعليم
إدارة التعليم بمحافظة عنيزة
قسم التخطيط والتطوير

الموضوع: تسهيل مهمة الباحثة أروى الروكان.

المكرم/ قائد مدرسة الأمير سلطان بن عبد العزيز الثانوية          وفقه الله

المكرمة/ قائدة مدرسة وادي الجناح الابتدائية          وفقها الله

السلام عليكم ورحمة الله وبركاته

إشارة إلى خطاب سعادة مدير عام مركز بحوث سياسات التعليم رقم ١٥٢٢٧ وتاريخ ١٤٤٢/١٠/٢٩هـ، بشأن تسهيل مهمة طالبة الدكتوراه بجامعة McGill في كندا/ أروى بنت عبد الله الروكان في تطبيق أداة دراستها "تصور أولياء الأمور ودرجة رضاهم عن البرنامج التعليمي الشامل المقدم لأبنائهم/ بناتهم من ذوي اضطراب التوحد في المدارس الحكومية في المملكة العربية السعودية"، نأمل التفضل باستيفاء الاستبانة على الرابط والباركود أدناه من قبل معلمي ومعلمات برنامج التعليم الشامل للطلاب ذوي اضطراب التوحد المنضمين في مدارس التعليم العام، مثمنين لكم حسن تعاونكم.

https://cutt.us/jg3Z6

وتقبلوا تحياتي.

رئيس قسم التخطيط والتطوير

د. خالد بن محمد المنصور

**Appendix E(continued)**

Example of consent form to school boards and to schools Study-2

**Appendix F**

Teachers consent form Study-2

Faculty of Education                    Faculté des sciences de l'éducation

Fax/Télécopie

McGill University                     Université McGill      (514) 398- 6968

3700 McTavish Street            3700, rue McTavish

Montreal, QC, Canada H3A1Y2     Montreal, QC, Canada H3A 1Y2

**Researcher:**

Arwa Alrawkan, PhD student, McGill University, Department of Educational and Counselling Psychology, (514) 569-6599, *arwa.alrawkan@mail.mcgill.ca*

Dr. Tara Flanagan, Department of Educational and Counselling Psychology, (514 )398-3441, *taradawn.flanagan@mcgill.ca*

**Title of Project:** *"Inclusive education in Saudi mainstream classrooms: Competence Level by mainstream Teachers in public Schools Across Saudi Arabia"*

Please read the following information carefully:

I am Arwa Alrawkan the principal investigator of this study with my supervisor Dr. Tara Flanagan conducting a study exploring teachers beliefs and attitudes towards inclusive education programs for students on the autism in public schools in the Kingdom of Saudi Arabia. The goal is to be able to identify any differences between teachers' competence, knowledge and levels of experience across the country. The overall objective of this project is to actively search, explore and listen to teachers' opinions on their beliefs about the effectiveness about inclusive education programs for students on the autism spectrum in Saudi Arabian public schools. You are invited to participate in this study as you a part in the Education process in the Kingdom of Saudi Arabia. We are searching for teachers (mainstream and special education) who teach students on the autism in inclusive classrooms. These teachers should work in public elementary or high schools across Saudi Arabia. Additionally, this study is only open to teachers who currently reside in Saudi Arabia, who speak Arabic (to complete the survey), and who hold at least a bachelor's degree.

The survey will take approximately 15 to 20 minutes to fill. The survey will be administered on Google Forms and your responses will be anonymous as we are not collecting any identifiable information from you. Please be advised that the information collected in this study will be held in the strictest confidence and will only be used for research purposes. The consent forms will be stored in password protected files on the hard drive of a password-protected computer to which only the identified researchers will have access to. The type of information that we will be collecting is your opinions and comments regarding how you feel about the effectiveness of inclusive education in your school's program. Please note that results from the study will be created and disseminated to policymakers and will be written and submitted to scholarly conferences and appropriate journals.

Participation in this study is voluntary and due to the anonymous nature of the study, withdrawal is not possible once survey responses are submitted. random winner from those who fill out the survey. Three winners will receive electronic gif card of $40 for. Furthermore, all participants will receive a certificate at the end of the workshops. To get the chance, please fill your email in the Microsoft Form link. Email will only use to send the git cards for winners / the certificate for each participant. By using Microsoft forms, teachers' email will not be visible to others who are also signing up for the workshop. Only me (Arwa Alrawkan) can received and see teachers' emails. Please notice that all teachers' email will be destroyed once the gift cards have been sent out.

Gift Card Procedure

When you complete the research survey, you will find A link that will be added at the end of my research questionnaire to SEPARATE questionnaire. It is including a skill-testing question and box to add your email in order to receive the gift card when you win.

The skill-testing question is multiple choice and if you get the correct answer, I will add your name in the list for the draw (random name picker). The draw process will start after getting the required number of participants which approximately in the first week of July 2021. The Gift cards will be from Patchi Chocolate or Danub store in Saudi Arabia. Then the winner teachers will receive an email from me including barcode of the gift card. I will destroy teachers email after sending the gift card to the winners.

No anticipated risks are associated by participating. All disseminated results to scholarly journals and conferences will remain confidential with no identifying information.

**If** you agree to participate in the study, please click **"ok"** and by clicking "OK" you will give your consent to take part in this study.  Notice "you will not be able to start the survey in the next page until you click OK to give consent". Then, you will go to the next page to start an online survey. please before starting the survey, print or save your consent to participate in the study.

This study has been reviewed by the McGill Research Ethics Board for compliance with ethical standards. If you have any ethic al concerns or questions regarding your rights or welfare as a research participant in this study, you can speak with someone not on the research team by contacting the McGill Ethics Manager at (514) 398-6831 or via *lynda.mcneil@mcgill.ca.*
For any questions, concerns and clarifications, please contact Arwa Alrawkan at (514) 569-6599 or via *arwa.alrawkan@mail.mcgill.ca*.
Agreeing to participate in this study does not waive any of rights or release the researchers from their responsibilities. To ensure the study is being conducted properly, authorized individuals such as a member of the Research Ethics Board, may have access to your information.

**By clicking "ok" on this consent form, you are agreeing to take the survey and participate in the study.**

**Appendix G**

Rrquest Form to the MoE- Invitation to the Remote Workshop

(The Future of Inclusive Education in Saudi Arabia: From Policy to Practice)

Are you a teacher of students on the autism spectrum between 7 to 17 years of age? Do your students study in an inclusive education classroom in a regular public school in Saudi Arabia? If yes, I invite you to join us via the online workshop that will focus on inclusive education program in Saudi Arabia.

Presenter: Arwa Alrawkan, Ph.D candidate, in Human Development / Education and Counselling Psychology, McGill University; Montreal, Canada

Globally, inclusive education program has been integrated into education policy, including Saudi Arabia. In 1991, international organizations have declared "Education for All" act, and the principles and practice of inclusive education. In addition, the Kingdom of Saudi Arabia signed the 24 article that supported inclusive education for students with disabilities and need. As a result, teachers and academic in Saudis education system are responsible to work within the inclusion in their teaching practices. However, inclusive education still at its first stages in Saudi's education practices. As well, the concept of inclusive education remains generates intense debate amongst teachers, parents, researchers and policymakers.

First, through this workshop Arwa Alrawkan will share the policy and principles of inclusive education and the differences between special education and inclusive education programs. Additionally, Arwa will discuss how continuing to practice the attitude of special education in schools may obstructs the progress towards inclusive education.

Second, Arwa Alrawkan will include her Ph.D research "Teachers' knowledge, attitudes and beliefs towards Inclusive Education for students on the autism spectrum in public schools in Saudi Arabia" to describe the approach of inclusive education in Saudi public schools and the attitude of Saudi's teachers toward the program.

Third, kindly at the end of the workshop Arwa Alrawkan will ask you to participate in her study as a participant by posting the survey link in the Microsoft Teams box chat. Arwa will ask you to fill your email in McGill MS form to send the workshop invitation, workshop certificate and to send the gift cards. By using MS forms, teachers' email will not be visible to others who are also signing up for the workshop. Only me (Arwa Alrawkan) can received and see teachers' emails. Please notice that, all teachers' email will be destroyed once the survey invitation, workshop certificate, and gift cards have been sent out. Five participants will win gift cards of $40 for each.

The result of the survey will help us as academics to improve inclusive education practice in Saudi's schools and provide effective support for students. Please notice the survey will take approximately 15 to 20 minutes and your answers will be completely anonymous and protected.

Please click the link to go to the survey website or copy and paste the link in your web browser.

I appreciate your time.

All teachers are welcomed to join the workshop. Workshop participants will gain the opportunity to have a better understanding of the foundations of inclusion, the Saudi education goals within the 2030 vision, and recommendation for effective inclusive education.

Arwa Alrawkan has long 11 years of experience working in the field of special education in inclusive education in both Saudi Arabia and Canada in private and public sectors. She gains intensive knowledge and deep experience working with students with different disabilities in inclusive education program. Her master was in Inclusive Education from McGill University. In addition, she worked in inclusive education classrooms with Canadian teachers under training program for 150 hours. As well, currently Arwa's research focuses on inclusive education and the education system for students with diverse needs in the Saudi education system.

Registration

 Fee: In order to make this important workshop more adorable and accessible to teachers Arwa Alrawkan would like to provide this workshop as free.
The workshop will be online in (date). (time) and it will be conducted via the Microsoft team.

For registration, please click on the link below:
Thank you,

Arwa Alrawkan
Ph.D Candidate in Human Development Program
McGill University, & Department of Educational and Counselling Psychology
Tel: (514) 569-6599
Email: arwa.alrawkan@mail.mcgill.ca

**Appendix H**

Invitation to the Remote Workshop Via Twiter

ندعوكم لحضور ورشة العمل
بعنوان:
التعليم الشامل بين التخطيط والتطبيق

فرصة مهنية لكل المهتمين بتطوير مهاراتهم المهنية و لبناء قاعدة معرفية

ورشة العمل ستكون مجانية و سُتقدم شهادة مشاركة وشكر للمشاركين والمشاركات والتي تثري السيرة المهنية للمعلمين والمعلمات لإثراء معرفتهم حول "التعليم الشامل"

معلمين ومعلمات الدمج للطلاب والطالبات من ذوي اضطراب التوحد

الثلاثاء ١٤ سبتمبر ٢٠٢١ الموافق ٧ صفر

الساعة ٧- ٩ مساءً

برنامج مايكروسوفت تيم

لمزيد من المعلومات وللتسجيل

https://forms.gle/WMWRB2xHMhr32yXb8

McGill UNIVERSITY

**Appendix I**

Saudi Ministry of Education Approval to Conduct Remote Workshops

الرقـــم : ١٤٠١٩١
التاريخ : ١٤٤٢/١/٢٩هـ
المشفوعات :

وزارة التعليم

المملكة العربية السعودية
وزارة التعــليم
وكـالة التخطيط والتطوير
مركز بحوث سياسات التعليم

الموضوع: بشأن تسهيل مهمة الباحثة/ أروى بنت عبدالله الروكان

سعادة مدير عام التعليم بمنطقة الرياض                    وفقه الله

السلام عليكم ورحمة الله وبركاته

نفيد سعادتكم بأن طالبة الدكتوراه بجامعة (McGill) في كندا/ أروى بنت عبدالله الروكان، تقوم بإعداد بحث بعنوان "توجه وتصور المعلمين والمعلمات ومدى معرفتهم ببرنامج التعليم الشامل للطلاب ذوي اضطراب التوحد المنضمين في مدارس التعليم العام في المملكة العربية السعودية".

وترغب الباحثة في إقامة ورشة عمل (عن بُعد) ـ لمن له الرغبة في المشاركة ـ من المعلمين والمعلمات الذين يُدرِّسون في فصول التعليم العام للمراحل الثلاث ولديهم طلاب من ذوي الإعاقة أو من ذوي الاضطرابات السلوكية خصوصاً التوحد "مرفق محاور الورشة".

آمل من سعادتكم التكرم بالتوجيه بتسهيل مهمتها.

وللاستفسار يمكن التواصل مع الباحثة على بريدها التالي:

Arwa.alrawkan@mail.mcgill.ca

وتقبلوا تحياتي وتقديري

مدير عام مركز بحوث سياسات التعليم

أ. د. عبدالرحمن بن عبدالكريم مرزا

**Appendix J**

participation certificate for Teachers

**Appendix K**

Teachers Questionnaire (Survey)

## Part A: Demographic Questions

These questions are about you, your education and the time you have spent in teaching. In

responding to the questions, please mark the appropriate box.

1. **What is your gender?**
   ☐ Female        ☐ Male
2. **How old are you?**
   ☐Under 25   ☐25-29   ☐30–39   ☐40-49   ☐50-59   ☐60+
3. **What is your highest educational level ? And What is your background in Education**
   A. ☐Bachelor
      ☐Bachelor with Diploma
      ☐Master
      ☐Doctoral
   B. ☐ Special Education
      ☐ Other program in education .. please indicated, …………
4. **What grade do you teach currently?**
   ☐Elementary
   ☐Secondary (Meddle schools)
   ☐High school
5. **Which academic subject do you teach?**
   ☐Arabic Language
   ☐Math
   ☐Science
   ☐Religion
   ☐History
   ☐Other, (please mention)
             ………………..
6. **Please select the current region that you work in as a teacher**
   ☐Riyadh
   ☐Qassim
   ☐Makkah
   ☐Madinah
   ☐Dammam
   ☐Aseer
   ☐Al-Baha
   ☐Al-Jawf
   ☐Hail
   ☐Jizan

☐Najran
☐Northern Borders
☐Tabuk


**Questions related to your experience as a teacher:**

7. **How many years of experience do you have as a teacher in inclusive education classroom?**
   ☐1-2 years   ☐3-5 years   ☐6-10 years   ☐11-15 years   ☐16-20 years   ☐more than 20 years

8. **How many years of experience do you have as a teacher for students on the autism?**
   ☐1-2 years   ☐3-5 years   ☐6-10 years   ☐11-15 years   ☐16-20 years   ☐more than 20 years

9. **How long have you been working as a teacher at this school?**
   ☐1-2 years   ☐3-5 years   ☐6-10 years   ☐11-15 years   ☐16-20 years   ☐more than 20 years

10. **How long have you been working as a teacher at this?**
    ☐1-2 years   ☐3-5 years   ☐6-10 years   ☐11-15 years   ☐16-20 years   ☐more than 20 years

11. **How many course did you received in teaching students on the autism in mainstream classroom?**
    ☐1-2 courses   ☐3-4 courses   ☐5-6 courses   ☐More than 7 courses

12. **How many students on the autism spectrum do you have in your class currently?**
    ☐1-2 students   ☐3-4 students   ☐5-6 students   ☐More than 7 students

13. **How many students on the autism did teach in total during your position as a teacher**?
    ☐1-2 students   ☐3-4 students   ☐5-6 students   ☐More than 7 students

14. **Please indicate all levels of pre-service training you have obtained specifically in relation to inclusive education**
    ☐Undergraduate coursework
    ☐Diploma coursework
    ☐Graduate coursework

15. **Please indicate all levels of in-service training you have obtained specifically in relation to inclusive education**
    ☐Supervised practicum / internship experience
    ☐Inclusive education workshops

16. **Please indicate all relevant options that students on the autism can obtain in your school in addition to the inclusive education**
    ☐Individualized Educational Plan (IEP)
    ☐Resource room , how many hours per week? ……..

17. **Is there a specialized inclusive education team that serve from your school board?**
    ☐Yes
    ☐No

18. **Is there a specialized autism team that serve from your school board?**
    ☐Yes
    ☐N0

### Part B: Proposed Measure

Please read the following statements and using the scale below, mark the number that best

describes your level of agreement with each statement. Each item is coded on a 6-point scale.

(1= strongly agree, 2= somewhat agree, 3= neutral, 4= somewhat disagree, 5= strongly disagree

and 6= prefer to not answer)

| | *Teacher's knowledge about inclusive education for students on the autism* | *1* | *2* | *3* | *4* | *5* | *6* |
|---|---|---|---|---|---|---|---|
| 1. | I have adequate knowledge about inclusive education | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 2. | I have adequate knowledge on how to work with other professionals in inclusive education classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 3. | I have adequate knowledge related to law and policy of educating students on the autism in Saudi Arabia | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 4. | I have adequate knowledge on Saudi's inclusive policy framework | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 5. | I have adequate knowledge on how to modify curriculum | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 6. | I understand what is mean by inclusion in classrooms for students on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 7. | I have adequate knowledge on how to develop individualized education plan | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 8. | I have adequate knowledge on how to create active learning environment | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 9. | I have adequate knowledge on how to develop programs that support the well-being of all my students in inclusive education classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 10. | I am aware of appropriate strategies and activities that I can practice in my inclusive classroom with students who have autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 11. | I have adequate knowledge on how to establish positive relationship with students who have autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 12. | I am confident to teach students on the autism in mainstream classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 13. | I had pre-service training in inclusive practice | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 14. | I am attending in-service training in inclusive during the school's year | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 15. | The school provides support for teaching students on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 16. | The school provides support to assist me in order to help students on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | *Teacher's attitudes about inclusive education for students on the autism spectrum* | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 17. | Students on the autism learn best in their own special education classes where they have specially trained teachers | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 35 | Students on the autism should be educated in mainstream classrooms, with the provision of adequate support | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 36 | It is the right of a student on the autism disorder to be placed in a special education classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 37 | I feel able to meet the education needs of my students on the autism that are in my class | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 38 | Teachers' workload should not be increased by compelling them to accept students on the autism needs in their classrooms | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 39 | The best result is achieved if each student on the autism is placed in a special education classroom that best suits him/her | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 40 | Students on the autism should be educated in mainstream classrooms as much as possible | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 41 | Integrated students on the autism create extra work for teachers in mainstream classrooms | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 42 | A student on the autism should be transferred to a special education classroom in order not to violate his/her rights | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 43 | Learning of students on the autism can be effectively supported in mainstream classrooms as well | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| _Teacher's beliefs about inclusive education for students on the autism spectrum_ | | **1** | **2** | **3** | **4** | **5** | **6** |
|---|---|---|---|---|---|---|---|
| 44 | Students on the autism have the right to be educated in the same classroom as typically developing students | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 45 | Inclusion is a desirable practice for educating most typically developing students | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 46 | It is difficult to maintain order in a classroom that contains a mix of students on the autism and students with average abilities. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 47 | Students on the autism should be given every opportunity to function in an integrated classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 48 | Inclusion can be beneficial for parents of children on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 49 | Parents of children with disabilities prefer to have their child placed in an inclusive classroom setting | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 50 | Most special education teachers have an appropriate knowledge base to educate typically developing students effectively | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 51 | The individual needs of students on the autism CAN be addressed adequately by a regular education teacher | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 52 | We do not need to learn more about the effects of inclusive classrooms before inclusive classrooms take place on a large scale basis | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 53 | The best way to begin educating students in inclusive settings is just to do it | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 54 | Most students on the autism are well behaved in inclusive education classrooms | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 55 | It is feasible to teach students with average abilities and needs in the same classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 56 | Inclusion is socially advantageous for students on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 57 | Students on the autism will probably develop academic skills more rapidly in an inclusive education classroom more than in a special, separate classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 58 | Students on the autism are not likely to be isolated by typically developing students in inclusive classrooms | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 59 | The presence of students on the autism promotes acceptance of individual difference on the part of typically developing students. | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 60 | Inclusion promotes social independence among children on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 61 | Inclusion promotes self-esteem among children on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 62 | Students on the autism are likely to exhibit more challenging behaviors in an inclusive education classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 63 | Students on the autism in inclusive classrooms develop a better self-concept than in a self-contained classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| # | | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|
| 64 | The challenge of a regular education classroom promotes academic growth among students on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 65 | Children with exceptional needs monopolize teachers' time | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 66 | The behaviors of students on the autism do not require significantly more teacher-directed attention than those of typically developing children | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 67 | Parents of children on the autism require more supportive services from teachers than parents of typically developing children | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 68 | Parents of children with exceptional needs present no greater challenge for a classroom teacher than do parents of a regular education student | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 69 | A good approach to managing inclusive classrooms is to have a special education teacher be responsible for instructing the children on the autism | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 70 | In order to reduce the potentially negative consequences of the COVID-19 pandemic, Teachers are working under resilient education system | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 71 | Despite the difficulties from online teaching, we are able to respond to the current challenges of improving our students' academic performance and social skills | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 72 | Online teaching resources supports students' academic and social needs | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| *Teacher's competence in inclusive education for students on the autism spectrum* | *1* | *2* | *3* | *4* | *5* | *6* |
|---|---|---|---|---|---|---|
| 73 I can make my expectations clear about student behavior | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 74 I am able to calm a student who is disruptive or noisy | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 75 I can make parents feel comfortable coming to school | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 76 I can assist families in helping their children do well in school | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 77 | I can accurately gauge student comprehension of what I have taught | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 78 | I can provide appropriate challenges for very capable students | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 79 | I am confident in my ability to prevent disruptive behavior in the classroom before it occurs | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 80 | I can control disruptive behavior in the classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 81 | I am confident in my ability to get parents involved in school activities of their children on the autism spectrum | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 82 | I am confident in designing learning tasks so that the individual needs of students on the autism spectrum are accommodated | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 83 | I am able to get children to follow classroom rules | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 84 | I can collaborate with other professionals (e.g. itinerant teachers or speech pathologists) in designing educational plans for students on the autism spectrum | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 85 | I am able to work jointly with other professionals and staff (e.g. aides, other teachers) to teach students on the autism spectrum in the classroom | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 86 | I am confident in my ability to get students to work together in pairs or in small groups | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 87 | I can use a variety of assessment strategies (e.g. portfolio assessment, modified tests, performance-based assessment, etc.) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 88 | I am confident in informing others who know little about laws and policies relating to the inclusion of students on the autism spectrum | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 89 | I am confident when dealing with students who are physically aggressive | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |
| 90 | I am able to provide an alternate explanation or example when students are confused | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

**Appendix L**

Interview Protocol

## A: Parents' Demographic Questions

These questions are about you, your education and the time you have spent in teaching. In

responding to the questions, please mark the appropriate box.

1. **What is your gender?**
   ☐ Female        ☐ Male

1. **How old are you?**
   ☐Under 25   ☐25-29   ☐30–39   ☐40-49   ☐50-59   ☐60+

2. **What is your highest educational level ?**
   ☐Bachelor
   ☐Bachelor with Diploma
   ☐Master
   ☐Doctoral

3. **In what grade do your child study?**
   ☐Elementary
   ☐Secondary (Meddle schools)
   ☐High school

4. **Marital status**
   ☐Married
   ☐Divorced

5. **Please select the current region of your child's school**
   ☐Riyadh
   ☐Qassim
   ☐Makkah
   ☐Madinah
   ☐Dammam
   ☐Aseer
   ☐Al-Bahah
   ☐Al-Jawf
   ☐Hail
   ☐Jizan
   ☐Najran
   ☐Northern Borders
   ☐Tabuk

6. **How many years does your child enroll in inclusive education classroom?**
   ☐1-2 years   ☐3-5 years   ☐ More than 6 years

B: Parents' Interview Questions

These are the questions that were used during the interviews:

1. Why did you decide to place your child in a inclusion classroom? What drew you to the school?

2. What might be the benefits of inclusive education classroom for a child diagnosed on the autism spectrum ?

3. Describe what your child's experience has been with the implementation of the inclusive education?

4. What do you think distinguishes the approach of inclusive education for your child on the autism spectrum?

5. What might be the challenges of including your child in mainstream classroom?

6. As a parent how do you feel social skills of children on the autism spectrum, impact their inclusion in mainstream classroom?

7. What sort of information and preparation needs to be provided to your child within the inclusion classroom

8. Describe to me what you feel are the strengths and weaknesses of the current inclusive education?

9. If you could list the five most critical characteristics of a successful inclusive education? what would they be (in descending order of importance)?

10. What are your experiences with inclusive educational of your child who have autism spectrum ?

11. As a parent how do you evaluate the academic progress of your child on the autism spectrum by including him/her in mainstream classroom ?

12. Describe your level of satisfaction with the inclusive education that is provided to your child in mainstream classroom?

13. According to the COVID-19, students in the KSA have received their education in their home via online program, could you please share your child's experience?

14. What are the advantages and disadvantaged that you noticed of being educated in home?

**Appendix M**

Ethics Approval Study-3

⚜ **McGill**

**Research Ethics Board Office**          Tel: (514) 398-6831
James Administration Bldg.
845 Sherbrooke Street West. Rm 325      Website: www.mcgill.ca/research/research/compliance/human/
Montreal, QC H3A 0G4

**Research Ethics Board 2**
**Certificate of Ethical Acceptability of Research Involving Humans**

**REB File #:** 21-01-024

**Project Title:** Inclusive Education: A Mixed-Methods, Systemic Approach to Understanding the Current Implementation of Inclusion in Saudi Arabian Public Schools for Students with Autism Spectrum Disorder (#2 Parents)

**Principal Investigator:** Arwa Abdullah Alrawkan

**Department:** Educational and Counselling Psychology

**Status:** Ph.D. Student

**Supervisor:** Professor Tara Flanagan

**Approval Period:** <u>April 5, 2021 – April 4, 2022</u>

The REB 2 reviewed and approved this project by delegated review in accordance with the requirements of the McGill University Policy on the Ethical Conduct of Research Involving Human Participants and the Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans.

Georgia Kalavritinos
Ethics Review Administrator

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* Approval is granted only for the research and purposes described.
* Modifications to the approved research must be reviewed and approved by the REB before they can be implemented.
* A Request for Renewal form must be submitted before the above expiry date. Research cannot be conducted without a current ethics approval. Submit 2-3 weeks ahead of the expiry date.
* When a project has been completed or terminated, a Study Closure form must be submitted.
* Unanticipated issues that may increase the risk level to participants or that may have other ethical implications must be promptly reported to the REB. Serious adverse events experienced by a participant in conjunction with the research must be reported to the REB without delay.
* The REB must be promptly notified of any new information that may affect the welfare or consent of participants.
* The REB must be notified of any suspension or cancellation imposed by a funding agency or regulatory body that is related to this study.
* The REB must be notified of any findings that may have ethical implications or may affect the decision of the REB.

**Appendix N**

Ministry of Education Consent Form Study-3

Faculty of Education     Faculté des sciences de l'éducation

McGill University      Université McGill  (514) 398- 6968

3700 McTavish Street    3700, rue McTavish

Montreal, QC, Canada H3A1Y2  Montreal, QC, Canada H3A 1Y2

**Researcher:**

Arwa Alrawkan, PhD student, McGill University, Department of Educational and Counselling Psychology, (514) 569-6599, *arwa.alrawkan@mail.mcgill.ca*

Tara Flanagan is the faculty supervisor of the PI (Arwa Alrawkan), Department of Educational and Counselling Psychology, (514) 398-3441, *taradawn.flanagan@mcgill.ca*

Dear Dr. Merza,

This letter is being sent to you on behalf of Arwa Alrawkan and Dr. Tara Flanagan at McGill University. We are currently conducting a study exploring parents perspectives and level of satisfaction towards inclusive education programs for their children on the autism in public schools in the Kingdom of Saudi Arabia. The study's goals is "exploring the perceptions of parents is necessary and important in order to improve the level of services provided for children on the autism and their families" (Al Jabery et al., 2014, p. 476). The goal is to be able to identify any differences between parents' knowledge and levels of satisfaction across the country. This project will not limit any participants based on their ethnic, cultural, or gender differences. The overall objective of this project is to actively search, explore and listen to parents opinions and beliefs about the effectiveness about inclusive education programs for students on the autism in Saudi Arabian public schools.

After getting approval from the Ministry of Education regarding this study, the school principals will receive the approval. Then, they will send the approval via email to parents who have children on the autism spectrum and who will agree to participate in this study. Then, by email the school principals will inform Arwa Alrawkan with parents who accept to participate in my study including parents' email to contact them later. After, Arwa Alrawkan will email parents with the consent form inviting them to participate in the study. Upon acceptance, an interview via Microsoft Team application will be scheduled with the lead investigator to begin conducting the study. Then, Arwa Alrawkan will email parents to set the appropriate time and day. As well to send the Microsoft Team link.

In this study, the sample will range of parents whose children are in different grades and ranging between 7 to 17 years old. It is expected that the parents will have varying levels of education. To explore my study aim, 8 parents of children on the autism spectrum will be identified by contacting the various school boards across the KSA.

Please be advised that the information collected in this study will be held in the strictest confidence and will only be used for research purposes. All disseminated results to scholarly journals and conferences will remain confidential with no identifying information.

The results from this project may be shared with educators, policymakers, community members, and the academic community. The results may also be submitted with the intent of publishing in various journals. We would be very thankful if you could please help us in this study.

Thank you for your time and we hope that you will consider our project.

Kindly replay the email with parents' email when parents accept to participate in the study to contact them via email to Ms. Alrawkan within one week of receiving it. Do not hesitate to contact us should you have any questions.

Best,

Arwa Alrawkan, PhD Candidate
McGill University
 (514) 569-6599
Arwa.alrawkan@mail.mcgill.ca

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**Appendix O**

Ministry of Education Approval Study-3

الموضوع بشأن تسهيل مهمة الباحثة/ أروى بنت عبدالله الروكان

سعادة مدير عام التعليم بمنطقة الرياض               وفقه الله

السلام عليكم ورحمة الله وبركاته

تجدون سعادتكم أدناه باركود ورابط استبانة لطالبة الدكتوراه بجامعة (McGill) في كندا/ أروى بنت عبد الله الروكان، بعنوان " تصور أولياء الأمور ودرجة رضاهم عن البرنامج التعليمي الشامل المقدم لأبنائهم/بناتهم من ذوي اضطراب التوحد في المدارس الحكومية في المملكة العربية السعودية".

آمل من سعادتكم التكرم بالتوجيه باستيفائها من معلمي، ومعلمات برنامج التعليم الشامل للطلاب ذوي اضطراب التوحد في المدارس الحكومية، المنضمين في مدارس التعليم العام في المملكة العربية السعودية، على الباركود أو الرابط التالي:

https://cutt.us/jg3Z6

كما نرفق لسعادتكم أسئلة مقابلة خاصة بأولياء أمور الطلاب لاطلاعهم عليها ومن ثمَّ إرسال الموافقة من ولي الأمر لبريد الباحثة أدناه (لمن يرغب في المشاركة).

وللاستفسار يمكن التواصل مع الباحثة على هذا البريد : Arwa.alrawkan@mail.mcgill.ca

وتقبلوا تحياتي وتقديري

مدير عام مركز بحوث سياسات التعليم

أ.د. عبدالرحمن بن عبدالكريم مرزا

**Appendix P**

Parents' Consent Form

| | |
|---|---|
| Faculty of Education | Faculté des sciences de l'éducation |
| Fax/Télécopie | |
| McGill University | Université McGill    (514) 398- 6968 |
| 3700 McTavish Street | 3700, rue McTavish |
| Montreal, QC, Canada H3A1Y2 | Montreal, QC, Canada H3A 1Y2 |

**Parent Consent Form**

**Researcher:**

Arwa Alrawkan, PhD student, McGill University, Department of Educational and Counselling Psychology, (514) 569-6599, *arwa.alrawkan@mail.mcgill.ca*

Dr. Tara Flanagan is the faculty supervisor of the PI, Department of Educational and Counselling Psychology, (514 )398-3441, *taradawn.flanagan@mcgill.ca*

**Title of Project:** *"Parents perception and levels of satisfaction with inclusive education for their children on the autism spectrum in public schools in Saudi Arabia"*

**Purpose and Procedure of the Study:** We are currently conducting a study exploring parent perspectives and satisfaction about inclusive education programs in mainstream classrooms for their child on the autism. The study's goals is "exploring the perceptions of parents is necessary and important in order to improve the level of services provided for children on the autism and their families" (Al Jabery et al., 2014, p. 476). The goal is to be able to identify any differences between parents' knowledge and levels of satisfaction across the country.

I am Arwa Alrawkan the principle investigator with my supervisor Dr. Tara Flanagan invite you to participate in my study. I will interview you and the overall objective of this project is to actively search, explore and listen to your opinions and beliefs about the effectiveness and inclusive education programs for your child / children on the autism in Saudi Arabian public schools.  Please notice that, this project will not limit any participants based on their ethnic, cultural, or gender differences.

Once consent is obtained from you (as participant), parents will receive their consent form with my signature to participate in the study via email. Participant demographics include either father or a mother from different backgrounds and regions in Saudi Arabia. After the participant signs the consent form, the researcher will provide an approximately 15-minute information session about the study, including an overview about inclusive education and its goals. The interview will be conducted online via Microsoft Team application. I (Arwa Alrawkan) will send the link by email and the password to join the interview. As well, it is not mandatory to participate by video and you can keep your video camera off,

The lead investigator (Arwa Alrawkan) will explain the purpose of my study, make them fully understand that their participation is totally voluntary. In addition, participated parents can stop at any time for any reason and their data will not be used in the results, but will remain confidential.  After, by email participants will received a demographic form to complete and return it back to me (Arwa Alrawkan). The researcher will remind the participants there is no threat towards them and no issues will result of their response. The information from the interview will be confidential and their child's teacher will never know about their interview or response. The structured interview consists of roughly 14 questions. After the interview, a follow-up discussion about how the parents feel will take place, ensuring they leave the interview in a content mood. The whole process should take approximately 90 minutes. At the end of the interview Participants will receive online gift card.

**Confidentiality:**

First of all, PI will take a permission from the participants to record the interview. Please be advised that the information collected in this study will be held in the strictest confidence and will only be used for research purposes. All identifiable materials including audio files and consent forms will be stored in password protected files or in a locked cabinet to which only the identified researchers (Arwa Alrawkan) and my supervisor (Dr. Tara Flanagan) will have access to. Prior to starting the study, the parents will have an opportunity to create a pseudonym in which all information will be linked to that pseudonym. The type of information that we will be collecting parents' opinions and comments regarding how you feel about the effectiveness of inclusive education in your child's school program. There are no anticipated risks and the interview will be audiotaped only and the recordings are solely for the use of the researcher. Quotes that relate to the themes of the study may be used in the

dissemination of results such as publications and conferences. Furthermore, please note that results from the study will be created and disseminated to policymakers and will be written and submitted to scholarly conferences and appropriate journals.

No harm is expected to come out of responding to this interview and there are no anticipated risks by participating. All disseminated results to scholarly journals and conferences will remain confidential with no identifying information. This study has been reviewed by the McGill Research Ethics Board for compliance with ethical standards. If you have any ethical concerns or questions regarding your rights or welfare as a research participant in this study, you can speak with someone not on the research team by contacting the McGill Ethics Manager at 514-398-6831or lynda.mcneil@mcgill.ca.

For any questions, concerns and clarifications, please contact Arwa Alrawkan at (514) 569-6599 or *arwa.alrawkan@mail.mcgill.ca*.

Please sign below if you have read the above information and consent to participating in this study. Agreeing to participate in this study does not waive any of rights or release the researchers from their responsibilities. A copy of this consent form will be given to you and the researcher will keep a copy. To ensure the study is being conducted properly, authorized individuals such as a member of the Research Ethics Board, may have access to your information. By signing this consent form, you are allowing such access and you agree for being audio-recorded. .

Parent Name: (please print)     _____

Parent Signature:              _____

Date:                          _____

**Appendix Q**

Parent Debrief Form

Thank you for your participation in this research, it is greatly appreciated! Your responses will help us to better understand parents' perspectives and satisfaction with inclusive education programs in Saudi Arabian public schools. As you know, inclusive education is an important part in today's education system and can be a powerful tool to improve students' skills and performance in school and in their lives. As a parent involved in an inclusion setting for students on the autism spectrum, it is beneficial for the field that we understand your thoughts and positions towards inclusive education programs. Your responses to the survey will help us better understand the issues and hopefully improve parts of the programs.

If you are interested in receiving a copy of the aggregate findings once the study is complete or if you have any questions about this study, please feel free to contact the principal investigator Arwa Alrawkan at arwa.alrawkan@mail.mcgill.ca.