PAVING THE WAY FOR INCLUSIVE EDUCATION IN DEVELOPING COUNTRIES

THROUGH RTI: A FOCUS ON EGYPT

By

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THESIS APPROVAL

"Paving The Way For Inclusive Education In Developing Countries Through RTI: A Focus On Egypt" a thesis prepared by Sara Tadros AbdelMasih in partial fulfillment of the requirements for the Master of Arts degree in Applied Child and Adolescent Psychology was submitted in 2024, and was approved and accepted by the thesis advisor, internal examiner and the School of Graduate and Professional Education.

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Title: PAVING THE WAY FOR INCLUSIVE EDUCATION IN DEVELOPING COUNTRIES THROUGH RTI: A FOCUS ON EGYPT

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Abstract

This study aims to promote Inclusive Education (IE) in schools in Egypt. While the country established laws promoting IE, various factors are hindering inclusion from being implemented. The study addresses: 1) teachers' perceived competence in teaching inclusively; 2) measuring their attitudes towards IE; 3) assessing the relationship between both factors; 4) offering practical strategies following the RTI model that could be implemented in Egypt to pave the way for IE. Two scales were used: the Questionnaire on Teachers' Diagnostic Competence Related to Classroom-based Assessment in Inclusive Schools (DaCI) and the Teachers' Attitudes Towards Inclusion Scale (TAIS). 31 private school teachers in Egypt participated in the study. Results showed that teachers perceived having high levels of perceived competence, specifically in Instructional Decision-Making and Educational Assessment, and they scored lower in Identification of Students with Special Educational Needs. Teachers' attitudes towards IE were largely negative, with low scores in Implications of Inclusion for Teaching Practice and an overall low score for TAIS. No statistically significant correlation was found between perceived competence and attitudes from the Pearson correlation analysis.

Practical recommendations focused on changing the terminology used in education, accepting differences between students, and providing basic training for teachers. Additional recommendations included collaborating with experts in the field, and providing cost-efficient screenings and progress monitoring tools to recognize students' areas of need and how they can be better supported.

Keywords: *Inclusive Education (IE), Response to Intervention (RTI), Learning Difficulties (LD), Special Education Needs (SEN).*

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EDUCATION

Master of Arts – MA in Applied Child and Adolescent Psychology   September 2023 - Present
The American College of Greece – Deree   Athens, Greece

Bachelor of Arts   December 2022
The American University in Cairo   Cairo, Egypt
- Major 1: Integrated Marketing and Communication [GPA 3.78/4.0] **high honors**
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  Received the Ahmed Zewail Prize for Excellence in the Sciences and Humanities

French Baccalaureate (BAC)   June 2018
Lycée Français du Caire   Cairo, Egypt

EXPERIENCE

Rotational Program Supervisor   August 2024 – Present
CIPPO Egypt
- Create IEPs for children who are behaviorally dynamic / neurodiverse
- Attend parent and school meetings
- Provide targeted training for support teachers
- Create lifestyle care plans for children
- Conduct SEL sessions for young children

Content Creator (part-time)   September 2023 – Present
Ascend Now
- Create relevant social media content following the company's brand image
- Incorporate ongoing TikTok and Instagram trends in content while maintaining professionalism

Support teacher (Internship)   January – July 2024
Campion School
- Support children with special learning needs from EYFS to Year 6 in their general classrooms and in learning support classes while using educational therapy techniques tailored to their individual needs
- Supervise students taking computerized screenings and assessments such as the Rapid, COPS, and CEM tests
- Receive weekly supervision and performance feedback from the Junior School's Deputy Head

Front line Psychologist (part-time)   January – September 2023
O7 Therapy
- Provided basic psychological support to clients' distress
- Provided clients with psychoeducation and relevant resources when needed
- Received weekly group and individual supervision

Speech and Language Specialist (SLT)   February– April 2023
Effective Learning Foundation (E.L.F.)
- Conducted speech and language-focused learning sessions for children with learning difficulties
- Attended meetings and received trainings on how to conduct sessions for children with LDs

Freelance Content Creator   November – December 2022
Popcorn Productions
- Attended creative meetings and briefs and contributed to the creative direction in photoshoots
- Came up with content for Instagram Reels, Stories, and Posts

Marketing Intern   July – December 2021
O7 Therapy
- Participated in meetings to brainstorm new slogan, campaign, and advertising ideas
- Created content for Instagram Reels and other social media posts, and wrote weekly blogs

ACADEMIC PROJECTS

- Current MA Thesis Topic: "Paving the Way for Inclusive Education in Developing Countries: a Focus on Egypt" *(Deree, 2024)*
- Wrote a paper on the benefits of promoting inclusive education in Egypt. The paper was awarded the Ahmed Zewail Prize for Excellence in the Sciences and Humanities *(AUC, 2023)*
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EXTRA CURRICULAR ACTIVITIES

Youth Mentor July 2018 – present
KDEC Youth
- Guide a group of middle and high school students in their personal and spiritual journey
- Offer them emotional support whenever it is needed

Camp Counselor July 2016 - present
Wadi Sports Camp (WSC)
- Lead and take care of campers between the ages 12 and 18 during daily activities
- Offer care, emotional, and social support to campers experiencing hardships

Multimedia Manager July 2022 – February 2023
Entrepreneur's Society, AUC
- Designed graphics for the organization's social media posts
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Mass Communication Association, AUC
- Held advising sessions for Mass Com students
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LANGUAGES

- Fluent in French, English, and Arabic
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ACKNOWLEDGMENTS

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I. INTRODUCTION

Inclusive Education (IE)

Defining IE

Inclusive Education (IE) for students with learning difficulties (LDs) focuses on considering students' unique needs and equipping them with suitable resources and support strategies to offer them appropriate learning opportunities (Hayes et al., 2017). IE sheds light on the significant importance of collaborative teaching and individualized instruction to encourage students and allow them to reach their full academic and social potential without taking away from their right of being included in general education schools with their peers (Cole et al., 2004). "Inclusive education involves valuing and facilitating the full participation and belonging of everyone in all aspects of our education communities and systems" (Kologon, 2019). Said differently, inclusivity is about accommodating and accepting diversity. Based on UNESCO's "Education for All" initiative, Inclusive Education (IE) highlights the importance of offering the same quality of learning and giving all students similar learning opportunities and experiences, regardless of their differences (Mantzikos et al., 2023). This requires the implementation of equality-focused teaching, where teachers offer the same learning opportunities for all students, to be able to learn, succeed, and reach their full potential, regardless of their gender, ethnicity, race, background, or abilities. To be able to do so, teachers need to recognize and acknowledge any barriers hindering students from learning, understanding class material, or completing assignments. There are necessary requirements for IE to take place; some include creating a safe environment where students can freely ask questions without hesitation or fear of receiving negative responses, considering each student's needs when building the material and preparing

tests and assignments, making sure that all students are well-equipped for learning, and encouraging all students to participate in class discussions (Slee, 2018). Every child rightfully deserves to be part of society and to have access to proper education, and this includes children with LDs and neurodevelopmental disorders. IE paves the way for learning for all students, as it suggests that children with LDs and other disabilities should attend general education classrooms (Ahmed, 2012).

Disabilities from Different Lenses: the Medical Model and the Social Model

Studies have shown that disabilities can be perceived from two very different perspectives, based on the medical model and the social model (Park et al., 2021). Both models have a significant impact on how children are taught and dealt with in schools.

The medical model has created a problematic view of disabilities, suggesting that they are deficiencies within individuals. Based on the medical model, which, historically speaking, has been the predominant approach, people who have disabilities are perceived as "abnormal" and "dysfunctional" beings. It is, therefore, assumed that they need to be medically treated to "fix the problems" that are in them. When this approach is applied in academic settings, it shifts people's focus on diagnosing disabilities and then trying to "fix" these "deficiencies", rather than thinking about how the child can be better supported and equipped to learn efficiently and successfully. Said differently, the medical model supports the idea that individuals with disabilities are viewed as having something "wrong" with them, that professionals (i.e. either doctors or educators) need to fix. This creates an unaccepting and non-accommodating environment for differences and diversity (Areheart, 2008; Goering, 2002; Park et al., 2021; Rothman, 2014).

On the other hand, disability rights theorists have strongly opposed this model by arguing that disability is a social construct, which is primarily what the social model, influenced by the

philosopher Michel Foucault's works, suggests (Bampi et al., 2010). The social model recognizes that disabilities are not solely about individuals' physical or mental conditions. It suggests that disabilities are largely shaped by how society is organized. This model highlights that many of the challenges individuals with disabilities experience and face daily are not because of their impairments, but are rather caused by social barriers (Bampi et al., 2010). Examples include discriminatory attitudes, exclusionary policies, and a lack of accommodating or appropriate support. This model encourages individuals to give less importance to changing the individual, how they behave, and how they interact with others, and encourages people to focus instead on changing the environment and society, to make it more accepting, inclusive, and accommodating to diversity. It is important to have the principles of the social model in mind, when thinking about IE, to be able to recognize how inclusive environments can be fostered in schools (Barnes, 2019; Park et al., 2021; Samah, 2007; Shakespeare, 2006).

Benefits of IE

Contrary to popular belief, IE does not only serve children with LDs but rather benefits all students when it is implemented appropriately (Molina-Roldán et al., 2021). Indeed, the literature demonstrates that IE promotes higher academic achievements and outcomes for both students who are neurodivergent and students who are neurotypical. A research study comparing academic performance of children in inclusive versus segregated schools, found that students who were taught and brought up in more inclusive environments overperformed socially and academically in comparison to students who were in segregated schools (Oh-Young, 2015).

Next, IE promotes diversity and acceptance. If all children are exposed to diversity from a young age and are taught to accept differences rather than fear them, respect for differences will be ingrained in their minds early on. Inclusive classroom environments can expose children

to diversity on a daily basis and normalize the acceptance and inclusion of all children within the community. In addition, daily interactions between different learners can encourage students to learn from each other's strengths and minimize stigmatization and stereotyping. Similarly enough, all students can potentially reach higher academic achievements and outcomes when learning in inclusive classrooms. High achievers and children with academic challenges can equally benefit from working collaboratively. In Kindergarten Peer-Assisted Learning Strategies (K-PALS), children are selectively paired with one of their classmates by the teacher. The pairs typically include a stronger reader and a student who still needs reading support. Together, they take turns being "the reader" and "the coach" through structured reading activities. The reader practices reading while the coach supports them by providing corrective feedback and encouragement. Not only does this strategy strengthen all children's reading skills, but it also teaches them how to work with others and helps develop their social skills (Fuchs et al., 2017; Lyon et al., 2023). Strategies such as K-PALS, which address and encourage diversity through pair work allow overperforming students to learn from children with academic difficulties and vice versa (Fuchs et al., 2017).

In addition to the previously mentioned benefits, IE also offers all students a sense of belonging to a community. This is certainly beneficial for students during their childhood and adolescence as it can support them in building a positive self-image. A study focusing on fostering a sense of belonging in children in schools highlighted that being in a school that promotes acceptance and makes students feel that they have a community that they belong to improves students' emotional well-being, enhances their self-esteem, ameliorates their academic performance, and allows them to build stronger relationships with their peers (Sancho et al., 2012). Additionally, it is argued that having a sense of belonging reduces children's feelings of anxiety and isolation, and

encourages students to have more positive attitudes towards learning. Adding on to this, also having a sense of belonging also has long-term effects and outcomes that could benefit the entire community (Rose et al., 2017). A study evaluating 644 participants' sense of belonging found that having a strong sense of belonging could predict higher feelings of meaningfulness in the future (Lambert et al., 2013). Similarly, it was found that children who experience IE from a young age are more likely to have positive attitudes towards inclusion and support inclusive practices and policies in the future when they become adults (Rose et al., 2017).

Drawbacks to IE

Although there are many benefits to IE, one significant challenge that it presents is the high demand it adds on general education teachers, who sometimes are not equipped with suitable or sufficient training and resources to be able to properly support their diverse group of students, with diverse needs and abilities (Kurowski et al., 2022). This could potentially lead to the teachers having to compromise the quality of the teaching they provide to the rest of the class, decreasing the quality of education offered to all the students in the class. Additionally, studies have found that IE can lower teachers' academic standards for their high-achieving and typically-developing students (Savich, 2018). Additionally, studies have found that even though the idea of offering a non-restrictive environment may be appealing in theory, in practice, it is not easy to implement and requires a significant amount of time, training, and resources, which, from a financial point of view are all expensive (McCarty, 2006). The integration process may also be hindered by insufficient support services, such as specialized staff and individualized teaching strategies, which are crucial for students with significant disabilities. Overall, even though it cannot be denied that IE promotes admirable goals as it is based on noble values, these

limitations need to be considered and addressed to guarantee that all students receive an equitable and high-quality level education.

Attitudes Towards IE

Educational inclusion requires active and voluntary efforts to readjust typical schooling to offer equal learning opportunities to all children (Molina-Roldán et al., 2021). The concept of IE gradually came to life and its implementation would only be possible by ensuring that teachers, schools, and policymakers have a positive attitude towards it (Ahmed, 2012). Indeed, teachers' attitudes towards inclusion have a strong impact on how successful IE strategies are executed in schools (Forlin et al., 2008). This has been demonstrated time and time again through various research studies, suggesting that teachers' attitudes are one of the most significant factors contributing to the success or failure of IE (Lindner et al., 2023). A research study analysis examined 36 previously conducted studies dealing with the relationship between teachers' attitudes towards inclusion and its implementation. The study found that primary school teachers typically have neutral or indecisive attitudes towards IE, with more positive attitudes when it comes to including children with mild LDs, and the more severe children's difficulties are, the less positive teachers' attitudes get. It was elaborated that the inclusion of children with mild disabilities is more common, firstly because it does not require as much teacher training, knowledge, and resources, and secondly because teachers have more positive attitudes and are more open to including children with mild LDs than those with more severe ones (De Boer et al., 2011). The more negative teachers' attitudes towards inclusion are, the less likely it is for IE to take place effectively or successfully (Gibb et al., 2007). Similarly, the more accepting individuals are of IE, the easier it will be for it to be applied (De Boer et al., 2011).

IE in Egypt

In 2007, Egypt signed the Convention on the Rights of the Child (CRC) and the Convention on the Rights of Persons with Disabilities (CRPD), which support the right to good quality education for all children, including children with LDs (Velez et al., 2011). CRC and CRPD both highlight the importance of inclusion rather than integration of children with LDs in schools. While children with LDs and typically developing children are placed together in both systems, inclusive education, and integrative education are different in essence. Inclusion requires a personalized and tailored approach to education, promoting a system that accommodates the needs of all students. With inclusion, the entire educational system is tweaked and adjusted to fit the needs of different types of learners. Integration, on the other hand, places children with LDs in general education classrooms, without providing them with any additional accommodations, services, or support they may need, which is, arguably, a discriminatory practice (Hick et al., 2009). Research has found that when children with LDs and other disabilities are placed in general education classrooms without being provided with any additional support, they will not be able to learn efficiently and they are likely to be discriminated against and face social exclusion (Oh-Young et al., 2015). This is primarily because if children with LDs are not given the appropriate support they need in class, their differences in abilities and their unique behaviors could be confusing and misinterpreted by their peers or their teachers, which could in turn lead discrimination, stigma, and isolation from various social and academic activities at school. (Oh-Young et al., 2015).

In hopes of reaching a more inclusive system, Egypt published a Ministerial Decree in 2009, encouraging the entry of children with mild disabilities into general education, both in private and public schools. The goal behind this mandate was to help a total of 5040 schools in

Egypt include over 152000 children with LDs in their general education classrooms by 2012. The decree was later updated in 2015 (Hassanein et al., 2021).

Having signed the CRC and the CRPD, and issued this Ministerial Decree, Egypt is required to make efforts to put IE at the forefront of its priorities and actively take steps to become more inclusive, accepting, and inviting for all students. That being said, while there are laws and regulations supporting children with disabilities and giving them the right to receive good quality education, these rules are not fully or commonly applied (El-Haddad, 2023). This may be primarily due to cultural, economic, and social factors. Inclusion is still a relatively new concept in Egypt, and children with LDs are still placed in segregated schools. In other words, there are special schools designated for children with LDs, other disabilities, and neurodevelopmental disorders (Abbas, 2023; El-Haddad, 2023). While it is quite rare, integration is practiced in some private schools in Egypt on a limited basis as students with LDs are sometimes allowed to enroll in the schools, but they are not given any additional support to assist their learning to ensure appropriate teaching is practiced (Abbas, 2023). The little progress that has been made to include children with LDs in general education is far behind the target that was stated in Egypt's National Strategic Plan (El-Haddad, 2023; Kotb et al., 2023). To support this, it was recognized in 2014 by the Ministry of Education (MoE) that out of approximately 2 million school-aged children with disabilities, less than 2% of them were enrolled in any type of school in Egypt (Ministry of Education, 2014). This corresponds to a number as low as less than 0.19% of the total number of students enrolled in schools in Egypt (Humanity & Inclusion, 2022). Respectively, only 7% of the 40000 were enrolled in general education schools, with only partial inclusion or integration in the education system, and being forced to spend most of their time at school in segregated special education classrooms. The remaining 37200 students, on the other

hand, received completely segregated special education schooling, with very limited quality of instruction and learning (Ahmed El-Adham et al., 2024).

It is important to recognize the differences in opportunities and resources children receive in Egypt depending on which socio-economic class they fall under. This is primarily because private schools, which are far from being accessible to the general Egyptian population, offer significantly more resources, facilities, and opportunities for children with LDs and other disabilities, in comparison to public schools (Krafft et al., 2019). Given the laws and policies that have been established to provide children with LDs more opportunities to go to school with their typically developing peers, and establish a healthy lifestyle and social life, some public schools accept children who are neurodiverse to market and advertise their openness to the outside world (Kotb et al., 2024). A study focusing on IE in Egyptian public schools found through an interview with a parent of a child with learning difficulties that her son was accepted at a public school and they pay for tuition every year, however the child is not allowed to physically go to the school or attend classes with his peers (Kotb et al., 2024). What this suggests is that these schools typically accept diverse children solely on paper, meaning that they allow them to enroll in the school, but do not let them attend classes or even go to campus. Diversity here includes children with divergent physical and intellectual abilities. These children typically get homeschooled (meaning that they pay the school's tuition and private tutor lessons) or do not get any type of education at all. The only advantage these schools offer them is that they allow the children to take official government exams since they are technically enrolled in the school (Kotb et al., 2024). This is considered to be an advantage that parents recognize because taking official government exams will allow students to be recognized by an official education

credential which can increase their opportunities to get into high school or further education, and even expand their job opportunities for the future.

Barriers to IE in Egypt

Many studies have been conducted to identify the types of barriers that hinder IE from being successfully implemented in Middle Eastern and North African countries (i.e. the MENA region). Findings have shown that one of the major challenges stopping the MENA region from implementing more IE systems is that its respective countries are trying to directly apply the special education system that is created and tailored to the West, in their own countries, without considering the significant cultural, educational, political, and social differences (ElHoweris et al., 2020; Hassanein, 2021). This makes implementation nearly impossible and extremely impractical. Limited teaching experience, training, and preparation for teaching in an inclusive classroom have also been recognized as important factors stopping IE from taking place in Egypt and other countries in the MENA region (Humanity & Inclusion, 2022). The lack of adequate training provided to teachers results in negative attitudes and perceptions towards the inclusion of children with LDs, which, as discussed earlier, makes it much more difficult for IE to take place successfully (Abbas, 2023; Ahmed, 2012; Hassanein et al., 2021; Humanity & Inclusion, 2022). Other barriers include gender, limited resources, and non-accommodating infrastructure. It was found that countries like Egypt cannot afford to invest in changing the curriculum and building facilities and suitable transportation to help include children with disabilities in general education (Ali, 2020). Finally, unclear roles and responsibilities of staff members create confusion for teachers and other stakeholders in the school as each person does not have a clear understanding of what is expected of them, what their responsibilities are, and who they should

go to in case support is needed. Specific duties need to be clearly defined and distributed to all staff members to support the development of IE (Hassanein, 2021).

Response to Intervention (RTI)

About RTI

The term "response to intervention" was initially coined within the medical and healthcare industry to refer to a patient's reaction to a given treatment (Park et al., 2021). In parallel, its meaning in the education field is quite similar. The aim of the RTI model in the education field is to focus on enhancing students' learning. This is done by observing children's responses to given interventions, which include adjusting instructions, the curriculum, and the classroom environment, and supporting them accordingly. Rather than assuming that a child's failure to learn in a classroom lies in their limited abilities, RTI focuses on how the environment, i.e. teaching strategies and structural activities in the classroom can be adjusted to better fit the student's needs and improve their learning outcomes (Artiles et al., 2010; Fuchs et al., 2012).

Despite its roots dating back to the 1970s with Deno and Merkin's early works on the effectiveness of introducing a three-tiered model of intervention for children who have reading difficulties, the Response to Intervention (RTI) model is still considered to be a booming system in many countries around the world today (Fuchs et al., 2011). While it originally focused on reading difficulties and curriculum-based measures for progress monitoring, the modern RTI model addresses the limitations, barriers, difficulties, and challenges in diagnosing as well as treating learning difficulties (Mesmer et al., 2018). This model has provided a framework that identifies students with LDs and pinpoints their areas of weakness, to then work on an intervention plan that suits their individual needs, without depriving them of being included in general education classrooms. Whether it is to support overachieving students, students with

academic struggles, or students with behavioral challenges, RTI offers personalized

accommodations for students' unique needs with the objective of determining and providing

different types of learners with the services they need to succeed. This means that recognizing

students who need special education services is a priority when using RTI.

The latter is a three-tiered model that supports education for all students and aims to

minimize the number of diagnoses for LDs (Johnson et al., 2006; Mesmer et al., 2018; National

Center on Response to Intervention NCRTI, 2010). The first Tier consists of a screening for all

students, also known as a mass screening, on specific target skills. The purpose of the screening

is to identify students who may be at risk of having academic challenges. Those who perform

adequately on the screening receive Tier 1 instruction. Tier 1 instruction refers to high-quality

teaching practices that are meant to be used for all the students in general education classrooms.

The purpose behind Tier 1 instruction is to provide as many children as possible with adequate

teaching methods that can support their academic success without needing further support. On

the other hand, students who underperform move to Tier 2, where they receive increased

evidence-based instruction in small groups, and their progress is tracked. If students still fail to

perform adequately after receiving Tier 2 instruction, they move to Tier 3 where they receive

even more intensive instruction, which typically requires more personalized special education

methods. Ongoing monitoring of performance progress is required in Tier 3, and if students are

able to meet the standards of acceptable performance, they move back to Tier 2. If they are not

able to do so, testing for a possible LD is advised (Al-Onizat, 2021; Fuchs et al., 2008; Kenny-

Chapur, 2023; National Center on Response to Intervention, 2010).

Benefits of RTI

To begin with, the quality of education that the RTI system offers is quite high as it provides opportunities for all learners to grow. Students who struggle academically still get an equal chance at learning as their peers in general education classrooms, with the additional support and services offered to them (Collier, 2012).

Based on the literature, RTI has been shown to be an effective method for identifying students' academic challenges from early on (Mesmer et al., 2018). Early identification of LDs is crucial as it paves the way for early intervention, which could prevent the aggravation of students' academic struggles or further difficulties from arising (Guralnick, 2017; Rochford et al., 2014). Studies have found that early intervention allows for an improvement in young learners' academic performance as well as their language and communication skills. Additionally, early intervention could reduce the need for special educational services and additional accommodations later on (Guralnick, 2017; Rochford et al., 2014). Therefore, early intervention and prevention, which are supported by the RTI model, can help maximize learning for all students.

Another major advantage of RTI is that it allows for progress monitoring. Given the ongoing tracking of students' performance progress, teachers, parents, and other stakeholders involved are constantly aware of how the student is doing academically. This allows them to recognize when an intervention method is successful and when it is not, giving them a better understanding of how they can efficiently support the student. In some cases, small-group interventions are enough, and in others, when students are not responsive to any tentative interventions, more intensive instructional approaches may be the best solution for them (Mesmer et al., 2018).

Previous findings recognize that the RTI model can, and has supported IE in various countries before (McDaniel, 2013). However, it was also found that very little research has been done on IE in Egypt, particularly within the context of RTI, which does not seem to be documented. Other countries that have adopted the RTI system in their schools have demonstrated remarkable outcomes, which will be further discussed.

RTI in the U.S.

RTI was first established as an appropriate model for identifying LDs in 2004 in the United States after being recognized by federal laws such as the Individuals with Disabilities Education Act (IDEA). By 2008, all 50 states started to take initiatives to support the implementation of RTI (Piia et al., 2018; Special Educational Programs (US), 2010). The United States is one of the first countries to apply newly developed methods that support IE in both public and private schools, encouraging the inclusion of children with special needs in general education classes. (Abbas, 2023).

The RTI model was encouraged in most States and districts due to its effectiveness, particularly in providing students with academic challenges with early interventions that strengthen their abilities. It also gives them the necessary skills to succeed in school and avoid being placed in special education in the future (Hammer, 2012). The major benefit that this system has provided to the U.S. is, firstly, the greater quality of education services offered both in public and private general education schools. Secondly, the cost-efficient aspect of this model has made it much easier to implement, and has given policymakers a stronger motive to apply such a system in their States (Hammer, 2012; McInerney, 2013; Piia et al., 2018). An additional reason why RTI has been supported in the U.S. is that it creates a common understanding across all schools and States regarding the levels and types of interventions needed in educational

settings. That being said, even though each school may implement different intervention strategies for each Tier, all strategies will have somewhat similar objectives and effects, allowing for equal learning opportunities for all students across schools, districts and States in America. (Special Educational Programs (US), 2010).

RTI in Finland

Similar to the RTI system in the U.S., Finland has also adopted a three-tiered model that includes special education in general education classrooms, through general support (i.e. Tier 1), increased support (i.e. Tier 2) and special support (i.e. Tier 3). This was established back in 2010 and all Finnish schools officially started applying it in 2011 (Malinen, 2012; Piia et al., 2018). Multiple objectives needed to be achieved before the implementation of this model. First, there was a need to come up with a method to help assess the amount of special educational services needed. Next, teacher education and training, and establishing appropriate administrative procedures to support special educational services were detrimental factors in determining whether or not this strategy would succeed. Additionally, policymakers needed to establish laws around special education, for all schools to be following the same guidelines and framework, ensuring fairness and equality in education for all students. The primary value behind education in Finland is that everyone should have equal access and opportunity to the best quality of education, regardless of ethnicity, gender, age, social and financial status, location, or physical and cognitive ability (Niemi et al., 2016). The suggested multi-tiered model abides by these values and puts them at the forefront of educational plans. Based on the law in Finland, if a student fails to show signs of progress after receiving Tier 1 and Tier 2 support, they would be required to get an official referral for special education to receive Tier 3 support (Bjorn, 2018).

RTI in the Netherlands

The Netherlands has implemented models inspired by the RTI system, primarily focusing on the multi-tiered level of support this model offers, as well as the ongoing progress monitoring it provides for students. The purpose of these models is to minimize the amount of misdiagnosed students with LDs and focus on providing them with interventions that could effectively support their learning in general education instead. A meta-analysis focusing on RTI in the Netherlands has shown that the RTI model is very effective in the Netherlands as it has led to significant improvements in students' academic performance, especially in reading interventions. Retest scores for students in Tier 3 (intensive intervention) reflected the remarkable progress they have made in reading abilities, with effect sizes varying between 0.34 to 1.02, which is quite high. These findings recognize the positive impact the RTI framework has on students' academic performance and their educational outcomes. This includes typically developing students, as well as students with LDs (Nilvius, 2021).

Another study examined the influence of phonological memory, orthographic knowledge, rapid digit naming, and letter sound naming, on predicting how responsive to Tier 3 intervention (i.e. intensive individual intervention) students who scored below the 10th percentile in reading would be. This study was conducted in the Netherlands on 122 Dutch students in second and third grade. All students were retested right after receiving the intervention and their scores were compared to norm scores. Results of the study showed that out of the 122 students, 46 improved their reading skills after receiving intensive individual intervention, as their reading scores went up above the 10th percentile when they got retested. As for the remaining 76 students, their scores remained below the 10th percentile, which means they did not respond to the personalized individual intervention provided to them. This suggests that referral to special educational

services would be the next step to take for these students. Overall, the findings showed that RTI is an effective method for identifying severe LDs (Scheltinga et al., 2010; Thuneberg et al., 2014). Similarly enough, another study examining the effectiveness of RTI on Dutch poor readers found that understanding individual differences between students' learning styles and progress rates is very important for differential diagnosis, as well as prognosis (Struiksma et al., 2009).

The Present Study

This research study holds multiple objectives, with the first being to evaluate teacher's self-reported diagnostic competencies related to classroom-based assessment. This will allow a better understanding of how competent general teachers in Egypt view themselves as educators who recognize and accommodate learning differences. Based on the barriers hindering schools in Egypt from implementing RTI that were discussed in the literature, it is expected that teachers will not perceive themselves as being competent enough to teach in inclusive classrooms given the limited knowledge, training, and resources they have (Abbas, 2023; Ahmed, 2012; Hassanein et al., 2021; Humanity & Inclusion, 2022).

A second aim is to identify whether or not general education school teachers in Egypt have a positive attitude towards IE as evaluating teachers' attitudes towards IE will allow for a better assessment of how this matter can be implemented in Egypt. It is expected based on previous research suggesting that teachers who are not sufficiently trained and are not qualified to teach in inclusive classrooms tend to have more negative attitudes towards IE, that teachers in Egypt will express having negative attitudes towards IE Abbas, 2023; Ahmed, 2012; Hassanein et al., 2021; Humanity & Inclusion, 2022). Additionally, another aim is to see whether teachers'

diagnostic competencies and their attitudes towards IE are related. It is hypothesized that there is

a positive correlation between teachers' perceived competence in teaching inclusively, and their

attitudes towards IE, with lower perceived competence being associated with more negative

attitudes. The fourth and final objective of this study is to offer suggestions to overcome the

barriers hindering IE from taking place in Egypt, so that teachers can teach more inclusively

using the RTI approach.

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II. METHOD

Through the literature review, a general idea has been made about what RTI is, what its benefits are, where it has been implemented, and how it promotes IE. The literature also shed light on the status of IE in Egypt. Given the limited resources available in the literature addressing this topic in Egypt specifically, there is a need for primary research to be conducted. The primary research focused on assessing teachers in Egypt's perceived individual abilities teaching in inclusive classrooms, the perceived abilities they have about other teachers' competencies, and their personal attitudes towards IE.

Study Analysis

The study at hand employed a quantitative design to examine teachers' perception of their competence as educators who can accommodate different types of students. Their attitudes towards IE were also assessed through a questionnaire. Therefore, it is primarily a survey research and a correlational study that examines how competent teachers are to employ IE practices in their general education classrooms, and their attitudes towards IE. An online survey, consisting of two questionnaires, was sent to general education teachers in schools in Egypt, which they were required to fill out. This provided more clarity on teachers' confidence in their ability to teach using IE practices and what attitudes they have towards IE.

Procedure

After receiving the IRB approval, participants were recruited through convenience and snowball sampling. A link to the survey was sent to them in an email along with a message, encouraging them to share the survey with their colleagues and other teachers they may know, who could potentially take part in the study. The entire survey was estimated to be completed in about 15 to 20 minutes in total. It was divided into four parts. The first part was simply a short

paragraph, briefly explaining the purpose of the study and its benefits (Appendix A). It also explained that participation in this survey was entirely voluntary and that any personal information, that could potentially give away the identity of participants, would not be disclosed. If participants agreed to this, they were required to press on the "I agree and would like to proceed with the survey" button. The first part of the survey also included the researcher's contact information (i.e. an email address and phone number) that participants could contact if they had any questions or wanted to know more about the study. Once they pressed on the agree button, participants moved on to part two of the survey.

The second part included nine demographic questions (Appendix B), which were meant to serve as screening questions, to prevent anyone who does not fit the given criteria from participating in the study. They also gave more descriptive information about participants' backgrounds. Demographic questions focused on filtering out anyone who was not a general education teacher at a school in Egypt and did not speak English. If someone who was not eligible to take the survey attempted to take it, the survey closed automatically.

After completing the demographic questions, participants proceeded with filling out the first scale which was the Questionnaire on Teachers' Diagnostic Competence Related to Classroom-based Assessment in Inclusive Schools (DaCI) (Appendix C).

Next, they filled out the Teachers' Attitude Towards Inclusion Scale (TAIS) (Appendix D) in the final part of the survey. Participants were required to respond to every single question on the survey. If they failed to do so, they would not be able to submit their answers. Their responses were recorded once the entire survey had been completed and submitted. After data collection, results were analyzed and interpreted. Afterwards, the researcher drew conclusions and made recommendations based on the findings and data analysis.

Participants

Participants in this study included a total of 31 general education teachers in schools in Egypt. Given the limited time and resources available, the participants were recruited using convenience and snowball sampling. Because the study was conducted in English, all participants needed to be fluent English speakers. Anyone who did not fit this exact description was excluded from participating in this study. In an attempt to reach a sample as diverse as possible, active efforts were made to reach out to teachers from different schools in Egypt.

Out of the 31 participants involved in the study, 30 were female, and only 1 was male. Participants' years of teaching experience ranged from 1 to 34 years, with an average of 10 years. 22 participants shared having taken special education courses, whether through their Master's degrees, other diplomas or certifications, such as Postgraduate Certificate in Education International (PGCEI), or online courses. The remaining 12 teachers did not complete any special education courses before. The teachers varied in terms of the grade level they taught. 16 teachers reported being elementary/ primary school teachers (i.e. from Kindergarten to Grade 6), 12 were middle school teachers (i.e. from Grades 7 to 9), and the remaining 3 were high school teachers (i.e. from Grades 10 to 12). Some teachers reported having masters' degrees (13 participants), while others reported that the highest educational degrees or qualifications they have received were their bachelor's degrees (18 participants). All 31 participants reported that they teach in private schools in Egypt and that they are fluent English speakers.

Materials and Instruments

Given that the study included an online survey, participants needed a laptop, tablet, or a smartphone to fill it out. To ensure reliability, two pre-existing self-report-type Likert scales were utilized. Participants were asked to fill out the Questionnaire on Teachers' Diagnostic

Competence Related to Classroom-based Assessment in Inclusive Schools (DaCI) Version 0.2, which is a 28-item self-report five-point Likert scale. Then they were required to fill out the Teachers' Attitude Towards Inclusion Scale (TAIS) which is a 30-item self-report eight-point Likert scale. In addition to the scales, nine additional items (Appendix C), assessing demographics, were added at the beginning of the questionnaire to prevent the participation of anyone who may not be fit for this study. The demographic questions also provided some context on the characteristics of the sample and how representative it is.

The Questionnaire on Teachers' Diagnostic Competence Related to Classroom-based Assessment in Inclusive Schools DaCI was initially developed in 2021 in German by Dr. Jana Jungjohann and Dr. Markus Gebhardt. It consisted of 30 items divided into four different categories. The four-dimensional structure of the questionnaire was approved and two items were removed in Version 0.2, which was established in 2023. Version 0.2 of the DaCI therefore consists of 28 items and was translated into English. DaCI examines teachers' diagnostic competencies, specifically in classroom-based assessments. The scale includes four subcategories: instructional decision-making, educational assessment, identification of special education needs (SEN), and progress monitoring. It is also a self-report measure, meaning that it relies on teachers' personal opinions and understanding of their capabilities. The DaCI consists of 28 statements and five response options ranging from "not at all true" to "completely true". The scoring of DaCI goes as follows:

Not at all true → 1 point   Rather not true → 2 points   Rather true → 3 points

Mostly true → 4 points   Completely true → 5 points

The lowest possible score is 28, and the highest is 140. The higher the score, the more competent teachers perceive their diagnostic abilities to be, and the more capable they feel to

teach in inclusive classrooms. Based on the given hypothesis, it is expected that teachers will score low on DaCI, reflecting low perceived diagnostic abilities and low competence levels when it comes to teaching inclusively.

Examples of items from DaCI include "I am familiar with methods of how to support literacy development in reading, writing or mathematics" (e.g. from the Instructional Decision Making subscale), "I know how to interpret results from standardized tests for measuring the status quo and how to assess educational aims" (e.g. from the Educational Assessment subscale), " I know how to check whether the aims of a special support strategy have been achieved" (e.g. from the Identification of Students with SEN subscale), and " I know how to adapt instruction based on student progress monitoring data" (e.g. from the Progress Monitoring subscale).

It is true that DaCI does not directly assess how competent teachers believe they would be to teach following the RTI system, however, the competencies that the scale assesses are necessary skills for teachers to acquire, to be able to teach using RTI. Therefore, it was expected that a teacher who is competent in identifying LDs and teaching inclusively, based on DaCI, would also be able to teach using the RTI model.

Other tools directly related to RTI included more specific terminology that may not have been familiar to all teachers, which is why their selection for this study did not feel suitable. DaCI, on the other hand, includes simple items with basic terminology, which makes it more accessible and understandable for all teachers, to be able to fill out more confidently. This made DaCI a particularly useful tool for this study, for assessing teachers' readiness to implement RTI principles in a suitable way, that fits their current skill sets and awareness. Consent to use this questionnaire was given by its creators, after being contacted through email.

The Teachers' Attitude Towards Inclusion Scale TAIS was developed in 2014 by Dr. Jeremy Monsen, Dr. Donna Ewing, and Dr. James Boyle. This scale is a revised version of the previously developed tool Opinions Relative to Mainstreaming Scale ORMS (1979) by Larrivee and Cook. Modifications primarily included using more up-to-date terminology. For example, terms such as "handicapped" and "normal" children, which were used in ORMS, have been completely removed in TAIS and replaced by more appropriate language. In addition, ORMS includes a five-point Likert scale while TAIS uses an eight-point Likert scale.

TAIS was first tested on a sample of 106 teachers, but after running some tests, only 20 items and 93 teachers met the standards for factorability, as well as sampling adequacy. The 20 items were then grouped into four different subcategories: (1) Problems of Inclusion of SEN Pupils in Mainstream Classes, (2) Social Benefits of Inclusion of SEN Pupils in Mainstream Classes, (3) Implications of Inclusion for Teaching Practice, and (4) Implications for Teachers Addressing the Needs of Children with SEN. TAIS was found to be a valid and reliable tool for both applied and research purposes. As its name indicates, TAIS assesses teachers' attitudes towards the inclusion of children with Special Education Needs (SEN) in general education classrooms. It consists of 30 statements and eight response options ranging from "strongly agree" to "strongly disagree". The scoring of TAIS goes as follows:

For items 1, 4, 6, 8, 10, 14, 16, 18, 21, 26, 28, and 30, which are positively stated, the scoring goes as follows:

Strongly agree → 8 points   Agree → 7 points   Somewhat agree → 6 points

Slightly agree → 5 points   Slightly disagree → 4 points Somewhat disagree → 3 points

Disagree → 2 points   Strongly disagree → 1 point

For items 2, 3, 5, 7, 9, 11, 12, 13, 15, 17, 19, 20, 22, 23, 24, 25, 27, and 29, which are negatively stated, the scoring goes as follows:

Strongly agree → 1 point   Agree → 2 points   Somewhat agree → 3 points

Slightly agree → 4 points   Slightly disagree → 5 points Somewhat disagree → 6 points

Disagree → 7 points   Strongly disagree → 8 point

Scores are calculated by adding up the total number of points together. The lowest possible score is 30, and the highest is 240. The higher the score, the more positive the teacher's attitude towards inclusive education is. In parallel, lower scores indicate more negative attitudes towards IE. Based on the given hypothesis, it is expected that teachers will score low on TAIS as a result of low scores on DaCI, reflecting low competence levels, and in turn, a negative attitude towards IE.

Examples of items in TAIS include "The extra attention SEN students require is to the detriment of the other students" (e.g. from the Problems of Inclusion of SEN Children in Mainstream Classes subscale), " Isolation in a special class has a negative effect on the social and emotional development of a SEN child" (e.g. from the Social Benefits for all of Inclusion of SEN Children in Mainstream Classes subscale), " Inclusion of SEN children necessitates extensive retraining of regular classroom teachers" (e.g. from the Implications of Inclusion for Teaching Practice subscale), and "The needs of SEN students can best be served through special, separate classes" (from the Implications for Teachers Addressing the Needs of Children with SEN subscale).

The creators of this tool were also contacted by the researcher, and permission was given, to use this scale. In addition to giving consent for the use of the scale, the authors of TAIS also shared their cut-off scores for each of the categories as the cut-offs had not been published.

Scoring

Scoring and Interpretation of TAIS:

As mentioned previously, the authors of TAIS shared their cut-off scores for each of the

subcategories, which were used as reference points to interpret high and low scores.

(1) Problems of inclusion of SEN pupils in mainstream classes:

high score **> 5.97**; low score **< 3.26**

 (2) Social benefits of inclusion of SEN pupils in mainstream classes:

high score **> 6.84**; low score **< 4.16**

 (3) Implications of inclusion for teaching practice:

high score **> 5.29**; low score **< 2.43**

 (4) implications for teachers addressing the needs of children with SEN:

high score **> 5.49**; low score **< 2.46**

An overall cut-off score for the scale as a whole was then given by calculating the mean of all

the cut-offs combined.

Overall high score **> 5.89**; overall low score **< 3.07**

Scoring and Interpretation of DaCI:

Because TAIS and DaCI are two different scales with varying ranges (TAIS is out of eight while

DaCI is out of five), DaCI scores were adjusted using an eight-point-scale to proportionally fit

the scores out of eight using a simple equation: "Adjusted Score = (Raw Score / 5) x 8".

This formula was applied to all the scores for DaCI.

Given that DaCI has yet to be a standardized published scale, the researcher followed the same

steps conducted for TAIS to interpret DaCI. This means that the same cut-off score used for the

overall scoring of TAIS was also used for DaCI. In addition, because this study aims to compare

the scores of both scales to identify potential relationships between competence and attitudes,

having the same cut-off scores for both scales was suitable.

Statistical Methods

Excel Data Analysis and the statistical software Jeffreys's Amazing Statistics Program

JASP were both used for the analysis of the data. First, descriptive analysis for each subscale was

conducted in Excel for both scales. Next, Pearson's Correlation test was performed on JASP to

recognize and identify whether or not there is a potential correlation between DaCI scores and

TAIS scores. This allowed for the quantification of the relationship between the current study's

variables (i.e. competence levels and attitudes towards IE) as well as the direction of the

relationship (i.e. whether they are positively or negatively correlated). Because the sample size

was over 30, normality was automatically assumed and there was no need to run a normality test.

III. Results

Descriptive Statistics

Scores for each of the DaCI subscales were calculated separately. Instructional Decision Making (IDM) (M = 6.329, SD = 1.159, n = 31), Educational Assessment (EdA) (M = 6.19, SD = 1.014, n = 31), Identification of Students with SEN (IdSEN) (M = 4.869, SD = 1.581, n = 31), and Progress Monitoring (PoM) (M = 5.899, SD = 1.41, n = 31). An overall score for DaCI as a whole was also given (M = 5.824, SD = 1.66, n = 31). IDM had the highest scores with a mean score of 6.32, and IdSEN had the lowest scores with a mean score of 4.86 (view Table 1). On average, teachers scored high in Instructional Decision Making (6.329 > 5.89), Educational Assessment (6.199 > 5.89), and Progress Monitoring (5.899 > 5.89), and scored within the average range in Identification of Students with SEN (3.07 < 4.869 < 5.89). Teachers' overall score was also within the average range but was quite close to reaching the "high" cut-off score (3.07 < 5.82 < 5.89). This is based on the cut-off scores discussed in the method, which were calculated from the TAIS cut-offs. The results of DaCI scores suggest that teachers in Egypt perceive that they are competent enough to teach in inclusive classrooms.

Table 1

DaCI Descriptive Scores

	IDM	EdA	IdSEN	PoM	Overall
Mean	6.32	6.19	4.86	5.89	5.89
Std. Deviation	1.15	1.01	1.58	1.41	1.02

Scores for each of the TAIS subscales were also given. Problems with Inclusion (Component 1) (M = 3.779, SD = 1.112, n = 31), Social Benefits of Inclusion (Component 2),

(M = 4.535, SD = 0.914, n = 31), Implications of Inclusion for Teaching Practice (Component 3) (M = 2.282, SD = 0.877, n = 31), and Implications for Teachers Addressing Needs of Students with Special Educational Needs (Component 4) (M = 3.105, SD = 1.030, n = 31). An overall score TAIS as a whole was also given (M = 3.425, SD = 0.982, n = 31). Social Benefits of Inclusion (Component 2) had the highest scores with a mean score of 4.53, while Implications of Inclusion for Teaching Practice (Component 3) had the lowest scores with a mean score of 2.82 (view Table 2). On average, teachers scored within the average range in Problems with Inclusion (3.26 < 3.779 < 5.97), Social Benefits of Inclusion (4.16 < 4.535 <6.84), and Implications for Teachers Addressing Needs of Students with Special Educational Needs (2.46 < 3.105 <5.49), and they scored low in Implications of Inclusion for Teaching Practice (2.282 < 2.43). This is based on the cut-off scores discussed in the method, which were established and shared by the authors of TAIS. Teachers' overall score on TAIS fit within the average range but was close to reaching the "low" cut-off score (3.07 < 3.425 < 5.89).

Table 2

TAIS Descriptive Scores

	Component 1[a]	Component 2[b]	Component 3[c]	Component 4[d]	Overall
Mean	3.77	4.53	2.28	3.1	3.53
Std. Deviation	1.11	0.91	0.87	1.03	0.81

[a] Problems of inclusion of SEN pupils in mainstream classes.
[b] Social benefits of inclusion of SEN pupils in mainstream classes.
[c] Implications of inclusion for teaching practice.
[d] Implications for teachers addressing the needs of children with SEN.

Correlation

Results of Pearson's correlation test demonstrate that the correlation between DaCI and TAIS scores was positive but not statistically significant (r = 0.203, p = 0.136). Given that r(31) is closer to 0 than it is to 1, this suggests that there is no correlation. In parallel, because p > 0.05,

then the correlation is not statistically significant, meaning that no correlation can be assumed

(view Table 3).

Table 3

Pearson's Correlation

		DaCI Scores	TAIS Scores
1. DaCI Scores	r	–	0.203
	p-value	–	0.136
2. TAIS Scores	r	0.203	–
	p-value	0.136	–

IV. DISCUSSION

Teachers' Perceived Competence

As it was previously mentioned in the results, the scores of the DaCI questionnaire revealed that teachers perceive themselves to have high self-competence when it comes to teaching in inclusive classrooms. This is not aligned with the literature, as previous research suggests that teachers in Egypt and other countries in the MENA region face multiple barriers that hinder their ability to reach inclusive classrooms. As discussed in the literature review, some include lack of awareness of what inclusion means and practical inclusive practices across different stakeholders (Abbas, 2023; Hassanein et al., 2021), limited teacher training (Humanity & Inclusion, 2022), non-accommodating and rigid curriculums (Ahmed, 2012), and negative attitudes towards inclusion (Ghoneim, 2014; El-Ashry, 2009; El-Zouhairy et al., 2014).

Similarly enough, the results of the current study also suggest that general education teachers in Egypt believe that their colleagues (i.e. other teachers in Egypt) do not have the qualifications or training needed to be able to teach in classrooms with children with SEN. This was recognized in teachers' responses to the TAIS scale. Through TAIS, 87.2% of participants disagreed to the statement "normal classroom teachers possess a great deal of the expertise necessary to work with an SEN child", another 96.6% disagreed to "Regular classroom teachers have sufficient training to teach children with SEN", and 64.5% disagreed that "Parents of an SEN child present no greater problem for a teacher than those of a non-SEN-child". 96.7% of participants have also agreed that "Inclusion of SEN children necessitates extensive retraining of regular classroom teachers", and another 87.2% have agreed that "Diagnostic-prescriptive

teaching is better done by special education teachers than by normal classroom teachers". It is assumed that if teachers believed that their fellow colleagues were competent enough to teach inclusively, then they would respond differently to such statements and would believe that teachers in Egypt would be able to manage classrooms with diverse learners.

It is important to also recognize that DaCI does not evaluate teachers' level of competence, but rather their perceived levels of competence, as self-report scales are by definition based on self-perceptions. This discrepancy between teachers' high perceived level of self-competence and individual ability based on their scores in DaCI versus the lack of knowledge, awareness, training, and experience that the literature highlights and is also demonstrated through teachers' scores in TAIS, may be due to multiple factors.

First and foremost, a lack of self-awareness could allow teachers to believe that they are more skilled and competent than they actually are. The Dunning-Kruger Effect is a cognitive bias that suggests that individuals who have limited skills in a specific area or field may overestimate their abilities due to a lack of awareness of what skillfulness, mastery, and competence mean in this domain (Schlösser et al., 2013). Said differently, this theory suggests that individuals do not know what they do not know. Similarly enough, teachers may not be aware of their finitude or limitedness, when it comes to teaching inclusively, because they may not be aware or understand the requirements needed to teach in such settings, and they may not have a clear understanding of what inclusive education truly means.

Another factor contributing to teachers' high perceived abilities may be their long years of experience. Out of the 31 participants, 16 of them stated that they had 10+ years of experience (responses varied between 10 to 34 years). Having many years of experience could give teachers the impression that they automatically qualify to teach inclusively and that they have the

knowledge and awareness they need to be able to successfully teach diverse learners. However, a study assessing teachers' years of experience and the quality of their teaching found that teachers with 0 to 3 years of experience did not show any evidence of offering lower-quality teachingthan teachers with 4 to 5 years of experience. In fact, the study even demonstrated that, with time, teachers' quality of teaching declined as their years of experience increased (Graham et al., 2020). This could primarily be because the more experience teachers receive, the less open they are to change, as they believe that they have managed to deal with diverse classrooms in the past using specific traditional methods, so there is no need for them to change their teaching styles (Churchward et al., 2019). However, inclusive education requires flexibility, adaptability, and openness to acquiring specialized skills such as learning how to write Individualized Education Plans (IEPs) and implementing new behavior and classroom management techniques.

Another noteworthy factor, that could have contributed to the perceived high self-competence teachers have expressed about themselves, is comparison. As discussed previously, 71% of the study's participants expressed that they have completed special education courses in the past. It is true that in some contexts and cultures, especially in the Arab region, it can be common for teachers to receive very limited training (in general, but also especially related to IE) as they begin their teaching career (Parnell, 2017). This could encourage teachers to believe that they are competent, skilled, and knowledgeable enough to teach inclusively just by comparison to other educators, who may not have received any training at all. Therefore, the limited competence of others may increase teachers' perceived self-competence, meaning that this perception would come from comparison rather than objective measures and skills.

It is also important to recognize that out of the 31 participants involved in the study, when asked to take the DaCI questionnaire, 64.4% of participants disagreed with the statement "I

have ample experience in writing special education reports". Writing a special education report and Individualized Education Plans (IEPs) is arguably one of the most important skills to have when teaching in an inclusive classroom. This is primarily because it provides personalized instruction, and clear communication between all stakeholders involved, regarding the student's goals, objectives, and the interventions that will be used to support them. Efficient reports also serve as a supportive tool for monitoring student progress which is crucial for effective and successful inclusive learning (or any learning in that matter).

Another possibly significant outcome to address from the findings would be that out of the four components of DaCI (Instructional Decision Making, Educational Assessment, Identification of students with SEN, and Progress Monitoring), teachers scored lowest in Identification of students with SEN. This may be because the three remaining categories are generally (and ideally) used by all educators, regardless of the type of students they teach. Therefore, a teacher does not need to be an expert in the field of special or inclusive education to be skilled in instructional making, educational assessment, and progress monitoring. However, Identification of Students with SEN requires a more advanced and specific level of training, experience, and knowledge.

Teachers' Attitudes Towards Inclusion

As discussed earlier, lower scores on TAIS suggest more negative attitudes towards inclusion, whereas higher scores suggest more positive attitudes. Based on the results of the current study, it was found that teachers scored low on Component 3 (Implications for Teachers Addressing Needs of Students with Special Educational Needs) and their overall score was also low. Therefore, the results of TAIS suggest that teachers in Egypt have negative attitudes towards IE, which is aligned with what was expected to be found.

Based on previously conducted research suggesting that teachers' attitudes towards inclusion play an important role in its implementation in schools (Unianu, 2021), teachers' current attitudes towards inclusion could be a contributing factor to why inclusive practices have yet to be implemented in schools in Egypt (Kotb et al., 2024; Parnell, 2017). The less positive teachers' attitudes are towards IE, the less likely it is for it to take place (Ahmed, 2012; Forlin et al., 2008). Therefore, no matter how many laws and regulations the government establishes around the inclusion of people with disabilities, if teachers and other stakeholders involved in schools do not have positive attitudes towards inclusion, inclusive practices will be far more challenging to implement.

Many factors could contribute to teachers' doubts towards inclusion, with the first and most evident being the lack of adequate training, resources, and support available for them (Hassanein et al., 2021). While it is an important field to provide training in, teacher training programs in Egypt do not pay much attention to the subject of neurodiversity and inclusive practices (Parnell, 2017). As a result, when teachers do not feel equipped or prepared, structural barriers within the educational system might affect their attitudes towards the inclusion of students with SEN.

The amount of support and facilities teachers are provided varies, heavily depending on the type of school they teach in (i.e. private or public schools). Private international schools are typically more open to including children with disabilities than public schools are, because the rigid nature of the Egyptian National curriculum does not leave much room for adaptation or flexibility, whether it is in terms of instruction styles and delivery, or in assessment practices (Kotb et al., 2024). As discussed in the literature, many schools are not open to the idea of inclusion because they believe that it would create logistical and financial complications in the

school and it could be an additional burden to teachers and other stakeholders involved

(Hassanein et al., 2021; Kotb et al., 2024). This was also reflected in the responses teachers gave

to some of the items in TAIS. As it was previously mentioned, out of the 31 participants, 7

teachers strongly agreed and 10 teachers agreed that "A SEN child's classroom behavior

generally requires more patience from the teacher than does the behavior of a non-SEN child". 9

participants strongly agreed and 10 participants agreed that "Inclusion of SEN children requires

significant change in regular classroom procedures". Additionally, 8 participants agreed that "It

is likely that an SEN child will exhibit behavior problems in a normal classroom setting". It is

important to bear in mind that all of the participants involved in the current study were private

international school teachers in Egypt. It is therefore expected that public school teachers would

hold even more negative attitudes towards the inclusion of diverse children in schools due to the

rigid restrictions they face.

Another challenge expressed in the literature that could contribute to teachers' negative

attitudes towards inclusion would be the overcrowded classrooms they typically teach in

(Handicap International, 2022; Kotb et al, 2024). This is especially common in public schools in

Egypt. Managing a large classroom is already a challenging responsibility for teachers in and of

itself. Therefore, just the thought of including more children who would require more

individualized attention in the classroom can be anxiety-provoking for teachers, especially if

they do not have much experience in working with diverse learners.

Finally, while the active efforts that have been made by the government to provide better

opportunities for children with LDs and disabilities cannot be neglected, there is still a lack of

awareness in public opinion around the rights of people with disabilities and the benefits that

come with including them and allowing them to be active members of society. There is still a

negative cultural belief and social stigma around disabilities in Egypt, primarily because they are still viewed from the charity lens rather than the human rights model (Hassanein et al., 2021). When children with LDs are seen from the lens of the charity model, they are perceived as passive individuals who need help from others. It makes sense that teachers view the inclusion of diverse children in general schools as an obstacle and burden if all they see in children is passiveness and the need for assistance from others. The human rights model on the other hand would allow teachers and other individuals to look beyond the child's difficulties and recognize their strengths and human nature above all else. A shift in this perspective may change people's views on diversity and allow parents, schools, teachers, social workers, and policymakers to be more open to the idea of inclusion.

Correlation Analysis

To assess the relationship between perceived competence and attitudes (i.e. through responses from DaCI and TAIS) on a deeper level, Pearson's correlation test was conducted. As stated previously, the findings showed that there was no significant correlation between DaCI and TAIS scores ($r = 0.203$, $p = 0.136$). This means that teachers' perceived diagnostic competence did not have a significant influence on their responses when discussing their attitudes towards IE. Based on these findings, it can be concluded that there is no correlation between teachers' perceived competence in teaching inclusively and their attitudes towards IE.

It is important to consider contextual factors when addressing the causes that may have compromised the significance of the relationship that was dealt with in this study. First and foremost, for this research, teachers' competence levels were not assessed, but rather it was their perceived competence that was dealt with. As discussed earlier, perceptions are merely opinion-based beliefs. Because of the subjective nature of perceptions, it is possible that teachers'

responses may not have been an accurate representation of their actual competence levels when it comes to teaching in inclusive classrooms.

Additionally, the lack of flexibility and openness to adjustments and adaptations in the curriculum, instruction methods, and assessment types to fit the needs of diverse learners discussed in the literature makes it difficult for teachers to adequately teach different types of students (Kotb et al., 2024). A study focusing on teachers' attitudes towards inclusion and their professional development found that if teachers do not feel that they are supported with appropriate training and resources to be able to teach inclusively, their attitudes towards inclusion are more likely to be negative, even if they perceive themselves as being competent (Chatman, 2017). Therefore, no matter how competent teachers perceive themselves to be, if they are not given the space to be flexible in the classroom and to consider the needs of their students when working on their teaching methods, it is likely that they will not have positive attitudes towards inclusion. This suggests that competence alone cannot be sufficient to determine whether or not teachers will hold positive attitudes towards IE.

Another noteworthy factor to address would be the discrepancy between the theoretical training, courses, and certifications teachers receive, and on-ground practice and experience. Teachers may feel competent because they may be very knowledgeable about neurodiversity, special education, and inclusive education. However, theory and practice are different. A teacher may have taken special and inclusive education courses to learn about the theories and strategies that exist to support diverse learners. However, if they cannot apply this knowledge to practice, they might hold negative attitudes towards inclusion, when reality hits and they find themselves struggling to apply behavior management strategies and effective learning and assessment methods in their own classroom.

Practical Suggestions Following the RTI Approach

Based on the literature and the findings of this study, it cannot be denied that attempts to bridge the inclusion and diversity gap in Egypt have been made. That being said, the country is still far from reaching the desired goals of inclusion of people with LDs and other disabilities in society, especially in academic settings. The following suggestions and recommendations require minimal time, effort, and resources so they can be practically and easily implemented in schools in Egypt.

Using Appropriate Language

One of the most powerful and effective tools individuals possess is language. Teachers, parents, and other staff members at the school must be mindful of the language they use when discussing support services. For example, the term "shadow teacher", which is the most commonly used term in Egypt to refer to the special educator who assists the child in class, can often be problematic as it can have a negative connotation. The term "shadow" implies that an individual is glued to the student (the same way shadows are glued to people) and is passively there just to follow the child around and observe them without adding any value to their learning. Additionally, a shadow can also refer to something dark and unwanted, which can make the student reject this person (Sumayaa, 2023). In parallel, other children at the school may also share similar feelings or attitudes towards the shadow teacher. Therefore, to avoid the shadow, they would consequently also have to avoid the student, which would lead to rejection and isolation, unintentionally stigmatizing the student and singling them out. Another major issue with the term "shadow" is that it does not clearly communicate the purpose this person holds. This can confuse the general education teacher, the child's parents, the school, the child, and possibly even the persons themselves about what their role is and what they should be doing. On

the other hand, using the term "support teacher" instead creates a more accepting, inclusive, and respectful environment for the student as well as the educator. The word "support" better explains the role of this person in the classroom to all stakeholders involved. It clearly communicates that this teacher is there to actively assist the student, and provide them with more guidance and the support they need to be able to learn successfully (Aristya et al., 2024). Therefore, an act as simple as replacing the word "shadow" with the term "support" would make a significant difference on how this individual interacts with students, teachers, other staff members at the school, and parents. This is primarily because the term "support" describes the role of the educator more accurately and promotes a more positive and empowering environment.

Accepting Differences

One of the core values of RTI is celebrating differences. This model strives to serve and accommodate all students and acknowledges the diversity in children's learning styles, preferences, and needs. This is reflected through the tailored and individualized interventions RTI focuses on. Teaching children from a young age to be accepting of all their peers, no matter how different they may be from one another, whether in terms of gender, age, race, ethnicity, physical appearance, socio-economic background, or ability, fosters a welcoming and inclusive environment. It also teaches children about empathy and helps them develop social and soft skills. Furthermore, when children are taught to accept everyone early on, this mindset will stay with them as they get older, which will in turn foster a more open-minded generation that views diversity as a strength rather than a weakness, which can benefit the community as a whole. Teachers need to model positive inclusive behaviors for students to learn from them. From a young age, children learn by observing and modeling the behaviors of adults. If a teacher simply

shows respect, attention, kindness, and acceptance to everyone in the classroom, students will be encouraged to do the same (Moreu et al., 2021).

Screenings and Assessments

One of the most significant factors to consider when establishing an RTI approach is having adequate screening and progress monitoring tools. There are many cost-efficient resources available online that teachers and schools can use even with a low budget. Examples of budget-friendly screening tests include Dynamic Indicators of Basic Early Literacy Skills (DIBELS), which assesses students from Kindergarten to Grade 8's acquisition of literacy skills (DIBELS, 2024). In addition to the screenings DIBELS provides, it also offers progress monitoring tools that cater to different grade levels and age groups. DIBELS offers free resources as well as low-cost ones which are quite accessible. There is also a free version of the progress monitoring tool easyCBM available online for reading and mathematics for Kindergarten to Grade 8 (easyCBM, 2024). Other tools to assess and monitor student behavior also exist, such as the Strength and Difficulties Questionnaire (SDQ), which is available for children aged 2 to 17 (YouthInMind, 2022), the Social, Academic, and Emotional Behavior Risk Screener (SAEBRS), which, as its name indicates, assesses students' social, academic, and behavioral risk factors. It is available for students from Grades 2 to 12 (Illuminate Education, 2022). There is even a progress monitoring tool that has been specifically designed for RTI use. The RTI Action Network offers varied resources and templates for schools to use to support the progress monitoring of students when implementing RTI (Early Childhood Professional Learning, 2024). Many tools can be adapted and translated into the Egyptian language to be accessible to a wider and more diverse group of schools.

Working with Education and Psychology Students

In attempts to raise more awareness and teach a new generation about inclusive education practices, many initiatives have started taking place in different universities and institutions across Egypt, to increase the popularity of this field. Zagazig University launched a Graduate Program focusing on Learning Disabilities, promoting neurodiversity and inclusivity awareness. The American University in Cairo also released the first Graduate Diploma in Egypt in Inclusive Education back in 2020. Additionally, in collaboration with ESLESCA University, the NGO Baseera Foundation for Visual Impairment has established a Postgraduate Diploma in Low Vision and Blindness Studies to support individuals who are visually impaired.

Given the small caliber in Egypt of qualified experts in the fields of Education, Psychology, or other related fields, it may be fitting to utilize the knowledge postgraduate students are learning in these programs and have them work in schools as part of their fieldwork. This way, the graduate students can benefit from the on-field experience they are receiving and also complete their practicum hours productively, while also providing quality training for general education teachers. Because of the limited targeted training available for teachers in Egypt, this would be particularly helpful for them. The graduate students would also be supervised by their professors, so experts in the field will be involved and guarantee high-quality training services. Previous studies have found a positive correlation between collaborative professional development and successful school improvement, showing that working collaboratively with professionals in the field can increase teachers' confidence and make them feel more supported and empowered to apply more inclusive practices (Lelinge et al., 2022).

The graduate students can offer targeted training to help teachers gain more practical awareness about inclusive practices and interventions. Examples would include neurodiversity

and inclusion awareness campaigns, training on how to write IEPs, inclusive classroom management strategies, how to adjust the curriculum to cater to different children with different needs, how to assess students' performance, how to track and measure their progress, etc.

Limitations and Recommendations for Future Research

First and foremost, one of the most significant limitations of this study is the small sample size it used. In addition to the participants involved in the study being limited in number, they were also limited in terms of diversity. All 31 teachers involved in the study were teachers in private schools, with no contribution from public school teachers in the research. This was primarily because the study was conducted in English and participants needed to be fluent English speakers (which most public school teachers in Egypt are not). Therefore, it should be addressed that given the differences in teaching methods, knowledge, training, and experience between teachers in private and public schools in Egypt, having a sample of only private school teachers is far from being representative of the Egyptian teachers population. This makes the generalizability of the findings more difficult as public school teachers may face different challenges and experiences than private school teachers, especially given the rigid curriculum and more limited resources they have access to. Future research can translate the scales to Arabic to reach a wider and more diverse group of teachers across different regions in Egypt. Furthermore, it may be of benefit to expand the research to a wider audience and include other stakeholders such as school principals, school administrators, school psychologists (if applicable), and parents, as they all contribute to the learning of students and need to be involved in the inclusion process.

Another important limitation that needs to be addressed is the self-report nature of the scales that have been used in the study. This was particularly problematic with DaCI, as the scale

did not measure teachers' actual competence levels but rather just their opinions or beliefs about how competent they think they are. This is evidently a subjective approach that leaves much to be desired. Future research is recommended to assess teachers' actual competence levels using a more accurate method. This could be done through class observations to directly see how the teacher interacts with children in the classroom, how they deal with conflict resolution, assess their class management skills, etc. Additionally, interviews, where researchers could give teachers case study examples and ask them how they would react in different scenarios, may also give some insights regarding teachers' thought processes, their problem-solving skills, and their awareness levels on how to teach different learners effectively.

In addition to being a self-report scale, because the interpretation of the scoring for DaCI has not been published yet and no predefined cut-offs have been established, the scores have been interpreted the same way as TAIS. This is an important limitation to address because it may have compromised the outcome of the study. Using the same interpretation strategy for both scales made the comparison between the two easier and more consistent. However, because DaCI and TAIS assess two completely different concepts, using the TAIS cut-offs to interpret the results from DaCI may not have been suitable. This may have influenced the accuracy of the findings. For this reason, if future researchers intend to use DaCI, it is recommended that they establish standardized cut-off scores as well as clear interpretation guidelines before beginning their research.

V. CONCLUSION

This study sheds light on the current initiatives and challenges for inclusive education (IE) in Egypt. The purpose of the primary research was to examine the perceived self-competence of teachers in Egypt in relation to teaching inclusively, assess their attitudes towards IE, and evaluate the relationship between the two. Two pre-existing scales DaCI and TAIS were used to assess teachers' competence (DaCI), and their attitudes (TAIS). In addition, Pearson's correlation test was conducted to assess the significance of this relationship. Contrary to expectations, teachers reported having high levels of self-perceived competence, which is the opposite of what the literature suggests. On the other hand, teachers expressed having mostly negative attitudes towards IE. This was especially apparent through the scores of the TAIS scale.

On another note, the conducted correlation test did not find a significant correlation between teachers' perceived competence and their attitudes towards IE. This suggests that competence alone may not be a strong enough factor for generating teachers' positive attitudes. However, this is merely a suggestion as there may be different interpretations as to why no correlation was perceived in the study. Factors relating to the complexity of RTI and inclusive teaching could also be another example. Additionally, other factors like the lack of available resources, poor and limited training, and having an inflexible curriculum, may all contribute to the resistance teachers in Egypt have towards inclusion in schools.

The findings highlight the crucial importance of providing practical hands-on training for teachers and increasing their awareness about neurodiversity and the benefits of inclusion to change cultural perceptions and stigma around disabilities.

Given the noteworthy success the RTI model has received in other countries, adaptations

of this model to fit the Egyptian context are encouraged. Practical strategies that require minimal time, effort, funding, or skills are suggested to promote the application of RTI in Egypt. Encouraging the use of more inclusive terminology and adjusting common language around special education roles, utilizing cost-effective screenings and progress monitoring tools, and creating safe environments that celebrate diversity, can all make a significant impact on the quality of learning that children receive at school, and may pave the way for greater inclusivity in Egypt.

Finally, future research should be more open to having a larger and more diverse sample. Including public school teachers, especially in the sample, can add a lot of value and accuracy to the study. Additionally, using more objective measures to assess teachers' competence levels rather than self-reporting is also advised. Lastly, including different stakeholders such as parents, school administrators, school counselors, and principals in the study would be beneficial as they all play an important role in the success or failure of inclusive practices.

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LIST OF TABLES

Table 1

DaCI Descriptive Scores

	IDM	EdA	IdSEN	PoM	Overall
Mean	6.32	6.19	4.86	5.89	5.89
Std. Deviation	1.15	1.01	1.58	1.41	1.02

Table 2

TAIS Descriptive Scores

	Component 1[a]	Component 2[b]	Component 3[c]	Component 4[d]	Overall
Mean	3.77	4.53	2.28	3.1	3.53
Std. Deviation	1.11	0.91	0.87	1.03	0.81

[a] Problems of inclusion of SEN pupils in mainstream classes.
[b] Social benefits of inclusion of SEN pupils in mainstream classes.
[c] Implications of inclusion for teaching practice.
[d] Implications for teachers addressing the needs of children with SEN.

Table 3

Pearson's Correlation

		DaCI Scores	TAIS Scores
3. DaCI Scores	r	−	0.203
	p-value	−	0.136

4. TAIS Scores	r	0.203	–
	p-value	0.136	–

Table 4.

Teachers' Demographics

Variable	n
Gender	
Male	*1*
Female	*30*
Grade level taught	
Elementary (K - G6)	*16*
Middle school (G7 - G9)	*12*
High school (G 10 - G 12)	*3*
Type of school	
Private	*31*
Public	*0*
Took a special ed. course	
Yes	*22*
No	*8*
Highest degree obtained	
Bachelor's	*18*
Master's	*13*

Table 5.

Teachers' Demographics

Teachers' years of experience	n
1 year	1
2 years	3
3 years	1
3.1 years	1
4 years	3
5 years	1
7 years	3
8.3 years	1
9 years	1
10 years	4
11 years	2
12 years	1
13 years	1
15 years	2
16 years	1
18 years	1
23 years	1
25.4 years	1
30 years	1
34 years	1
Total	30

Table 6.

Descriptive Statistics for Teachers' Years of Experience

	Years of Experience
Valid	31
Mode	10
Median	10
Mean	10.7
Std. Deviation	8.3
Minimum	1
Maximum	34

Table 7.

Jasp Output - Pearson's Correlations for DaCI and TAIS Scores

Pearson's Correlations

Variable		DaCi Scores Overall	TAIS Scores Overall
1. DaCI Scores Overall	Pearson's r	—	
	p-value	—	
2. TAIS Scores Overall	Pearson's r	0.203	—
	p-value	0.136	—

Note. All tests one-tailed, for positive correlation.
* p < .05, ** p < .01, *** p < .001, one-tailed

Table 8.

Jasp Output - DaCI Descriptive Statistics

Descriptive Statistics

	DaCI Scores IDM	DaCI Scores EdA	DaCI Scores IdSEN	DaCI Scores PoM	DaCI Scores Overall
Valid	31	31	31	31	31
Mode	6.400ª	6.400ª	3.730ª	4.800ª	5.490ª
Median	6.600	6.400	4.800	5.940	5.870
Mean	6.329	6.199	4.869	5.899	5.896
Std. Deviation	1.159	1.014	1.581	1.410	1.028
Range	5.000	4.620	6.130	5.490	4.210
Minimum	3.000	3.380	1.600	2.510	3.630
Maximum	8.000	8.000	7.730	8.000	7.840
Sum	196.200	192.160	150.930	182.860	182.790

ª The mode is computed assuming that variables are discreet.

Table 9.

Jasp Output - TAIS Descriptive Statistics

Descriptive Statistics

	TAIS Category 1	TAIS Category 2	TAIS Category 3	TAIS Category 4	TAIS Scores Overall
Valid	31	31	31	31	31
Mode	3.140ª	4.000ª	1.750ª	3.250ª	3.450ª
Median	3.860	4.600	2.250	3.250	3.600
Mean	3.779	4.535	2.282	3.105	3.532
Std. Deviation	1.112	0.914	0.877	1.030	0.811
Range	4.570	4.000	3.250	3.750	3.250
Minimum	1.570	3.000	1.000	1.250	1.850
Maximum	6.140	7.000	4.250	5.000	5.100
Sum	117.150	140.600	70.750	96.250	109.500

ª The mode is computed assuming that variables are discreet.

LIST OF FIGURES

Figure 1.

Pie chart describing participants' profession

What is your profession?
31 responses

- General education teacher / homeroom teacher
- Other

100%
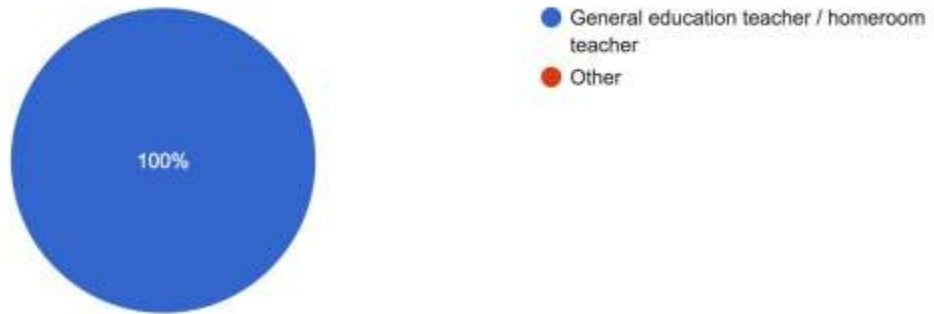
Figure 2.

Pie chart describing the grade level teachers teach

Which grade levels do you currently teach?
31 responses

- Elementary / primary school (Kindergarten to grade 6)
- Middle school (grades 7 - 9)
- High school (grades 10 -12)

41.9%

9.7%

48.4%
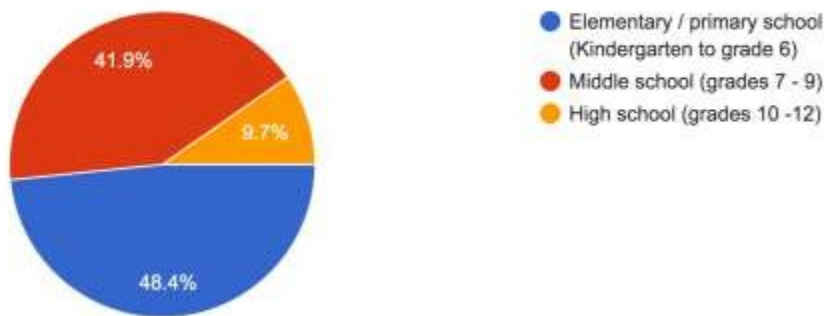
Figure 3.

Pie chart describing where participants teach

Where do you teach?
31 responses

● At a private school in Egypt
● At a public school in Egypt
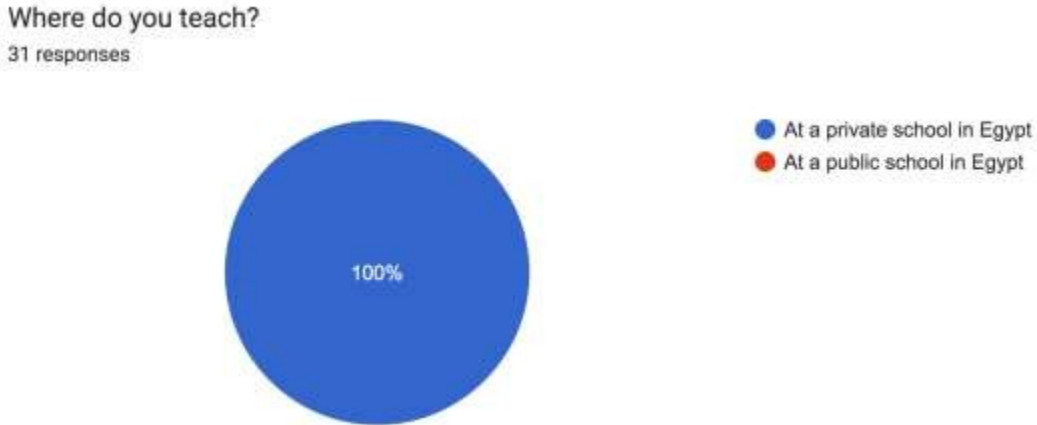
Figure 4.

Pie chart showing teachers' years of experience

Your length of teaching service since training is (please specify in years and months)
31 responses
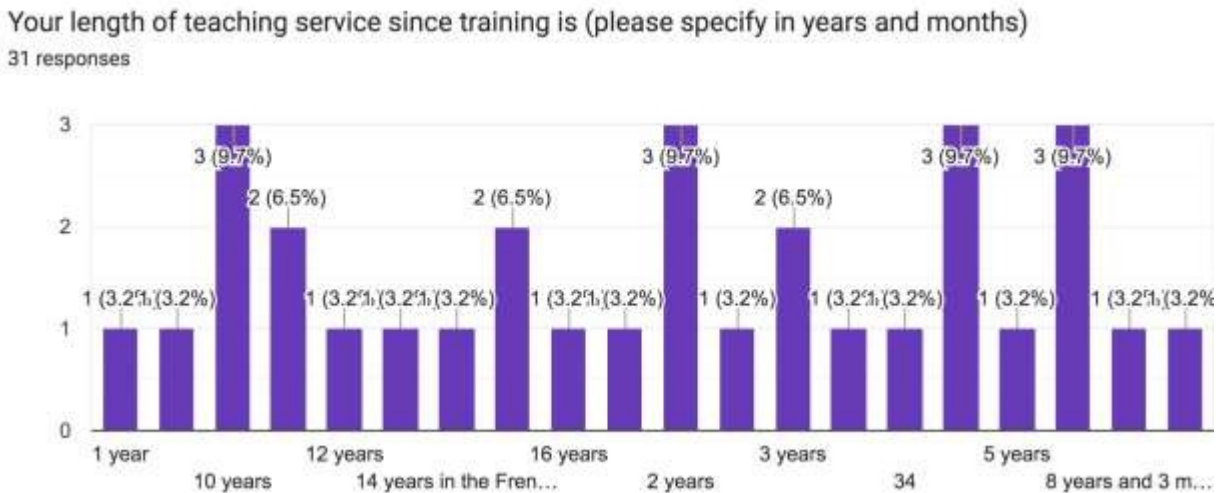
Figure 5.

Pie chart describing whether or not teachers have taken special education courses

Have you completed any special education courses? (If yes, please specify)
31 responses

- Yes
- No

29%

71%
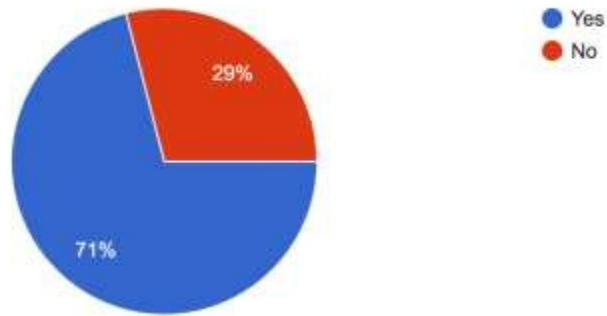
Figure 6.

Pie chart describing the special education courses participants took before

If you answered yes to the previous question, please specify what special education courses you took
21 responses

2 (9.5%) (9.5%)

1 (4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)(4.8%)   1 (4.8%

Diploma to teach Fre...   In my master's progra...   My postgraduate edu...   Post graduate diplom...   TEFL
Formation initiale de...   MA in Education   PGCEI   STEAM diploma   Tea...
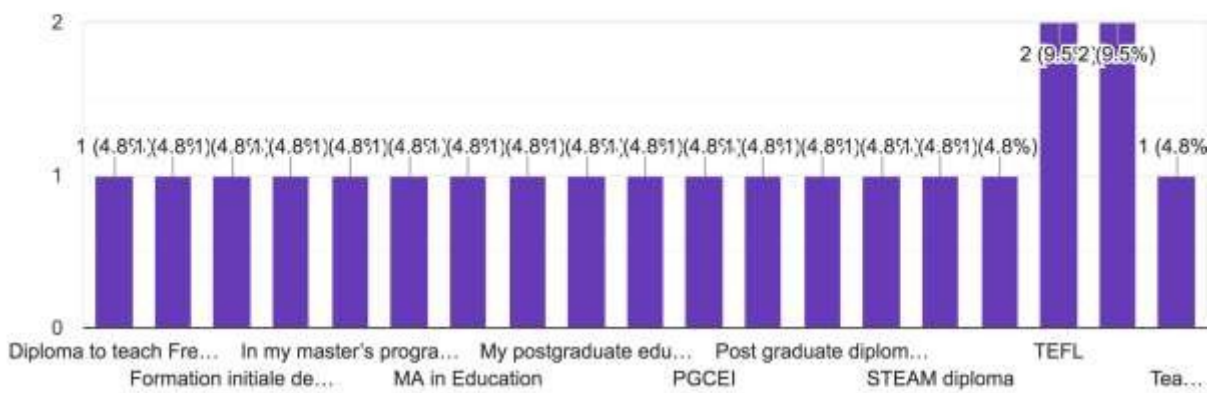
Figure 7.

Pie chart describing participants' English fluency

Are you fluent in English?
31 responses

- Yes
- No

100%

Figure 8.

Pie chart describing participants'gender

What is your gender?
31 responses

- Male
- Female

96.8%
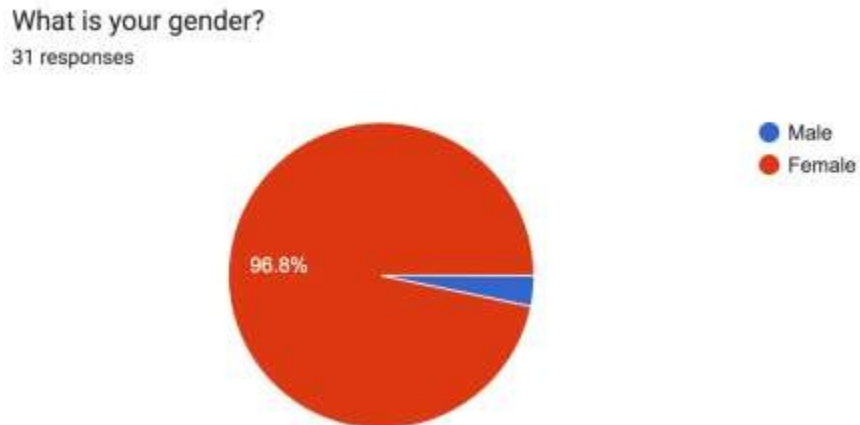
Figure 9.

Pie chart describing participants' highest level of education

What is the highest degree you have obtained?
31 responses

- Bachelor's degree (BA or university degree)
- Master's degree
- PhD
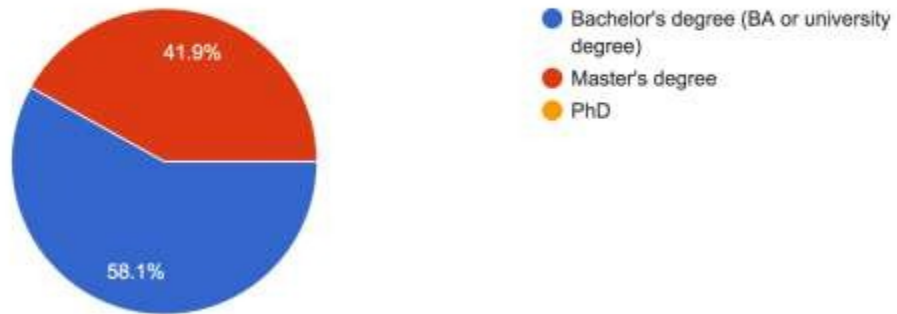
Figure 10.

Pie chart describing participants' responses to IDM01 from DaCI

IDM01) I know how to identify students with learning problems
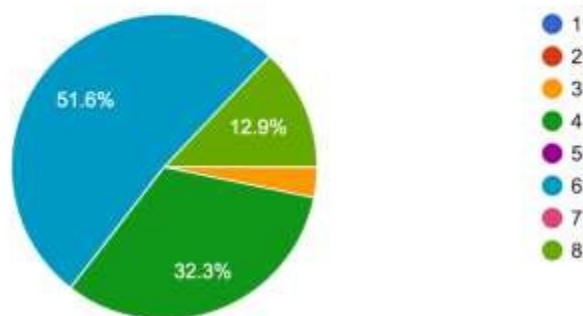31 responses

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
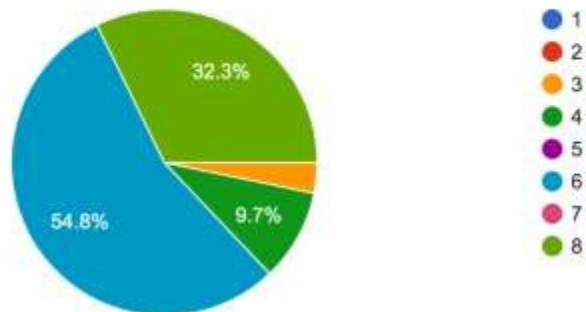
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 11.

Pie chart describing participants' responses to IDM02 from DaCI

IDM02) I am familiar with literacy approaches (i.e., reading, writing or mathematic)
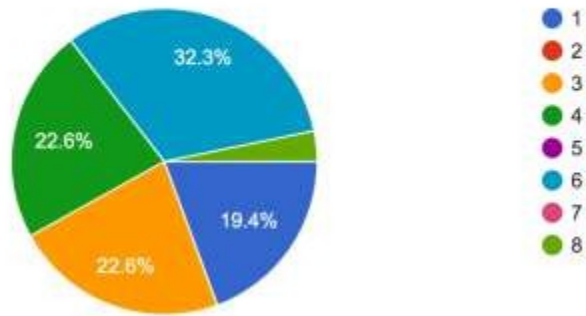31 responses
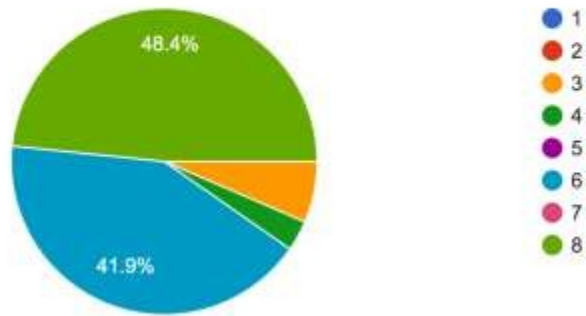
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 12.

Pie chart describing participants' responses to IDM03 from DaCI

IDM03) I am familiar with methods of how to support literacy development in reading, writing or mathematics
31 responses
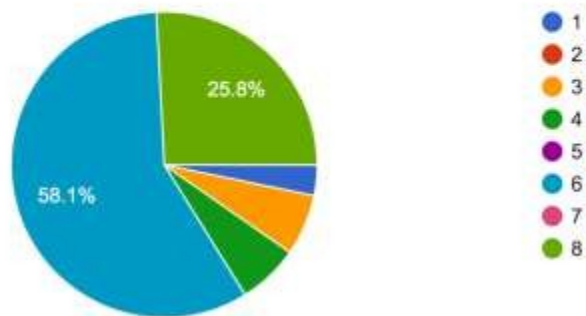
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 13.

Pie chart describing participants' responses to IDM04 from DaCI

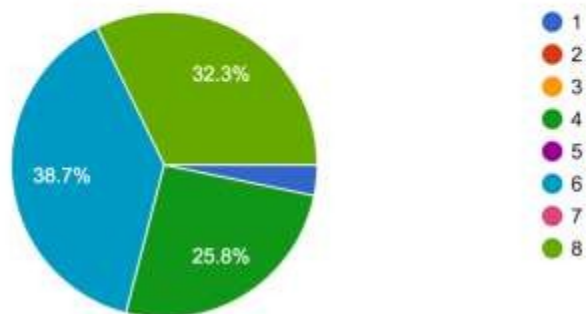IDM04) I know how to choose a suitable support strategy for a child
31 responses
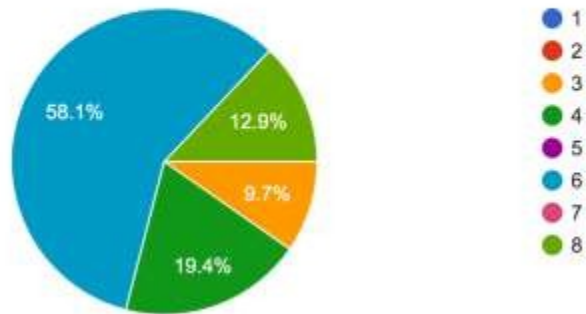
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 14.

Pie chart describing participants' responses to IDM05 from DaCI

IDM05) I know how to adapt a support strategy for literacy development
31 responses
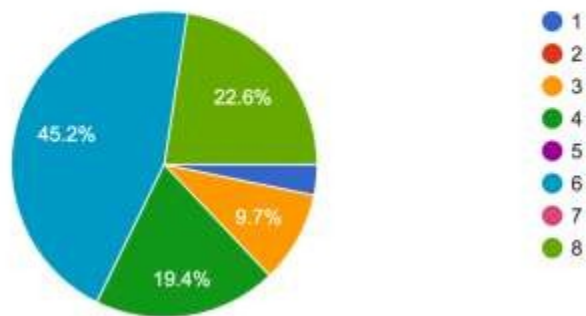
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 15.

Pie chart describing participants' responses to IDM06 from DaCI

IDM06) I know how to evaluate the level of fit of a specific support strategy for a child
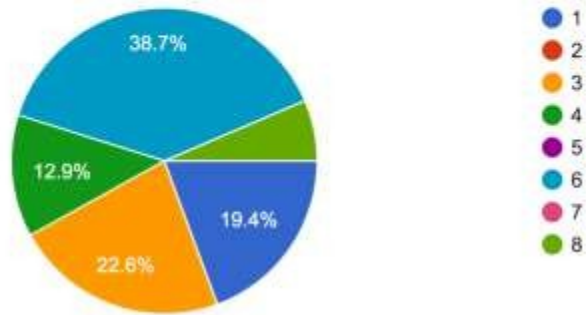31 responses
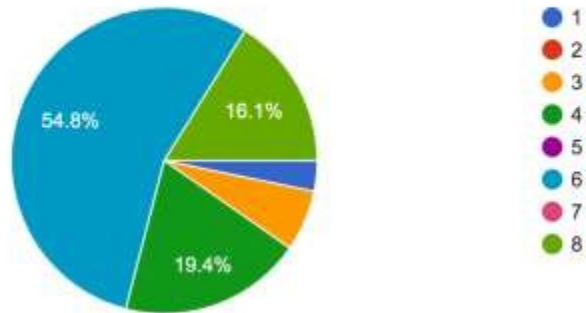
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 16.

Pie chart describing participants' responses to IDM07 from DaCI

IDM07) I am familiar with developing individualized material to be used for support independently
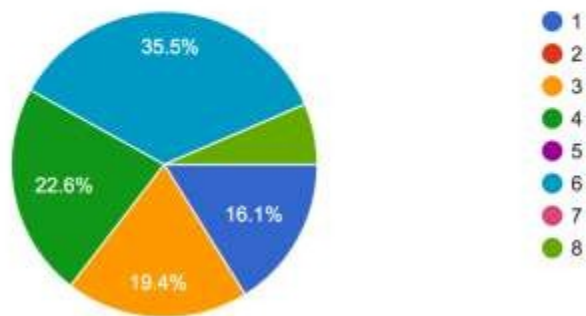31 responses
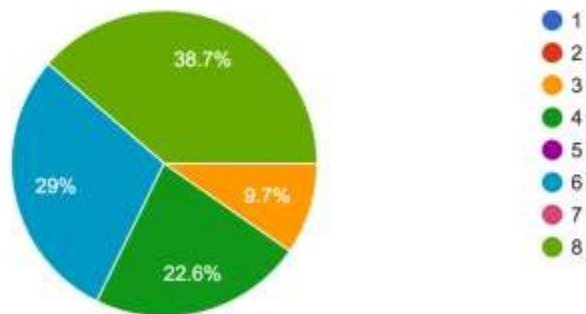
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 17.

Pie chart describing participants' responses to IDM08 from DaCI

IDM08) I know how to assess the reading, writing or mathematical literacy of a child when writing a school report
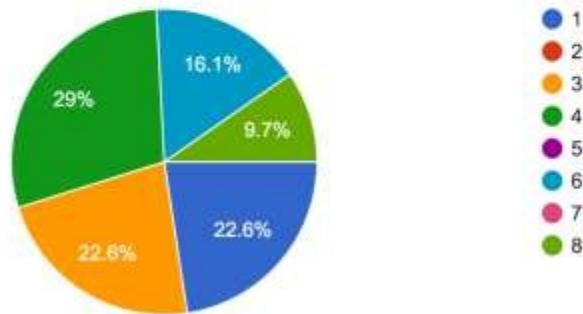31 responses
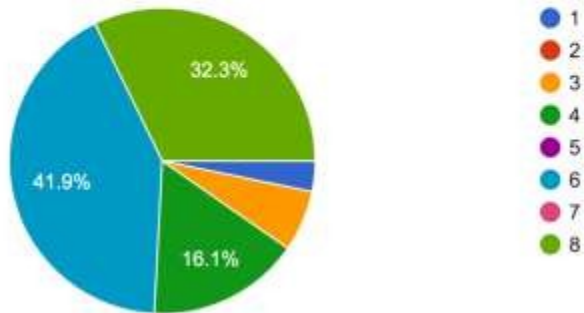
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 18.

Pie chart describing participants' responses to EdA01 from DaCI

EdA01) I know several informal and standardized tests for measuring the status quo (summative assessments)
31 responses
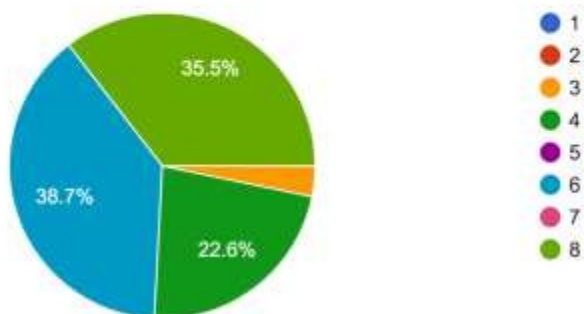
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 19.

Pie chart describing participants' responses to EdA02 from DaCI

EdA02) I am familiar with norm-reference values and their relevance in educational assessment
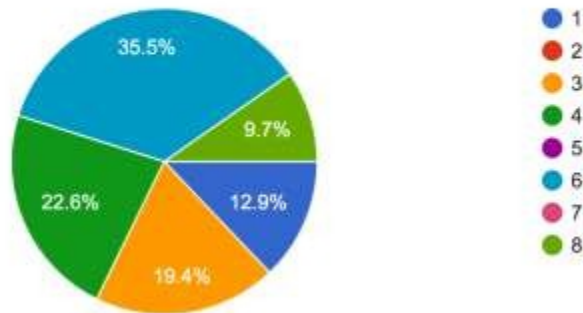31 responses
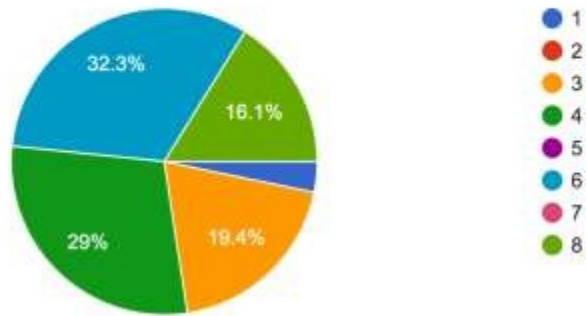
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 20.

Pie chart describing participants' responses to EdA03 from DaCI

EdA03)I choose an educational assessment based on its quality criteria
31 responses
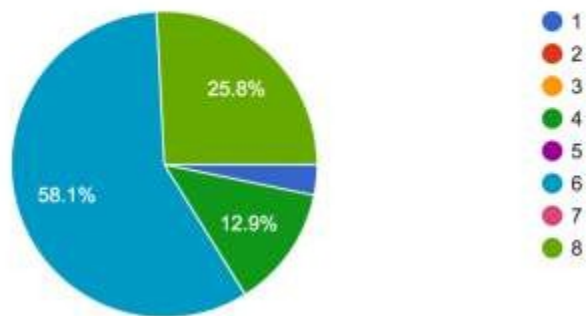
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 21.

Pie chart describing participants' responses to EdA04 from DaCI

EdA04) I choose an educational assessment test based on its user-friendliness
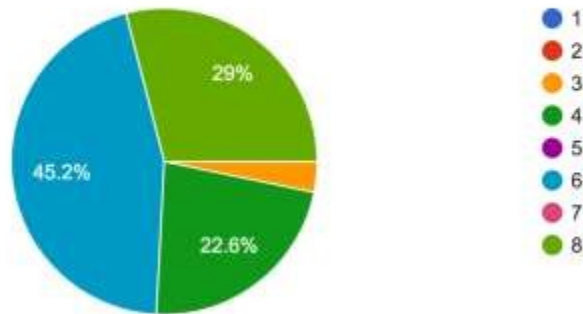31 responses
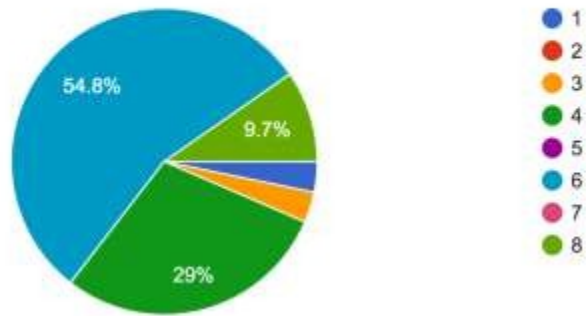
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 22.

Pie chart describing participants' responses to EdA05 from DaCI

EdA05) I know how to conduct informal and standardized tests for measuring the status quo of students and how to evaluate them
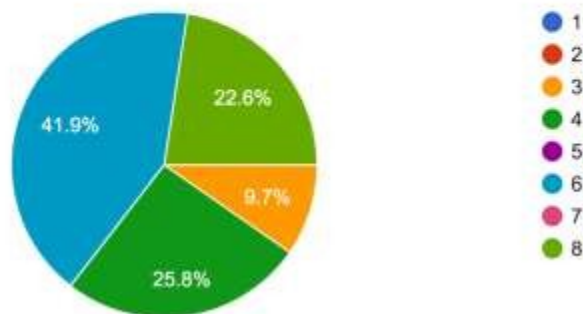31 responses
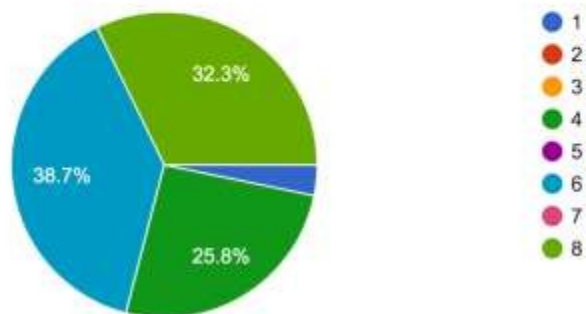
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 23.

Pie chart describing participants' responses to EdA06 from DaCI

EdA05) I know how to interpret results from standardized tests for measuring the status quo and how to assess educational aims
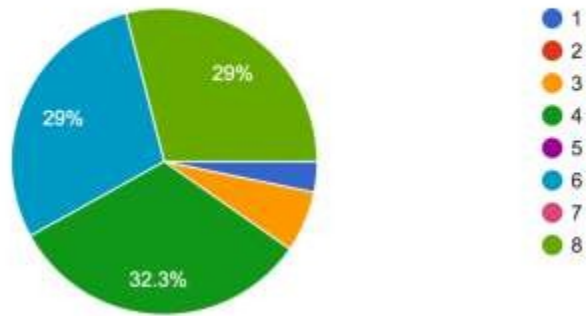
31 responses
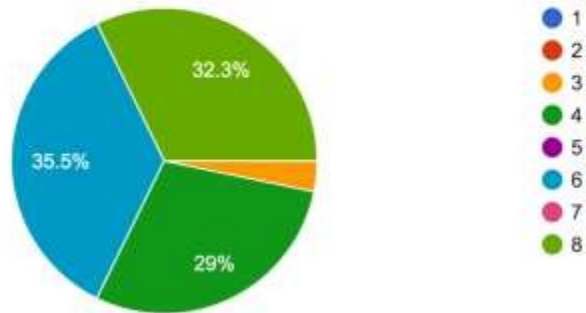
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 24.

Pie chart describing participants' responses to EdA07 from DaCI

EdA06) I know how to design informal tests for measuring the status quo independently (e.g., reading comprehension or number range extension tests)

31 responses
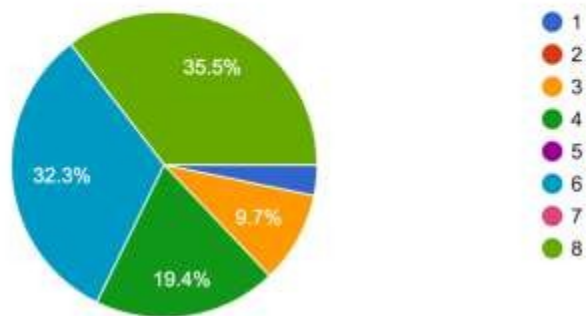
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 25.

Pie chart describing participants' responses to EdA08 from DaCI

EdA07) In everyday life at school, I know how to quickly and easily get a comprehensive overview of the achievement level of my class even without tests
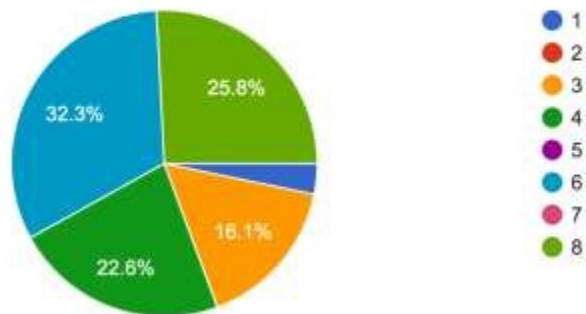
31 responses
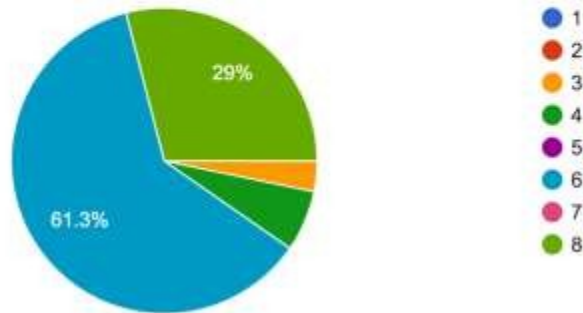
Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 26.

Pie chart describing participants' responses to EdA09 from DaCI

EdA08) If, in specific cases, there is no suitable standardized educational assessment available, I know how to adapt and use a standardized assessm...for concrete purposes (e.g., choosing subtasks)
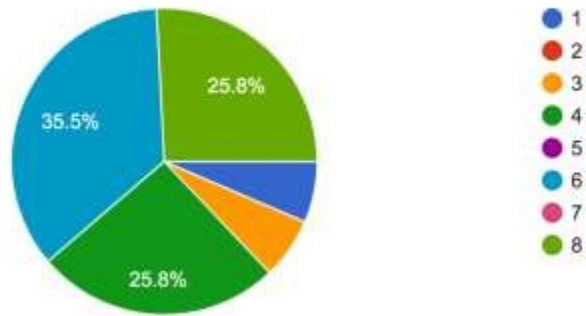
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 27.

Pie chart describing participants' responses to IdSEN01 from DaCI

IdSEN01) I have ample experience in writing special education reports
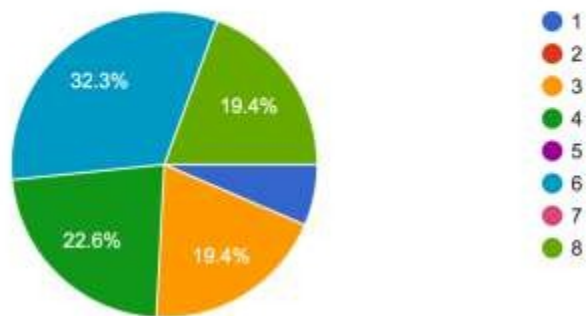31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 28.

Pie chart describing participants' responses to IdSEN02 from DaCI

IdSEN02) I am familiar with the steps necessary to be taken to assess a child's need for special educational support
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 29.

Pie chart describing participants' responses to IdSEN03 from DaCI

IdSEN03) I know how to conduct assessments to assess a child's need for special educational support
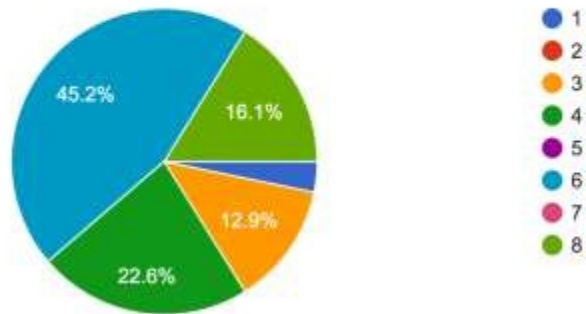
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 30.

Pie chart describing participants' responses to IdSEN04 from DaCI

IdSEN04) I know how to phrase the aims of special educational support

31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 31.

Pie chart describing participants' responses to IdSEN05 from DaCI

IdSEN05) I know different placements (also inclusive ones) and am familiar with providing advice on their advantages and disadvantages
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 32.

Pie chart describing participants' responses to IdSEN06 from DaCI

IdSEN06) I know how to check whether the aims of a special support strategy have been achieved
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 33.

Pie chart describing participants' responses to PoM01 from DaCI

PoM01) I am familiar with different instruments for progress monitoring (formative assessments)
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 34.

Pie chart describing participants' responses to PoM02 from DaCI

PoM02) I am familiar with the theoretical background and concepts of progress monitoring approaches
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 35.

Pie chart describing participants' responses to PoM03 from DaCI

PoM03) I know how to conduct and evaluate a progress monitoring instrument
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 36.

Pie chart describing participants' responses to PoM04 from DaCI

PoM04) I know how to interpret student progress monitoring data presented graphically
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 37.

Pie chart describing participants' responses to PoM05 from DaCI

PoM05) I know how to adapt instruction based on student progress monitoring data
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 38.

Pie chart describing participants' responses to PoM06 from DaCI

PoM06) I am familiar with designing an informal instrument for progress monitoring
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 39.

Pie chart describing participants' responses to PoM07 from DaCI

PoM07) I know how to evaluate the effectiveness of a support strategy
31 responses

Note: scores range from "not at all true" (1) to "completely true" (8)

Figure 40.

Pie chart describing participants' responses to item 1 from TAIS

1. Many of the things teachers do with non SEN students in a regular classroom are appropriate for SEN students (SEN = Special Education Needs)
31 responses
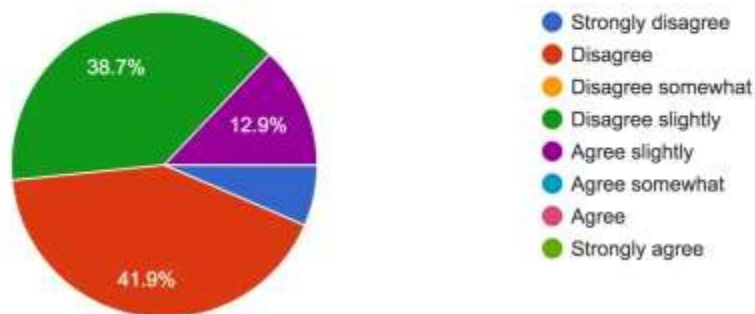
Figure 41.

Pie chart describing participants' responses to item 2 from TAIS

2. The needs of SEN students can best be served through special, separate classes
31 responses
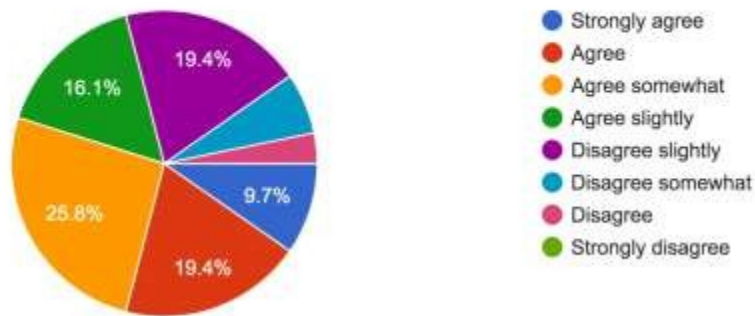
Figure 42.

Pie chart describing participants' responses to item 3 from TAIS

3. A SEN child's classroom behavior generally requires more patience from the teacher than does the behavior of a non SEN child
31 responses
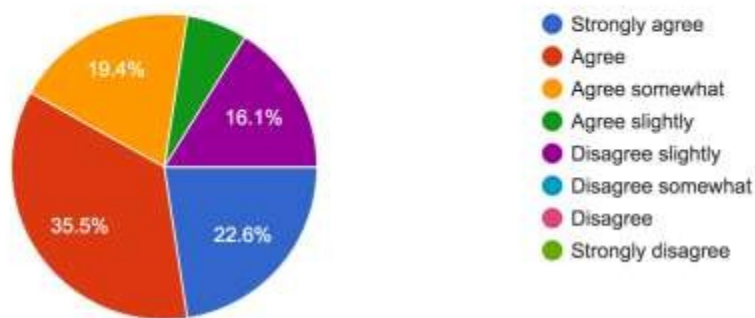
Figure 43.

Pie chart describing participants' responses to item 4 from TAIS

4. The challenge of being in a regular classroom will promote the academic growth of the SEN child
31 responses
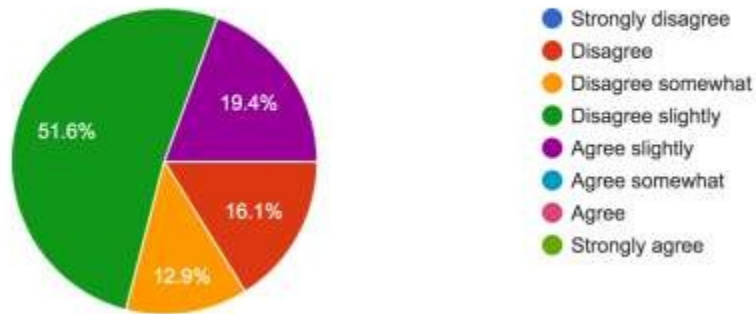
Figure 44.
Pie chart describing participants' responses to item 5 from TAIS

5. The extra attention SEN students require is to the detriment of the other students
31 responses
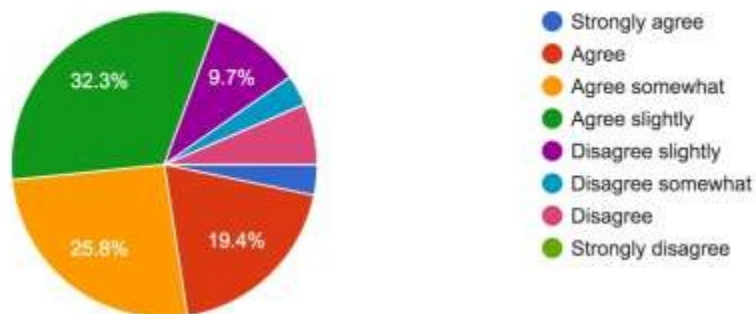
Figure 45.

Pie chart describing participants' responses to item 6 from TAIS

6. Inclusion offers mixed group interaction which fosters understanding and acceptance of differences

31 responses
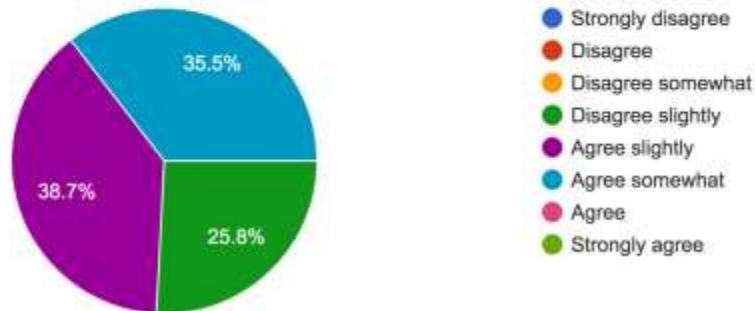
Figure 46.

Pie chart describing participants' responses to item 7 from TAIS

7. It is difficult to maintain order in a normal classroom that contains an SEN child

31 responses
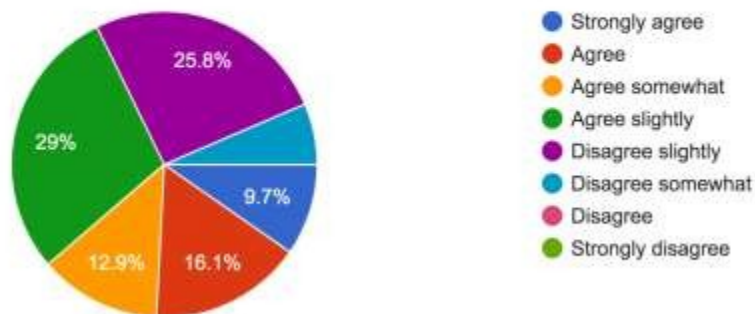
Figure 47.

Pie chart describing participants' responses to item 8 from TAIS

8. Normal classroom teachers possess a great deal of the expertise necessary to work with an SEN child

31 responses

- Strongly disagree
- Disagree
- Disagree somewhat
- Disagree slightly
- Agree slightly
- Agree somewhat
- Agree
- Strongly agree
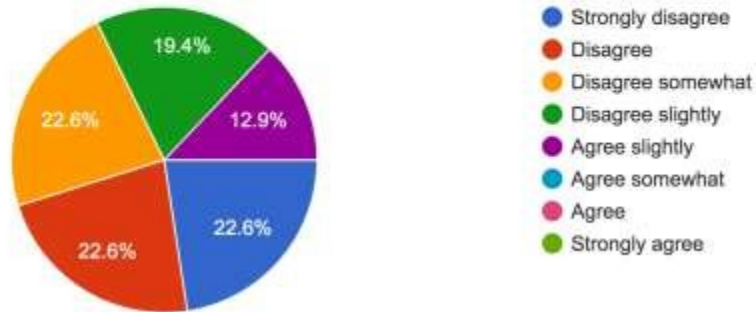
Figure 48.

Pie chart describing participants' responses to item 9 from TAIS

9. The behavior of SEN students sets a bad example for the other students

31 responses

- Strongly agree
- Agree
- Agree somewhat
- Agree slightly
- Disagree slightly
- Disagree somewhat
- Disagree
- Strongly disagree
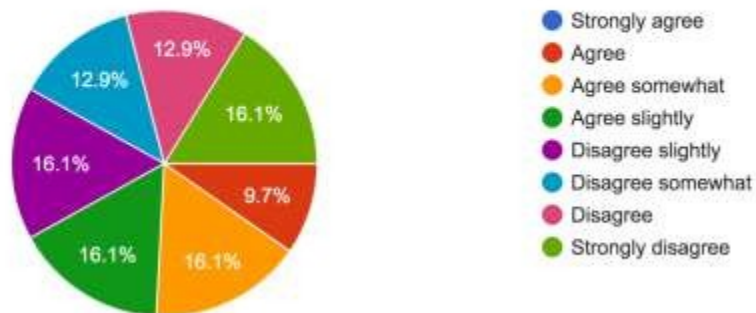
Figure 49.
Pie chart describing participants' responses to item 10 from TAIS

10. Isolation in a special class has a negative effect on the social and emotional development of an SEN child
31 responses
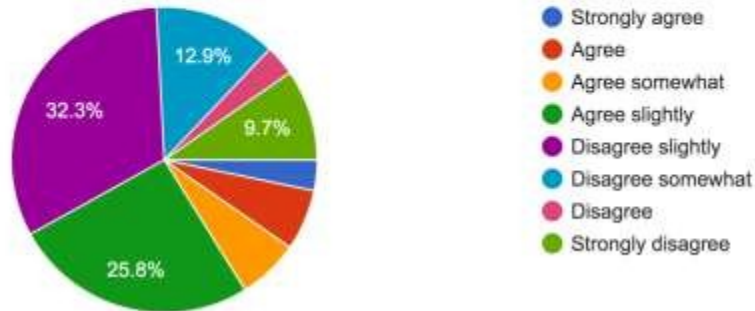
Figure 50.
Pie chart describing participants' responses to item 11 from TAIS

11. The SEN child probably develops academic skills more rapidly in a special classroom than in a regular classroom
31 responses
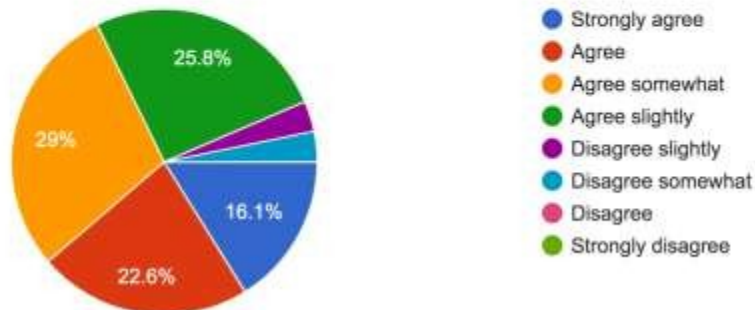
Figure 51.

Pie chart describing participants' responses to item 12 from TAIS

12. Most SEN children do not make an adequate attempt to complete their assignments
31 responses
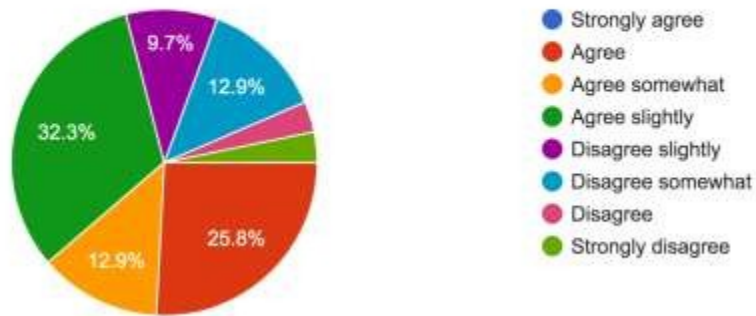
Figure 52.

Pie chart describing participants' responses to item 13 from TAIS

13. Inclusion of SEN children requires significant change in regular classroom procedures
31 responses
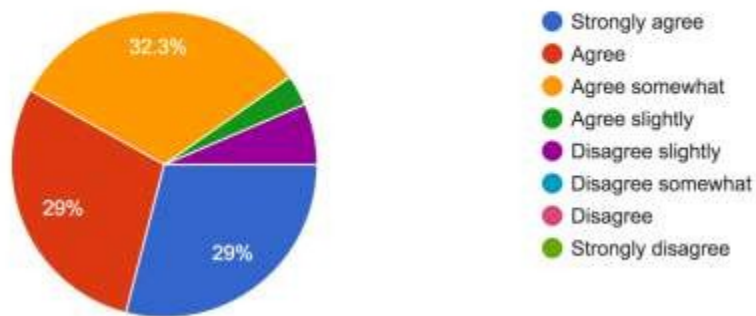
Figure 53.

Pie chart describing participants' responses to item 14 from TAIS

14. Most SEN children are well behaved in the classroom
31 responses

- Strongly disagree
- Disagree
- Disagree somewhat
- Disagree slightly
- Agree slightly
- Agree somewhat
- Agree
- Strongly agree

16.1%
48.4%
19.4%
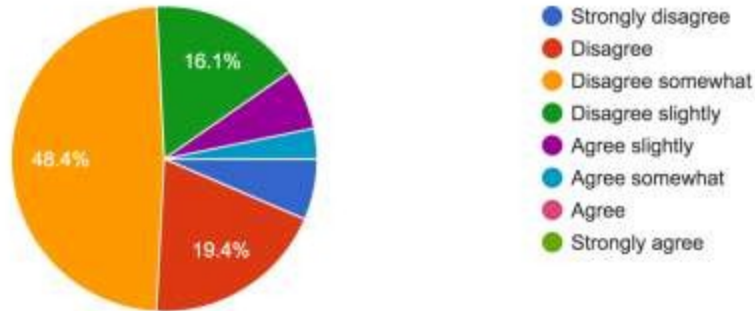
Figure 54.

Pie chart describing participants' responses to item 15 from TAIS

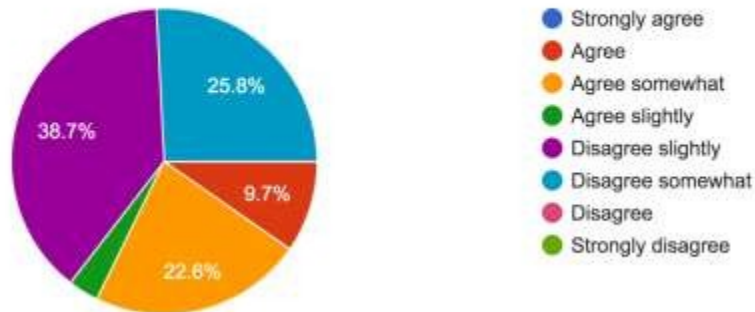15. The contact regular students have with SEN students may be harmful
31 responses

- Strongly agree
- Agree
- Agree somewhat
- Agree slightly
- Disagree slightly
- Disagree somewhat
- Disagree
- Strongly disagree

25.8%
38.7%
9.7%
22.6%

Figure 55.

Pie chart describing participants' responses to item 16 from TAIS

16. Regular classroom teachers have sufficient training to teach children with SEN
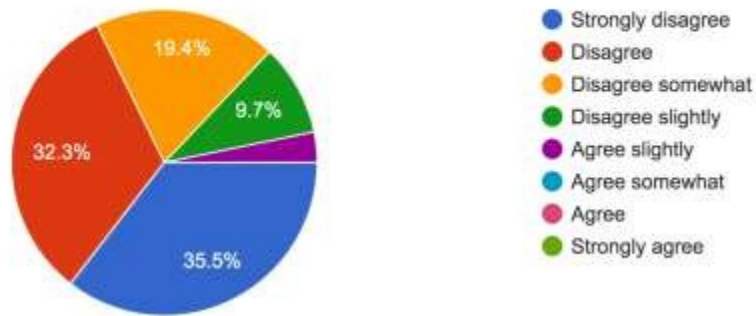
31 responses

Legend:
- Strongly disagree
- Disagree
- Disagree somewhat
- Disagree slightly
- Agree slightly
- Agree somewhat
- Agree
- Strongly agree

Figure 56.

Pie chart describing participants' responses to item 17 from TAIS
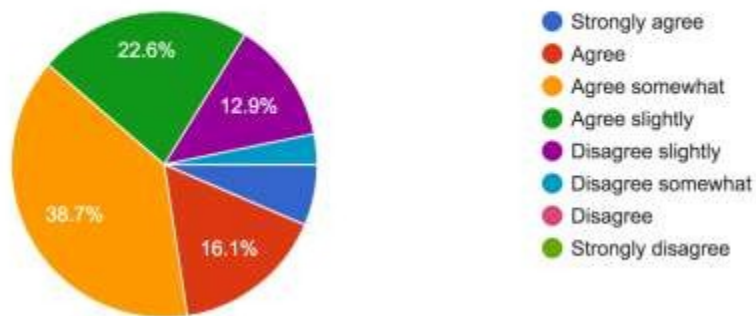
17. SEN students monopolise the teacher's time

31 responses

Legend:
- Strongly agree
- Agree
- Agree somewhat
- Agree slightly
- Disagree slightly
- Disagree somewhat
- Disagree
- Strongly disagree

Figure 57.

Pie chart describing participants' responses to item 18 from TAIS

18. Including the SEN child in the regular classroom promotes his or her social independence
31 responses

- Strongly disagree
- Disagree
- Disagree somewhat
- Disagree slightly
- Agree slightly
- Agree somewhat
- Agree
- Strongly agree
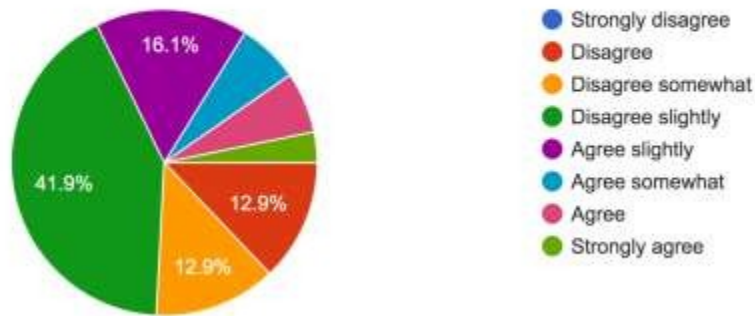
Figure 58.

Pie chart describing participants' responses to item 19 from TAIS

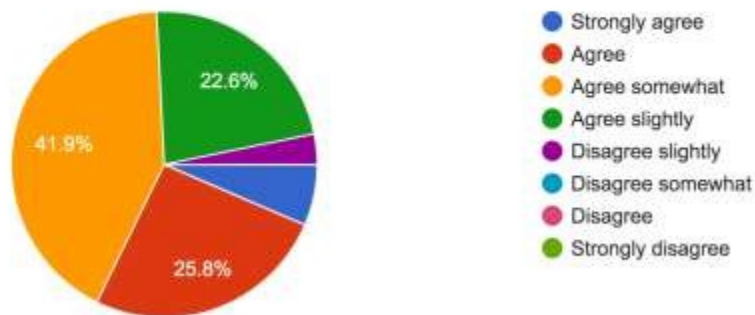19. It is likely that a SEN child will exhibit behavior problems in a normal classroom setting
31 responses

- Strongly agree
- Agree
- Agree somewhat
- Agree slightly
- Disagree slightly
- Disagree somewhat
- Disagree
- Strongly disagree

Figure 59.

Pie chart describing participants' responses to item 20 from TAIS

20. Diagnostic-prescriptive teaching is better done by special education teachers than by normal classroom teachers
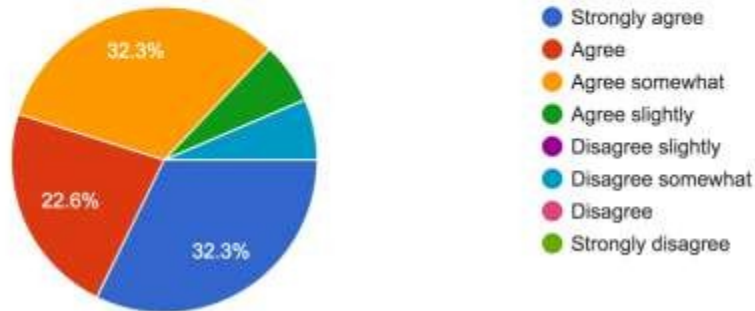
31 responses

Figure 60.

Pie chart describing participants' responses to item 21 from TAIS

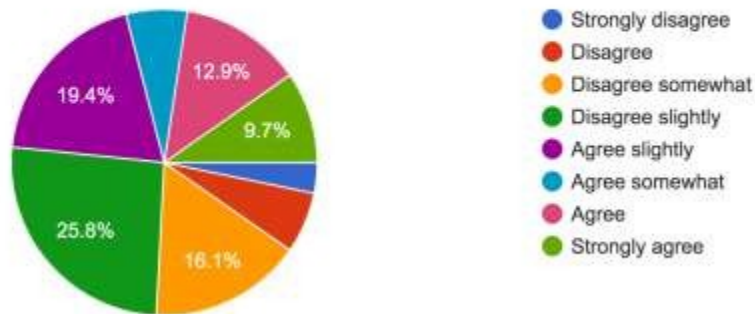21. The inclusion of SEN students can be beneficial for non-SEN students

31 responses

Figure 61.

Pie chart describing participants' responses to item 22 from TAIS

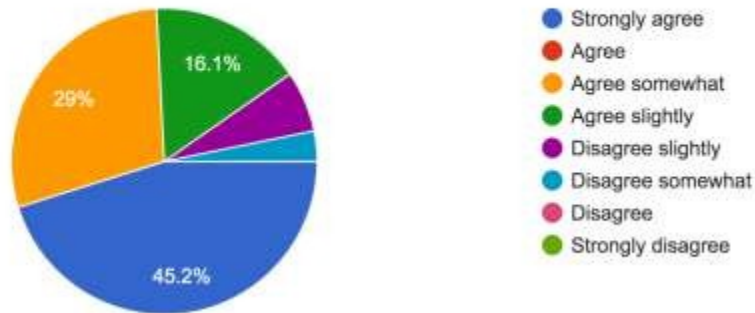22. SEN children need to be told exactly what to do and how to do it
31 responses

Figure 62.
Pie chart describing participants' responses to item 23 from TAIS

23. Inclusion is likely to have a negative effect on the emotional development of the SEN child
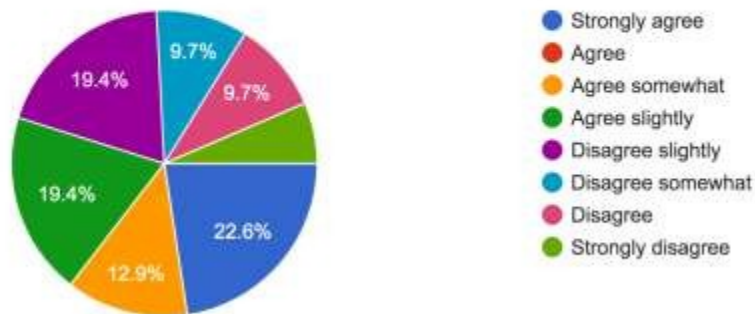31 responses

Figure 63.

Pie chart describing participants' responses to item 24 from TAIS

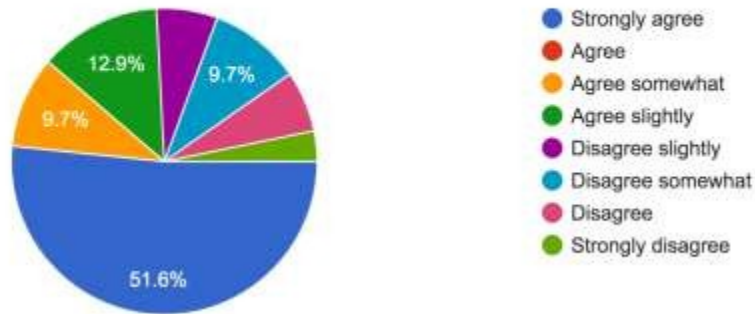24. Increased freedom in the classroom creates too much confusion
31 responses

Figure 64.
Pie chart describing participants' responses to item 25 from TAIS

25. The SEN child is socially isolated by non- SEN students
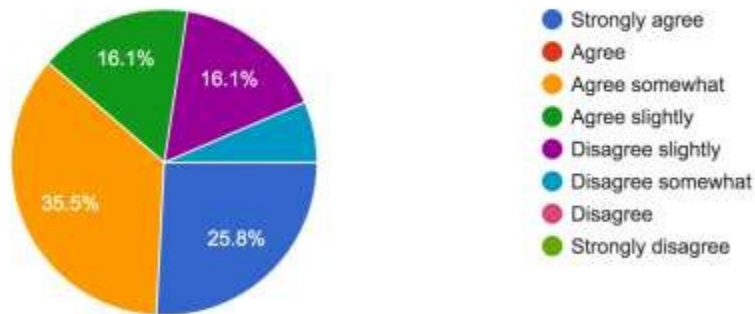31 responses

Figure 65.

Pie chart describing participants' responses to item 26 from TAIS

26. Parents of an SEN child present no greater problem for a teacher than those of a non SEN-child
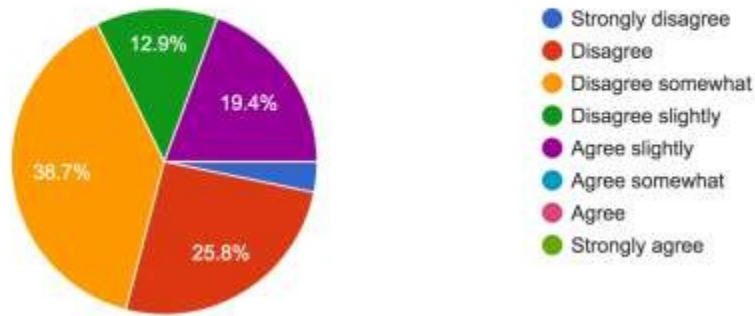31 responses

Figure 66.
Pie chart describing participants' responses to item 27 from TAIS

27. Inclusion of SEN children necessitates extensive retraining of regular classroom teachers
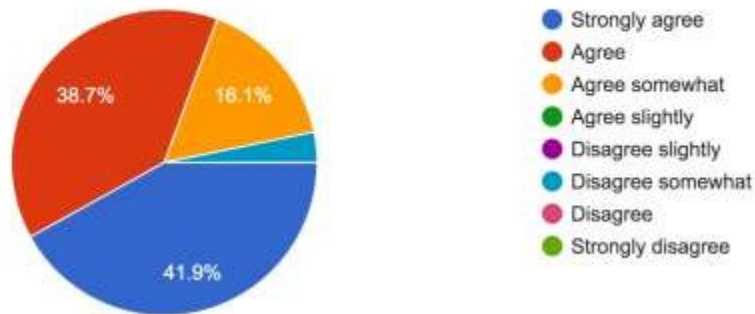31 responses

Figure 67.

Pie chart describing participants' responses to item 28 from TAIS

28. SEN students should be given every opportunity to function in the regular classroom setting where possible
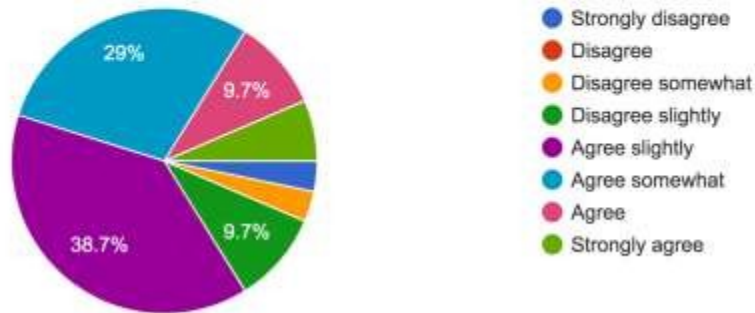31 responses

Figure 68.

Pie chart describing participants' responses to item 29 from TAIS

29. SEN children are likely to create confusion in the regular classroom
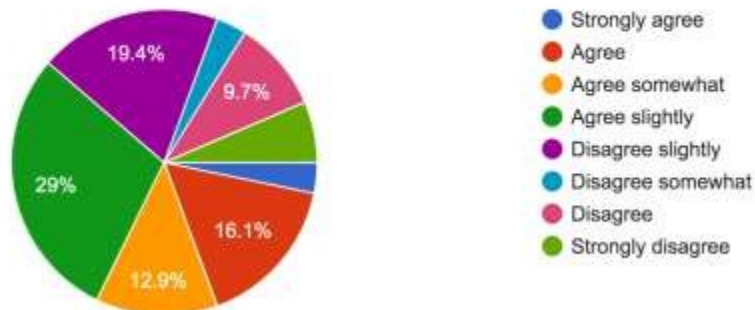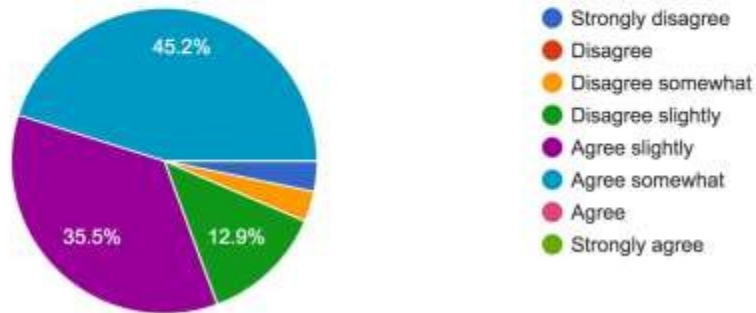31 responses

Figure 69.

Pie chart describing participants' responses to item 30 from TAIS

30. The presence of SEN students promotes acceptance of difference in the part of the non-SEN students
31 responses

APPENDICES

Appendix A: Consent Form

Consent form

Please take your time to read this form carefully and do not hesitate to ask for any clarification you need.

Research purpose

The purpose of the present study is to investigate teachers' self-perception of diagnostic competence and their attitudes towards inclusive education.

Procedure

This is an online survey that will take approximately 15-20 minutes to complete. Participants in this study will be asked to complete a questionnaire on attitudes**.** If you decide to participate, you will complete two short questionnaires after answering a few demographic questions. The survey can only be taken once.

The first questionnaire is the Questionnaire on Teachers' Diagnostic Competence Related to Classroom-based Assessment in Inclusive Schools (DaCI) and the second one is the Attitude Towards Inclusion Scale (TAIS). Some of the questions will assess your competencies as an educator and others will be about your attitudes towards inclusion.

Benefits/ risks: There is no risk in participating in this study. There are no direct benefits, but you may be informed about the research and its results after the data collection.

Confidentiality: Your responses will be anonymous. The account through which you have received the link to this study cannot be connected to your responses. Your data will be accessible only to the principal investigator and the co-investigators of the present study. Records and data will be kept confidential by coded responses. When research results are reported, responses will be aggregated and described in summary.

Participation and withdrawal: Your participation is completely voluntary, and you may withdraw at any time without any consequences. However, you cannot submit your responses if you leave any questions unanswered, in which case your participation will not be counted in the study.

To Contact the Researcher: If you have questions or concerns about this research at any time, please contact: Sara Tadros AbdelMasih Phone: +20 127 0466640; Email: s.abdelmasih@acg.edu You may also contact the faculty member supervising this work: Dr. Despina Paizi, PhD, Assistant professor, Deree The American College of Greece, Email: dpaizi@acg.edu

This research study has been reviewed and approved by the Institutional Review Board of The American College of Greece.

Name and signature of the main investigator: Sara Tadros AbdelMasih

I have read and understood the information provided to me. I have had all my questions answered to my satisfaction, and I voluntarily agree to participate in this study.

Appendix B: Demographic Questions

1. What is your profession?

    a. General education teacher / homeroom teacher

    b. Other

2. Which grade level do you currently teach?

    a. Elementary / primary school (Kindergarten to grade 6)

    b. Middle school (grades 7 - 9)

    c. High school (grades 10 -12)

3. Where do you teach?

    a. Private school in Egypt

    b. Public school in Egypt

4. Your length of teaching service since training is (please specify in years and months)

5. Have you completed any special education courses? (If yes, please specify)

    a. Yes

    b. No

6. If you answered yes to the previous question, please specify what special education courses you took

7. Are you fluent in English?

    a. Yes

    b. No

8. What is your gender?

    a. Male

    b. Female

9. What is the highest degree you have obtained?

    a. Bachelor's degree (BA or university degree)

    b. Master's degree

    c. PhD

Appendix C: The Questionnaire on Teachers' Diagnostic Competence Related to Classroom-based Assessment in Inclusive Schools DaCI

A) Instructional Decision-Making

1. I know how to identify students with learning problems.

2. I am familiar with literacy approaches (i.e., reading, writing or mathematic).

3. I am familiar with methods of how to support literacy development in reading, writing or mathematics.

4. I know how to choose a suitable support strategy for a child.

5. I know how to adapt a support strategy for literacy development.

6. I know how to evaluate the level of fit of a specific support strategy for a child.

7. I am familiar with developing individualized material to be used for support independently.

8. I know how to assess the reading, writing or mathematical literacy of a child when writing a school report.

B) Educational Assessment

1. I know several informal and standardized tests for measuring the status quo (summative assessments).

2. I am familiar with norm-reference values and their relevance in educational assessment.

3. I choose an educational assessment based on its quality criteria.

4. I choose an educational assessment test based on its user-friendliness.

5. I know how to conduct informal and standardized tests for measuring the status quo of students and how to evaluate them.

6. I know how to interpret results from standardized tests for measuring the status quo and how to assess educational aims.

7. I know how to design informal tests for measuring the status quo independently (e.g., reading comprehension or number range extension tests).

8. In everyday life at school, I know how to quickly and easily get a comprehensive overview of the achievement level of my class even without tests.

9. If, in specific cases, there is no suitable standardized educational assessment available, I know how to adapt and use a standardized assessment instrument for concrete purposes (e.g., choosing subtasks).

C) *Identification of Special Educational Needs*

1. I have ample experience in writing special education reports.

2. I am familiar with the steps necessary to be taken to assess a child's need for special educational support.

3. I know how to conduct assessments to assess a child's need for special educational support.

4. I know how to phrase the aims of special educational support.

5. I know different placements (also inclusive ones) and am familiar with providing advice on their advantages and disadvantages.

6. I know how to check whether the aims of a special support strategy have been achieved.

D) *Progress Monitoring*

1. I am familiar with different instruments for progress monitoring (formative assessments).

2. I am familiar with the theoretical background and concepts of progress monitoring approaches.

3. I know how to conduct and evaluate a progress monitoring instrument.

4. I know how to interpret student progress monitoring data presented graphically.

5. I know how to adapt instruction based on student progress monitoring data.

6. I am familiar with designing an informal instrument for progress monitoring.

7. I know how to evaluate the effectiveness of a support strategy.

Appendix D: Teachers' Attitude Towards Inclusion Scale TAIS

1. Many of the things that teachers do with non-SEN children students in regular classrooms are appropriate for SEN students

2. The needs of SEN students can best be served through special, separate classes

3. A SEN child's classroom behaviour generally requires more patience from the teacher than does the behaviour of a non SEN child

4. The challenge of being in a regular classroom will promote the academic growth of the SEN child

5. The extra attention SEN students require is to the detriment of the other students

6. Inclusion offers mixed group interaction which fosters understanding and acceptance of differences

7. It is difficult to maintain order in a normal classroom that contains an SEN child

8. Normal classroom teachers possess a great deak if expertise necessary to work with an SEN child

9. The behavior of SEN students sets a bad example for the other students

10. Isolation in a special class has a negative effect on the social and emotional development of an SEN child

11. The SEN child probably develops academic skills more rapidly in a special classroom than in a regular classroom

12. Most SEN children do not make an adequate attempt to complete their assignments

13. Inclusion of SEN children requires significant change in regular classroom procedures

14. Most SEN children are well-behaved in the classroom

15. The contact regular students have with SEN students may be harmful

16. Regular classroom teachers have sufficient training to teach children with SEN

17. SEN students monopolize the teacher's time

18. Including the SEN child in the regular classroom promotes his or her social independence

19. It is likely that an SEN child will exhibit behavior problems in a normal classroom setting

20. Diagnostic-prescriptive teaching is better done by special education teachers than by normal classroom teachers

21. The inclusion of SEN students can be beneficial for non-SEN students

22. SEN children need to be told exactly what to do and how to do it

23. Inclusion is likely to have a negative effect on the emotional development of the SEN child

24. Increased freedom in the classroom creates too much confusion

25. The SEN child is socially isolated by non-SEN students

26. Parents of an SEN child present no greater problem for a teacher than those of a non-SEN child

27. Inclusion of SEN children necessitates extensive retraining of regular classroom teachers

28. SEN students should be given every opportunity to function in the regular classroom setting where possible

29. SEN children are likely to create confusion in the regular classroom

30. The presence of SEN students promotes acceptance of difference in the part of the non-SEN students

Appendix E: IRB Approval Letter

Institutional Review Board

July 30th, 2024

Principal Investigator: Sara Tadros AbdelMasih, Applied Child and Adolescent Psychology

Re: Exempt determination (IRB protocol #202407454)

Dear Researcher,

Thank you for submitting your study entitled, "Promoting Inclusive Education Through the Use of RTI: A Cross-Cultural Study Comparing Egypt and Greece.". The IRB has reviewed and approved your study.

Please keep in mind that the IRB Committee must be contacted if there are any changes to your research protocol. Feel free to contact the IRB [irb@acg.edu] if you have any questions.

Best Wishes for your research work.

Ion Beratis, Ph.D.
Chair, IRB
Cc: Office of the Chief Academic Officer

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