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Challenges facing general education teachers in inclusive classrooms in Qatar

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Inclusive education has emerged as a growing national priority in Qatar, reflecting both international obligations and the strategic goals of the Qatar National Vision 2030. Despite this commitment, the effective implementation of inclusive practices remains constrained by persistent challenges encountered by general education teachers. This study examines the nature and extent of these challenges and investigates the impact of teacher demographic variables on inclusive teaching practices. Employing a mixed-methods design, quantitative data were collected from 203 teachers through a validated survey instrument, while qualitative insights were gathered via structured interviews with five general education teachers. Data were analyzed using SPSS 29 for quantitative analysis and ATLAS.ti 25 for thematic interpretation. The findings indicated a moderate level of challenges across cognitive, administrative, psychological, and social domains. Notably, no statistically significant differences were observed in teacher demographics. Thematic analysis revealed two central themes: enhancing inclusive education and promoting social integration. By foregrounding the experiences of general education teachers, this study addresses a critical gap in the literature. It underscores the need for sustained professional development, curricular adaptation, and institutional support to bridge the disconnect between inclusive policy frameworks and classroom realities.

KEYWORDS

inclusive education, general education teachers, implementation challenges, teachers' perceptions, diversity

1 Introduction

Inclusive education is a process that focuses on and responds to the diverse needs of all learners by removing barriers to education, enhancing participation, and reducing exclusion (Aiello, 2017). This approach has become a fundamental pillar in global education policies since the Salamanca Statement of 1994 (UNESCO, 1994). Today, the world is witnessing a rapid shift toward the implementation of inclusive education; however, translating this concept into practical application faces complex challenges related to infrastructure, teacher preparation, societal attitudes, and educational policies (Florian, 2014; Slee, 2019).

Inclusive education is based on several key principles, including removing barriers to learning and participation, providing a flexible and adaptable learning environment, and ensuring the development of diverse teaching strategies that respond to individual differences (Booth, 2017). From this perspective, the current study is conceptually grounded in the Universal Design for Learning (UDL) framework, which emphasizes

proactive curriculum design to accommodate the diverse needs of all learners. UDL promotes flexibility in the ways information is presented, fosters engagement, and demonstrates learning. This framework is particularly relevant for analyzing challenges related to teacher preparedness, instructional planning, and systemic constraints in inclusive classrooms (CAST, 2018; Mitchell, 2015). By adopting UDL as a guiding lens, this study positions itself to examine how existing structural and instructional limitations may conflict with the inclusive ideals promoted by Qatar's national education policy.

Despite the adoption of inclusive education policies in many countries, their practical implementation faces significant challenges, as highlighted in recent educational literature. One of the most pressing issues is the lack of adequate teacher preparation. Studies indicate that many general education teachers lack specialized training in adapting to the special educational needs of students, modifying curricula, and applying flexible instructional strategies (Bibigul et al., 2022; Crispel and Kasperski, 2021). Ozel et al. (2018) emphasized that the success of inclusive education largely depends on teachers' ability to adopt inclusive teaching practices supported by sufficient and continuous training. In addition, limited resources and institutional support pose significant barriers. A shortage of support teachers, assistive technologies, and adequately equipped facilities hinders the delivery of effective inclusive education (Zwane and Malale, 2018), while weak administrative backing and inadequate school policies further complicate implementation (Leijen et al., 2021). The literature also highlights the rigidity of traditional curricula and instructional methods, which are often designed for average learners and lack the flexibility necessary to accommodate individual differences, thereby impeding full inclusion (Florian, 2014; Slee, 2019). In this context, Mitchell (2015) calls for curricula based on UDL principles to enable full participation for all students. Moreover, the attitudes of society and school personnel play a pivotal role in the success or failure of inclusive education. Negative or hesitant perceptions toward students with disabilities diminish their chances of meaningful inclusion, and the absence of a school culture that embraces difference may lead to their social isolation, even if they are physically present in mainstream classrooms (Norwich, 2023; Slee, 2019).

The challenges associated with implementing inclusive education are well-documented in the international literature and can be broadly categorized into cognitive, administrative, psychological, and social domains. Cognitive challenges involve the professional knowledge and preparation of general education teachers, particularly in areas such as inclusive pedagogy, curriculum adaptation, and differentiated instruction. Numerous studies have highlighted a persistent gap between policy expectations and teacher readiness, especially when specialized training is limited or inconsistent (Mitchell, 2015; Crispel and Kasperski, 2021). Administrative challenges encompass systemic barriers such as excessive workloads, a lack of teaching assistants, limited access to resources, and insufficient planning time, all of which undermine teachers' capacity to apply inclusive strategies effectively (Florian and Black-Hawkins, 2011; Leijen et al., 2021). Psychological challenges reflect internal attitudes, beliefs, and emotional responses that influence teachers' confidence

and willingness to teach students with disabilities (Avramidis and Norwich, 2002). Meanwhile, social challenges pertain to broader contextual factors, including peer interactions, family engagement, and societal perceptions of disability (Florian and Black-Hawkins, 2011). Research also points to systemic limitations, such as inflexible curricula and instructional practices that fail to accommodate diverse learners, thereby constraining inclusive efforts (Florian, 2014; Slee, 2019). In response, scholars have advocated for curricula grounded in UDL principles to promote equitable access and participation (Mitchell, 2015). Furthermore, insufficient institutional support, a scarcity of assistive technologies, and unsupportive school leadership compound these challenges (Zwane and Malale, 2018; Leijen et al., 2021), while negative attitudes among educators and school communities continue to hinder meaningful inclusion (Norwich, 2023; Slee, 2019).

Although these studies offer important insights into global and regional implementation challenges, a notable gap remains in the literature regarding the voices of general education teachers in Qatar, who are directly responsible for applying inclusive practices in diverse classrooms. Much of the existing scholarship in Qatar either focuses on special educators, preservice teacher attitudes, or policy-level analysis. In contrast, the lived experiences and practical constraints faced by in-service general education teachers remain underexplored. Furthermore, previous empirical studies, such as those by Khoaeane (2012) and Mubaiwa (2019), while informative, are situated in sub-Saharan African contexts and lack a unified conceptual framework. These studies primarily describe surface-level barriers, such as a lack of resources and inadequate training, but do not systematically examine how these challenges interact with curriculum design or institutional culture through a theoretical lens.

This study aims to address these gaps by providing an empirically grounded and theoretically informed analysis of the challenges faced by general education teachers in Qatar. It builds on earlier findings by adopting a mixed-methods approach that integrates quantitative measurement and qualitative interpretation, while also diverging from prior research by situating teacher narratives within the UDL framework. By doing so, the study contributes new knowledge about how inclusion policies are experienced and enacted in practice, offering context-specific insights that can inform both policy and professional development in Qatar and comparable contexts.

2 Study context: inclusive education in Qatar

The State of Qatar has shown growing interest in developing inclusive education policies in alignment with its international commitments and in support of Qatar National Vision 2030, which aims to establish a comprehensive and high-quality educational system (Ministry of Education and Higher Education, 2020). Qatar's efforts have included issuing the "National Policy on Inclusive Education," establishing educational support centers, and implementing teacher training programs to enhance educators' competencies in addressing student diversity

(Al-Hendawi and Alodat, 2023; Al-Hendawi et al., 2024). Aligned with the Qatar National Vision 2030 goals, the Ministry of Education and Higher Education has adopted inclusive education as a strategic priority, implementing reforms to provide supportive school environments that integrate students with disabilities into general education classrooms. These efforts include deploying trained professionals, using assistive technologies, and curriculum adaptations to meet the needs of diverse learners (Ministry of Education and Higher Education, 2020).

Recent studies indicate that implementing inclusive education in Qatari schools faces challenges similar to those in international literature. Alkhateeb et al. (2022) reported that teacher education in Qatar generally faces many challenges, including teacher workload, stakeholder roles, dissatisfaction with college-based preparation, and cultural influences. Nevertheless, a critical gap persists in preparing general education teachers for inclusive practice. Most teacher education programs include minimal coursework on inclusive education, typically a single module, which is insufficient to equip teachers with the practical skills and attitudes required for effectively addressing student diversity (Hassanein et al., 2021). This inadequacy contributes to several persistent challenges in the field, including limited teacher preparedness, lack of interdisciplinary collaboration, negative perceptions toward inclusion, and insufficient classroom resources (Al Jaffal, 2022; Hamid and Mohamed, 2021).

Empirical findings from regional and international contexts corroborate these issues. For example, studies have reported that general education teachers (GETs) frequently feel underprepared to support students with autism spectrum disorder (ASD) and other disabilities in mainstream classrooms due to insufficient training and institutional support (Alharbi, 2022; Ngadni et al., 2023). Furthermore, the transition to inclusive systems is often hindered by structural, attitudinal, and logistical constraints that undermine the effectiveness of inclusion initiatives.

Therefore, this study aims to bridge a critical research gap by examining the challenges faced by GETs in Qatari preparatory and secondary schools, a context that remains underexplored in the existing literature. While prior studies such as Khoaeane (2012) and Mubaiwa (2019) have investigated teachers' perceptions of inclusive education challenges, they were situated in different national and educational systems and did not specifically address the sociopolitical and institutional conditions unique to Qatar. Moreover, these earlier works did not incorporate a mixed-methods approach that combines quantitative breadth with qualitative depth to triangulate teachers' experiences. By focusing on the Qatari context and integrating both survey data and teacher narratives, this study contributes a contextually grounded and methodologically robust perspective to the field. The findings aim to inform policy development, enhance teacher preparation programs, and support the implementation of sustainable and inclusive educational reform in Qatar and similar settings.

3 Study purpose and questions

This study explored the challenges general education teachers in Qatar encounter when implementing inclusive education. Specifically, it examines both the perceived level of these

challenges and the impact of demographic factors, including gender, educational level, years of experience, teaching stage, and specialization. The study also aims to understand teachers' lived experiences and perceptions in order to gain deeper insights into the barriers they face. By integrating quantitative and qualitative methods, the study aspires to inform educational policies and practices that promote more effective and equitable inclusive education in Qatar.

The following research questions guided the study:

1. What is the overall level of challenges general education teachers face in implementing inclusive education in Qatari classrooms?
2. Are there statistically significant differences in these challenges based on teachers' gender, educational level, years of experience, teaching stage, and specialization?
3. What themes emerge from general education teachers' experiences and perceptions regarding the challenges of implementing inclusive education in Qatar?

4 Methods

4.1 Study design

This study employed a mixed-methods approach to investigate the challenges faced by general education teachers in inclusive classrooms in Qatar. The research design was informed by the UDL framework, which served as the conceptual lens guiding both data collection and analysis. UDL principles underscore the importance of removing instructional and environmental barriers, and this lens helped frame the exploration of how systemic, instructional, and attitudinal factors impact the implementation of inclusive education. A survey was used to quantitatively assess the level of challenges encountered by teachers, focusing on potential variations across gender, teaching experience, educational attainment, teaching level, and area of specialization. Surveys are commonly employed in educational research to systematically capture the breadth of participants' experiences and perceptions (Creswell and Creswell, 2017). To complement the survey data and provide a deeper exploration of the underlying factors contributing to these challenges, structured interviews were conducted with a purposive sample of teachers. Structured interviews enable the collection of consistent and comparable qualitative data, allowing teachers to elaborate on specific issues (Kallio et al., 2016). By integrating survey results with interview findings, the study aimed to triangulate data sources and enhance the validity of its conclusions (Creswell and Plano Clark, 2018), offering a comprehensive understanding of the barriers to effective inclusive education in Qatari schools.

4.2 Participants

The quantitative phase of the study included a sample of 203 general education teachers currently working in inclusive classrooms across government schools in Qatar. Participants were selected using a two-stage cluster sampling method to ensure a representative sample across various school levels and

TABLE 1 Distribution of participants according to personal and professional variables ($N = 203$).

Variable	Category	Frequency	Percentage
Gender	Male	60	29.60%
	Female	143	70.40%
Educational level	Bachelor's degree	155	76.40%
	Diploma	4	2.00%
	Postgraduate studies	44	21.70%
Years of experience	1–5 years	59	29.10%
	11–15 years	52	25.60%
	More than 15 years	92	45.30%
Teaching level	Preparatory stage	17	8.40%
	Primary stage	79	38.90%
	Secondary stage	107	52.70%
Specialization	Science	109	53.70%
	Humanities	94	46.30%

Percentages are based on the total sample ($N = 203$). Educational level refers to the highest academic degree attained. Teaching level indicates the school stage at which participants were teaching.

geographic regions. In the first stage, schools offering inclusive education services were randomly selected from a comprehensive list provided by the Ministry of Education and Higher Education. In the second stage, all general education teachers within the selected schools who had experience teaching students with disabilities in inclusive classrooms were invited to participate. Researchers used this approach to enable adequate coverage of teachers across various educational levels (primary, preparatory, and secondary), subject specializations, and years of teaching experience. [Table 1](#) presents the demographic and professional characteristics of the participating teachers.

[Table 1](#) illustrates the distribution of the participants according to their personal and professional characteristics. Regarding gender, most participants were female (70.40%), while males constituted 29.60%. Regarding educational level, most participants held a bachelor's degree (76.40%), whereas diploma holders accounted for the lowest percentage (2.00%). Concerning years of experience, the highest proportion of participants had more than 15 years of teaching experience (45.30%), while those with 11–15 years of experience represented the smallest group (25.60%). Concerning teaching level, the secondary stage was the most represented (52.70%), while the preparatory stage was the least represented (8.40%). Finally, regarding specialization, science majors comprised the largest group (53.70%), while humanities majors accounted for 46.30% of the sample.

For the qualitative phase of the study, five general education teachers working in inclusive classrooms in Qatar participated in structured interviews. To ensure confidentiality, pseudonyms are used when referring to the participants. The sample included two male teachers and three female teachers, representing a range of specializations and teaching experiences. Ahmad, a 38-year-old biology teacher, brought perspectives from secondary education.

Musa, a 43-year-old elementary school teacher, contributed insights into inclusive practices at the primary level. Among the female participants, Nada, a 55-year-old Arabic teacher, shared reflections shaped by her extensive experience in education. In contrast, Nora, a 29-year-old Islamic education teacher, provided the viewpoints of a younger educator navigating inclusion. Hana, a 50-year-old science teacher, offered experiences related to integrating inclusive practices within scientific subjects. The diversity in participants' backgrounds and subject areas enriched the qualitative data, allowing for a nuanced understanding of the challenges general education teachers face in implementing inclusive education.

4.3 Instruments

In the quantitative phase of this study, the researchers employed a survey to investigate the challenges that general education teachers face in implementing inclusive education in Qatar. It was constructed based on frameworks and findings from previous research, particularly the studies by [Khoaeane \(2012\)](#) and [Mubaiwa \(2019\)](#), which examined similar challenges in different contexts. The survey consisted of two main sections. The first section gathered demographic and professional information, including gender, educational level, years of experience, teaching stage, and specialization. The second section contained statements to assess teachers' perceptions of the challenges they face in inclusive classrooms. Responses were measured using a five-point Likert scale ranging from “strongly disagree” to “strongly agree.” The survey was organized around four main dimensions: cognitive, administrative, psychological, and social challenges. This categorization was guided by both existing literature on barriers to inclusive education and conceptual frameworks that highlight the multifaceted nature of teacher readiness and systemic implementation ([Avramidis and Norwich, 2002](#); [Crispel and Kasperski, 2021](#); [Florian and Black-Hawkins, 2011](#); [Mitchell, 2015](#); [Leijen et al., 2021](#)). To ensure the validity of the survey, the instrument was reviewed by a panel of eight experts specializing in special education, educational psychology, inclusive pedagogy, and psychometrics. Expert review is a widely accepted method for establishing content validity in survey development ([DeVellis, 2016](#)). The panel included three university professors with extensive publication records in inclusive education, two ministry officials with expertise in policy implementation, and three senior school-based practitioners with over 15 years of experience in inclusive teaching. The experts evaluated the relevance, clarity, and alignment of the items with the study's objectives and conceptual framework. Based on their feedback, one item was removed due to redundancy with an existing statement, and several items were refined to improve linguistic clarity and cultural appropriateness while preserving their original conceptual intent. These refinements included rephrasing items to ensure alignment with local educational terminology and simplifying complex or ambiguous wording. As a result, the final version of the survey comprised 28 items across four dimensions (see [Supplementary material](#)), ensuring both content validity and contextual relevance.

Additionally, the instrument was piloted with a sample of 20 participants to assess its reliability and refine the administration process. Although relatively small, this sample size is considered appropriate for pilot testing in educational and psychological research, particularly when the goal is to evaluate the instrument's internal consistency, clarity, and logistical feasibility rather than to generalize results (Hertzog, 2008). The participants in the pilot study were representative of the target population in terms of teaching level, experience, and specialization, thereby ensuring that the feedback obtained was relevant for the intended context. Internal consistency reliability was evaluated using Cronbach's alpha coefficient. This widely accepted measure assesses the degree to which items within each scale are correlated and reliably measure the same underlying construct (Field, 2018). The results indicated acceptable to high levels of reliability across the four dimensions: cognitive challenges ($\alpha = 0.798$), administrative challenges ($\alpha = 0.762$), psychological challenges ($\alpha = 0.723$), and social challenges ($\alpha = 0.873$). The overall reliability coefficient for the entire survey was 0.84, demonstrating strong internal consistency in line with established benchmarks (Taber, 2018). These results supported the survey's psychometric soundness and informed minor refinements to item phrasing and formatting before full-scale administration.

In the qualitative phase, the researchers used structured interviews to explore general education teachers' experiences, perceptions, and challenges related to inclusive education in Qatar. Using interviews allowed for the collection of rich, detailed qualitative data that could capture the complexity of teachers' experiences and provide deeper insight into the factors influencing the success and challenges of inclusion (Creswell and Plano Clark, 2018). The interview protocol used in this study included twelve open-ended questions that encouraged participants to reflect deeply on their experiences and views. The questions covered a range of areas, including participants' backgrounds, definitions of inclusion, attitudes toward inclusive education, training experiences, positive and negative classroom experiences, available support, perceptions of the success of inclusion, and recommendations for improving inclusive practices (see [Supplementary material](#)). The development of the interview guide was informed by existing literature on inclusive education and barriers teachers face (Al Jaffal, 2022; Al-Busaidi and Tuzlukova, 2018; Amr, 2011).

4.4 Data collection

Data collection for this study was conducted in two sequential phases, following the approval of the Institutional Review Board at X University (Approval No. QU-IRB 229/2024-EA). In the first phase, quantitative data were gathered using a structured survey designed to measure the challenges faced by general education teachers in inclusive classrooms. The survey was developed and administered electronically in Arabic to ensure cultural and linguistic appropriateness for the participating teachers across different school levels in Qatar. Participation was voluntary, and informed consent was obtained before survey completion. In the second phase, qualitative data were collected through structured

interviews with a purposive sample of general education teachers with experience working in inclusive classrooms. Invitations to participate in the interviews were sent to selected teachers, and those who agreed provided written informed consent. Interviews were conducted individually, and each interview followed a structured protocol to elicit detailed reflections on participants' experiences, perceptions, and recommendations related to inclusive education. All interviews were audio-recorded with participants' permission, and transcriptions were completed verbatim in Arabic to maintain the authenticity of the data for analysis.

4.5 Data analysis

The survey responses were analyzed using IBM SPSS Statistics version 29. Descriptive statistics (frequencies, percentages, means, and standard deviations) were calculated to describe the participants' demographic characteristics and summarize survey item responses. A three-level classification (low, moderate, and high) was applied based on Likert scale intervals to interpret the mean scores for the survey. To examine differences in perceived challenges based on demographic variables, a combination of independent samples *t*-tests, one-way ANOVA, and multivariate analysis of variance (MANOVA) was initially conducted. The *t*-tests and ANOVAs served as preliminary exploratory tools to identify patterns across individual demographic groups and challenge domains. However, to enhance statistical rigor and reduce redundancy, a five-way MANOVA was employed as the primary inferential analysis. MANOVA is particularly suitable for analyzing multiple interrelated dependent variables, as it enables the simultaneous testing of group differences while controlling for the risk of Type I error (Tabachnick and Fidell, 2013; Hair et al., 2019). The four challenge domains, cognitive, administrative, psychological, and social, were treated as dependent variables due to their conceptual interdependence.

Before conducting the MANOVA, key assumptions were tested. Univariate normality was assessed for each dependent variable using the Shapiro-Wilk test and Q-Q plots. Multivariate normality was evaluated using Mahalanobis distance, with no significant multivariate outliers detected. Homogeneity of variance-covariance matrices was examined using Box's M test, which yielded a non-significant result ($p > 0.001$), indicating that the assumption was satisfied (Tabachnick and Fidell, 2013). Levene's test results for each dependent variable were also non-significant, supporting the assumption of equal variances across groups. Finally, Pearson correlation coefficients among the dependent variables were below 0.80, confirming acceptable levels of multicollinearity (Hair et al., 2019). Given that all assumptions were met, the five-way MANOVA was interpreted with confidence as the most appropriate and comprehensive method for analysis. This strategy aligns with established best practices in educational research, particularly when the study involves multiple outcome measures and seeks to explore the effects of intersecting demographic factors (Mertler and Reinhart, 2016). While *t*-tests and ANOVAs provided initial insight into mean-level trends, all substantive interpretations were

TABLE 2 Means and standard deviations for the challenges faced by teachers in inclusive classrooms and the overall scale ($N = 203$).

Domain	Mean	Standard deviation	Level
Administrative challenges	3.30	0.52	Moderate
Cognitive challenges	3.30	0.76	Moderate
Social challenges	2.85	0.94	Moderate
Psychological challenges	2.83	0.65	Moderate
Overall challenges	3.07	0.52	Moderate

based on the MANOVA results to avoid redundancy and ensure statistical validity.

Qualitative data were analyzed systematically using ATLAS.ti 25. To enhance the trustworthiness of the findings, two researchers independently coded the transcribed interviews following multiple careful readings to ensure immersion and a deep understanding of participants' experiences. A thematic analysis approach was employed, allowing for the inductive generation of codes directly from the data without imposing preconceived categories. Initially, two researchers generated the codes, then all researchers engaged in a collaborative review process to discuss the codes, resolve discrepancies, and refine the coding framework. Duplicate codes were deleted, and similar codes were merged to reflect broader conceptual meanings. In cases where disagreements arose, group discussions were conducted to reach a consensus. The finalized codes were then carefully grouped into broader categories and organized into overarching themes that accurately reflected the participants' voices. Throughout the analysis, credibility was reinforced through systematic comparison and cross-verification of codes across different interviews. Dependability was maintained by documenting analytic decisions and using an audit trail to ensure transparent coding and theme development tracking. Additionally, confirmability was supported by grounding all interpretations in direct quotations from the data (Fries, 2019).

5 Results

5.1 Quantitative results

To answer the first research question, means and standard deviations were calculated for the survey domains and items. The overall mean score for the survey was 3.07 ($SD = 0.52$), indicating a moderate level of challenge teachers face in implementing inclusive education (see Table 2).

5.1.1 Cognitive challenges

The mean scores for the cognitive challenges domain ranged from 2.96 to 4.09. The item "I do not have knowledge of the concept of inclusive education" had the highest mean ($M = 4.09$, $SD = 0.78$), indicating a high level of agreement. The item "I did not receive training courses on teaching students with disabilities in inclusive classrooms" had the lowest mean ($M = 2.96$, $SD = 1.29$), indicating a moderate level of challenges. The overall mean for the

cognitive challenges domain was 3.30 ($SD = 0.76$), indicating a moderate level of challenge.

5.1.2 Administrative challenges

The administrative challenges domain revealed mean scores ranging from 2.51 to 3.99. The item "My teaching load prevents me from providing appropriate educational services to students with disabilities" recorded the highest mean ($M = 3.99$, $SD = 1.00$), indicating a high level of challenge. The item "My school does not accept students with disabilities in regular classrooms" had the lowest mean ($M = 2.51$, $SD = 1.22$), indicating a moderate challenge. The overall mean for administrative challenges was 3.30 ($SD = 0.52$), indicating a moderate level of difficulty.

5.1.3 Psychological challenges

Within the psychological challenges domain, mean scores ranged from 2.37 to 3.16. The item "I am unwilling to teach students with disabilities in my classroom" had the highest mean ($M = 3.16$, $SD = 1.12$). In contrast, the item "I believe that teaching students with disabilities is a waste of time and effort" had the lowest mean ($M = 2.37$, $SD = 1.18$). The overall mean for psychological challenges was 2.83 ($SD = 0.65$), indicating a moderate level.

5.1.4 Social challenges

For the social challenges domain, mean scores ranged from 2.80 to 2.91. The item "Some students refuse to cooperate with students with disabilities or assist them" had the highest mean ($M = 2.91$, $SD = 1.07$), while "I frequently receive complaints from students about the presence of students with disabilities" had the lowest mean ($M = 2.80$, $SD = 1.09$). The overall mean for social challenges was 2.85 ($SD = 0.94$), also classified as moderate.

A five-way multivariate analysis of variance (Five-Way MANOVA) was conducted to answer the second research question. The results showed apparent differences in the mean scores across the different demographic variables. However, the MANOVA results indicated no statistically significant differences at the 0.05 level across the four challenge domains (cognitive challenges, administrative challenges, psychological challenges, and social challenges) based on gender, educational level, years of experience, teaching stage, or specialization. Specifically, the results revealed that all p -values for the multivariate tests were >0.05 , suggesting no overall multivariate effect for any demographic variables. The results also confirmed no significant univariate differences across any individual domain. All F -values were low, and all significance levels (p -values) exceeded 0.05. Therefore, the analysis concluded that teachers' perceptions of the challenges they face in inclusive classrooms were consistent across different genders, levels of education, years of teaching experience, school stages, and fields of specialization.

To examine differences in the overall scale of challenges faced by general education teachers in inclusive classrooms in Qatar, a five-way analysis of variance (Five-Way ANOVA) was conducted according to gender, educational level, years of experience, teaching stage, and specialization. The descriptive statistics are presented in Table 3.

TABLE 3 Means and standard deviations for the challenges faced by teachers in inclusive classrooms according to demographic variables (*N* = 203).

Variable	Mean	Standard deviation	<i>n</i>
Gender			
Male	3.057	0.515	143
Female	3.093	0.534	60
Educational level			
Bachelor's degree	3.069	0.496	155
Diploma	3.358	1.191	4
Postgraduate studies	3.039	0.528	44
Years of experience			
1–5 years	3.081	0.587	59
11–15 years	3.039	0.488	52
More than 15 years	3.076	0.495	92
Teaching stage			
Preparatory stage	3.232	0.349	17
Primary stage	3.123	0.462	79
Secondary stage	3.002	0.572	107
Specialization			
Science	3.022	0.476	109
Humanities	3.122	0.564	94

TABLE 4 Five-way ANOVA results for the overall challenges scale according to demographic variables.

Source of variation	Sum of squares	df	Mean square	<i>F</i>	<i>p</i>
Gender	0.001	1	0.001	0.004	0.948
Educational level	0.314	2	0.157	0.581	0.560
Years of experience	0.188	2	0.094	0.347	0.707
Teaching stage	1.094	2	0.547	2.021	0.135
Specialization	0.325	1	0.325	1.201	0.275
Error	52.488	194	0.271		
Corrected total	54.493	202			

Table 3 presents apparent differences in the mean scores across various demographic variables. A five-way ANOVA was applied to determine whether these differences were statistically significant, as shown in Table 4.

The results presented in Table 4 indicate no statistically significant differences at the 0.05 level in the overall challenges scale based on gender, educational level, years of experience, teaching stage, or specialization. The *F*-values (0.004, 0.581, 0.347, 2.021, and 1.201) and corresponding significance levels (*p*-values of 0.948, 0.560, 0.707, 0.135, and 0.275, respectively) all exceeded the alpha level of 0.05, confirming the absence of statistically significant differences across the studied variables.

TABLE 5 Themes, subthemes, and example codes.

Theme	Subtheme (group)	Example codes
Improving inclusive education	Training and professional development	Workshops, supervision, help
	Academic support	Collaboration, student support.
	Curriculum and learning difficulties	Learning difficulties, educational challenges
	Improving inclusive practices	Teaching strategies, empowerment, diversity
Social Integration	Positive peer interactions	Social interaction, successful inclusion
	Full social inclusion	Special needs considerations, justice
	Recognition of individual needs	Valuing students, participation, encouragement
	Gratitude and positive reflections	Positive experiences, development

5.2 Qualitative results

The thematic analysis of the qualitative data, conducted through a systematic and collaborative approach, identified two overarching themes: Improving Inclusive Education and Social Integration. Initially, two researchers independently coded the interview transcripts, generating 263 preliminary codes. Through collaborative review and group discussion, duplicate codes were removed, similar codes were merged, and consensus was reached on discrepancies. This rigorous process resulted in 47 distinct codes accurately capturing teachers' experiences and perspectives. These codes were then carefully organized into eight meaningful subthemes based on common challenges and experiences described by the teachers. The subthemes provided a structured and coherent framework for interpreting the qualitative data, with each group associated with specific codes representing key ideas expressed by teachers. Table 5 summarizes the overarching themes, their associated subthemes, and examples of the codes assigned during the coding process.

5.2.1 Improving inclusive education

The thematic analysis revealed the complex and interconnected barriers that general education teachers face in implementing inclusive practices effectively. These challenges, such as limited training, insufficient support structures, and rigid curricula, are not merely isolated issues but indicative of broader systemic misalignments between national inclusion policy and school-level implementation. For example, teachers' frustrations over a lack of collaboration and training reflect institutional gaps in the ongoing professional development infrastructure, which may be attributed to policy emphasis on access over preparedness. Additionally, the persistent rigidity of curricular demands suggests a mismatch between inclusive intent and assessment-driven accountability frameworks in Qatari schools. Teachers' calls for support also reflect a cultural expectation that inclusion be

teacher-driven rather than institutionally embedded. Despite these obstacles, the narratives conveyed a professional commitment to inclusive values, conditioned by a broader context of reform fatigue and accountability pressures. Their suggestions for targeted professional development, enhanced collaboration with special education staff, and ongoing institutional backing underscore a pathway for strengthening inclusive education in Qatar. The findings also reveal that with appropriate investments in training, resources, and curriculum flexibility, general education teachers can be better equipped to create truly inclusive learning environments that meet the needs of all students.

Teachers repeatedly emphasized the lack of adequate preparation for teaching students with disabilities. The findings reveal a critical gap in teacher preparation programs and professional development opportunities, which hinders the implementation of effective inclusive practices. Ahmad reflected on his experience, stating, *“During my university studies, inclusive education was only briefly mentioned. I had to learn everything practically on my own after I started teaching.”* Musa shared a similar sentiment: *“We are asked to include students with disabilities, but no one really showed us how. We are doing it by trial and error.”* Nada further emphasized the gap, noting, *“There should be a mandatory course for all teachers on inclusive strategies. It is unfair to the students when teachers are unprepared.”*

Teachers also highlighted the lack of sufficient educational support in inclusive classrooms. This challenge highlights the need for systemic support structures to facilitate successful inclusive education. Hana stated, *“We need more than just motivation; we need teaching assistants, specialized equipment, and extra planning time to accommodate diverse learners.”* Similarly, Nora shared, *“I struggle with adapting my lessons because I don’t have enough resources, and the school doesn’t provide much additional support.”* Musa pointed out the gap between policy and practice: *“On paper, inclusive education is encouraged, but in reality, we are left alone to manage without real support.”*

Another key barrier that emerged from the interview analysis was the curriculum’s inflexibility and students’ diverse learning needs. Teachers noted the need for more flexible and differentiated curricular frameworks to accommodate all students’ varied learning profiles. Nada explained, *“The curriculum is standardized for average learners. It doesn’t leave room for adapting to students who require a different pace or approach.”* Nora added, *“There’s pressure to finish the curriculum on time, but when you have students with disabilities in the class, you need to go slower, explain differently, and sometimes use different materials.”* Ahmad noted, *“Some students need visual aids, others need hands-on activities. A one-size-fits-all curriculum doesn’t work in inclusive classrooms.”*

Despite the barriers, teachers offered several practical suggestions for improving inclusive practices. These suggestions demonstrate the teachers’ commitment to inclusion and their willingness to engage in professional growth when appropriate structures are in place. Hana proposed, *“Workshops tailored specifically for classroom teachers—not just for special education specialists—would make a big difference.”* Musa emphasized the importance of collaboration: *“If we had regular meetings with special education teachers, we could exchange ideas and solve challenges faster.”* Nada stresses the importance of ongoing

support, stating, *“Inclusion should be an ongoing conversation, not a one-time workshop.”*

5.2.2 Social integration

The thematic analysis revealed the multifaceted and deeply interconnected challenges general education teachers encounter in fostering meaningful social integration within inclusive classrooms. These challenges are embedded within cultural norms that prioritize academic achievement and homogeneity, which can inadvertently marginalize students with disabilities. For instance, peer exclusion was often discussed in relation to students’ performance expectations, suggesting that prevailing norms of academic competitiveness influence social hierarchies in classrooms. Moreover, the lack of structured initiatives to support social inclusion may reflect a limited institutional emphasis on social-emotional learning in national education priorities. Teachers’ efforts to create empathetic environments, often through personal initiative, highlight the absence of systemic strategies that promote inclusive peer cultures. Despite these obstacles, the teachers’ reflections conveyed a strong belief in the importance of building inclusive, empathetic classroom communities. The teachers consistently emphasized that more authentic and lasting social inclusion could be achieved with greater guidance, intentional peer engagement strategies, and school-wide initiatives focused on social skills development. Their experiences and suggestions, from fostering empathy through group activities to providing structured peer support programs, illustrate a clear vision for promoting social integration. The findings suggest that when schools invest in nurturing social environments alongside academic inclusion, teachers can play a pivotal role in ensuring that students with disabilities are not only physically present but are fully and meaningfully integrated into the social fabric of the classroom.

Several teachers reported encouraging experiences of peer support and collaboration. Ahmad proudly shared, *“One of my students took it upon himself to be the ‘helper’ for a classmate with a disability. It wasn’t assigned; it came naturally.”* Nada described a heartwarming moment: *“During a group project, the other students insisted on making sure their peer with a disability had a meaningful role, not just a token position.”* Nora noted, *“When you create an accepting environment, students often surprise you with their kindness and creativity in including their peers.”* These examples show that inclusive environments foster student empathy and collaboration when nurtured appropriately.

Despite these positive examples, barriers to full social inclusion persisted. Teachers’ reflections suggest that achieving social inclusion requires intentional efforts to promote peer understanding and collaboration. Hana explained, *“Sometimes students with disabilities are unintentionally excluded during competitive activities because their peers assume they can’t contribute equally.”* Musa added, *“There are social cliques, and students with disabilities are often not part of them unless the teacher actively intervenes.”* Nora shared, *“I still see cases where students feel isolated despite being physically present in the classroom.”*

Teachers also stressed the importance of recognizing and addressing individual differences. Nada remarked, *“You can’t assume that all students with disabilities need the same kind of*

support. Some need encouragement; others need structured tasks.” Ahmad emphasized, “Understanding each student’s strengths and challenges is the foundation of effective inclusion.” Hana concluded, “It’s not about treating everyone the same—it’s about giving each student what they specifically need.” This personalized approach to inclusion resonates strongly with best practices in inclusive education and reflects the teachers’ growing expertise.

However, teachers expressed positive reflections on their experiences with inclusion. This positive attitude among teachers demonstrates the intrinsic rewards teachers experience when inclusion is successful. Musa reflected, “Inclusion made me a better teacher. It taught me patience, flexibility, and empathy.” Nora shared, “The success stories, even if few, make all the challenges worth it.” Hana concluded, “Seeing a student with a disability smile after presenting in front of the class is more rewarding than anything else.”

6 Discussion

This study sheds light on the multi-layered and systemic challenges that general education teachers in Qatar face while implementing inclusive education. Integrating quantitative and qualitative data offers a nuanced understanding of the measurable and lived dimensions of these challenges. The results confirmed that teachers perceive a moderate overall level of challenges, particularly in administrative and instructional domains, suggesting persistent gaps between policy and classroom realities.

Administratively, teachers reported overwhelming workloads and insufficient time for individualized planning and collaboration. These findings are consistent with international research that links teacher burnout and lack of planning time to unsuccessful inclusive practices (Candeias et al., 2020). In Qatar, where the national inclusive education policy mandates differentiated instruction and collaborative support, the lack of practical tools and institutional mechanisms to manage these demands undermines the implementation of such directives (Alkhateeb et al., 2022; Hassanein et al., 2021).

Instructionally, many teachers indicated that current curricula do not provide enough flexibility to accommodate students with disabilities. The rigid, content-heavy nature of national curriculum frameworks often leaves little room for modifications, which is particularly problematic in classrooms with students who require differentiated pacing, assessment, or instructional delivery. This reinforces the urgent need to adopt Universal Design for Learning (UDL) principles within Qatari schools, enabling educators to create access points for all learners without segregating instruction (Mitchell, 2015).

Interestingly, the lack of statistically significant differences across gender, experience, and specialization suggests that these challenges are systemic rather than isolated to specific subgroups of educators. However, it is important to interpret these findings with caution, given the assumptions required for multivariate analysis. While assumption testing supported the validity of the MANOVA in this study, future research involving larger and more diverse samples is recommended to further validate these patterns. Nonetheless, the current findings point toward the need for nationwide systemic reform in inclusive education in Qatar, rather than fragmented interventions. From a policy

perspective, this underscores that although strides have been made to promote awareness of inclusion, these efforts must be accompanied by equitable access to resources, ongoing professional development, and comprehensive school-level support systems across all teaching contexts.

Qualitative findings enriched this picture by uncovering emotional and cultural dimensions of inclusion. Teachers voiced a sense of isolation, frustration, and lack of preparedness, especially when left to navigate inclusive classrooms without coordinated support from special educators or school leadership. They also reported a lack of consistent communication between school stakeholders, which hinders the development of inclusive strategies. These findings align with global research that emphasizes the importance of collaborative professional cultures, where co-teaching, shared planning, and regular feedback loops enhance teachers’ capacity to meet diverse learning needs. (Holmqvist and Lelinge, 2021).

Cultural attitudes toward disability also emerged as a critical factor shaping the implementation of inclusive education. Despite Qatar’s commitment to international conventions on the rights of persons with disabilities, societal stigma and parental resistance to inclusion were cited as significant barriers. Some teachers indicated that parents of typically developing children objected to the presence of students with disabilities in general classrooms, fearing it would disrupt academic performance or classroom order. These attitudes contribute to the symbolic inclusion of students with disabilities, where they are physically present but not socially or instructionally integrated (Slee, 2018).

From a practical standpoint, these findings carry several implications. First, teacher education programs in Qatar must be restructured to include sustained training in inclusive pedagogy, behavior management, and collaboration with specialists. Short-term workshops are insufficient; inclusion should be integrated as a longitudinal theme across preservice and in-service training. Second, schools should be equipped with progress monitoring tools, teaching assistants, and adaptive technologies to reduce the burden on individual teachers and support evidence-based instructional decision-making. Third, leadership development programs are needed to prepare school principals to lead inclusive reform. School leaders must be trained to facilitate team-based problem-solving, prioritize inclusive values in decision-making, and mediate between policy expectations and classroom realities. Finally, community outreach campaigns should be launched to foster public understanding of inclusive education and reduce stigma toward disability. These campaigns can involve parents, students, and community leaders, aligning with cultural norms while promoting inclusive values.

7 Limitations

While this study provides valuable insights into general education teachers’ challenges in implementing inclusive education in Qatar, several limitations must be acknowledged. First, the study relied on self-reported data collected through surveys and interviews, which may be influenced by social desirability bias or individual interpretations of inclusion-related concepts. Although efforts were made to ensure anonymity and encourage

honest responses, some participants may have underreported or overreported their experiences due to institutional or cultural sensitivities. Second, while diverse, the sample was limited to teachers from public schools and did not include stakeholders from private or international schools, which may operate under different inclusive frameworks or expectations. This limits the generalizability of the findings to the broader educational landscape in Qatar. Third, while the qualitative phase offered rich, contextually grounded data, it was based on a small number of interviews. As a result, the perspectives captured may not fully represent the diversity of views across the education system. Additionally, the qualitative phase was based on five interviews with general education teachers, which may appear limited in scope. However, this sample size aligns with established qualitative research principles that emphasize depth of insight over breadth, particularly when interviews are rich, focused, and thematically saturated (Creswell and Creswell, 2017). The researchers observed that no new themes emerged by the fifth interview, indicating thematic saturation had been reached. Nevertheless, we acknowledge that the sample lacked representation from private, international, and special education school contexts. As such, the transferability of the findings to other educational settings may be constrained. Future studies should include a more diverse range of school types and stakeholders to broaden the understanding of inclusion-related challenges across Qatar's varied educational landscape. Finally, the study focused on teachers' perspectives. It did not include the voices of students, school leaders, or parents, each of whom plays a critical role in shaping inclusive education practices. Future research would benefit from a more holistic, multi-stakeholder approach that incorporates these viewpoints to develop a more comprehensive understanding of the inclusive education ecosystem in Qatar.

8 Conclusion

This study highlights a pivotal juncture in developing inclusive education in Qatar. While the country has made commendable strides at the policy level, through frameworks, strategic plans, and public commitments, there remains a significant gap between policy intention and classroom implementation. The findings demonstrate that general education teachers continue to face systemic, instructional, and cultural challenges that hinder the creation of genuinely inclusive learning environments. The absence of significant variation across demographic groups suggests that these challenges are widespread and structural, not merely due to individual differences in teacher experience or background. Teachers across the board reported insufficient training, inflexible curricula, limited resource access, and a lack of institutional support. Moreover, cultural attitudes toward disability, both within schools and the broader community, present persistent barriers to meaningful inclusion.

Inclusive education in Qatar must shift from policy rhetoric to tangible implementation. To support this transition, we propose a structured set of recommendations at both the short- and long-term levels, grounded in the study's findings. Short-term priorities should include (1) enhancing in-service teacher training focused on inclusive pedagogy and classroom management, (2)

providing immediate access to school-based supports such as teaching assistants and assistive technologies, and (3) initiating structured collaboration between general and special educators to improve inclusive planning and co-teaching. Long-term strategies involve (1) revising national curriculum frameworks to align with Universal Design for Learning principles, (2) embedding inclusive education as a core component across teacher preparation programs, and (3) launching national campaigns to shift societal attitudes and reduce stigma surrounding disability and inclusion.

Ultimately, inclusive education must be viewed as a systemic responsibility that requires coordinated action among teachers, school leaders, policymakers, and the broader community. Only through such comprehensive and sustained efforts can Qatar achieve an education system that equitably serves all learners.

Data availability statement

The original contributions presented in the study are included in the article/[Supplementary material](#), further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving humans were approved by Institutional Review Board, Qatar University. The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

AJ: Formal analysis, Writing – original draft, Methodology, Conceptualization, Investigation, Validation, Writing – review & editing, Funding acquisition. AA: Writing – review & editing, Project administration, Funding acquisition, Writing – original draft, Formal analysis, Conceptualization, Methodology, Validation, Investigation. MA-H: Writing – original draft, Validation, Writing – review & editing. AI: Writing – original draft, Writing – review & editing, Validation.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Generative AI statement

The author(s) declare that Gen AI was used in the creation of this manuscript. The author(s) affirm that generative AI tools were used only for language refinement and formatting support during the preparation of this article. The author(s) produced all

intellectual content, including developing research questions, data analysis, interpretation of results, and scholarly arguments.

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Supplementary material

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2025.1623453/full#supplementary-material>

References

- Aiello, P. (2017). *Ronald Gulliford: Alle Origini del Concetto di Bisogno Educativo Speciale [Ronald Gulliford: At the origins of the concept of Special Educational Need]*. Cham: Springer International Publishing.
- Al Jaffal, M. (2022). Barriers general education teachers face regarding the inclusion of students with autism. *Front. Psychol.* 13:873248. doi: 10.3389/fpsyg.2022.873248
- Al-Busaidi, S., and Tuzlukova, V. (2018). Teachers' perceptions of practices and challenges of innovating for the inclusion of special needs university English language learners in Oman. *J. Educ. Psychol. Stud.* 12, 659–671. doi: 10.53543/jeps.vol12iss4pp659-671
- Alharbi, H. (2022). Practical steps towards developing successful inclusive education supports in the Middle East. *Int. J. Whole School.* 18, 95–126.
- Al-Hendawi, M., and Alodat, A. M. (2023). Inclusive education of refugee students with disabilities in higher education: a comparative case study. *Hum. Soc. Sci. Commun.* 10, 1–11. doi: 10.1057/s41599-023-02410-6
- Al-Hendawi, M. K., Keller, C., and Alqahwaji, A. (2024). Special education teachers' self-efficacy and knowledge of learning disabilities in inclusive education in Qatar. *J. Educ. Sci.* 24, 175–194. doi: 10.29117/jes.2024.0180
- Alkhateeb, H., Romanowski, M. H., Sellami, A., Abu-Tineh, A. M., and Chaaban, Y. (2022). Challenges facing teacher education in Qatar: Q methodology research. *Heliyon* 8:e09845. doi: 10.1016/j.heliyon.2022.e09845
- Amr, M. (2011). Teacher education for inclusive education in the Arab world: the case of Jordan. *Prospects* 41, 399–413. doi: 10.1007/s11125-011-9203-9
- Avramidis, E., and Norwich, B. (2002). Teachers' attitudes towards integration/inclusion: a review of the literature. *Eur. J. Spec. Needs Educ.* 17, 129–147. doi: 10.1080/08856250210129056
- Bibigul, D., Marina, K., Alpysbayeva, M., and Nietbaeva, G. (2022). Training a special teacher: opinions and experience of teachers in the conditions of inclusive education. *Cypriot J. Educ. Sci.* 17, 920–929. doi: 10.18844/cjes.v17i3.6985
- Booth, T. (2017). "Promoting educational development led by inclusive values in England," in *Special Educational Needs and Inclusive Practices: An International Perspective*, ed. F. Dovigo (London: Routledge), 3–20. doi: 10.1007/978-94-6300-857-0_1
- Candeias, A., Galindo, E., Calisto, I., Borralho, L., and Reschke, K. (2020). Stress and burnout in teaching. Study in an inclusive school workplace. *Health Psychol. Rep.* 9, 63–75. doi: 10.5114/hpr.2020.100786
- CAST (2018). *Universal Design for Learning Guidelines Version 2.2*. Available online at: <http://udlguidelines.cast.org> (Accessed April 26, 2025).
- Creswell, J. W., and Creswell, J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, CA: SAGE Publications.
- Creswell, J. W., and Plano Clark, V. L. (2018). *Designing and Conducting Mixed Methods Research, 3rd Edn.* Thousand Oaks, CA: SAGE Publications.
- Crispel, O., and Kasperski, R. (2021). The impact of teacher training in special education on the implementation of inclusion in mainstream classrooms. *Int. J. Inclusion Educ.* 25, 1079–1090. doi: 10.1080/13603116.2019.1600590
- DeVellis, R. F. (2016). *Scale Development: Theory and Applications*. Thousand Oaks, CA: SAGE Publications.
- Field, A. (2018). *Discovering Statistics Using IBM® SPSS® Statistics, 5th Edn.* Thousand Oaks, CA: SAGE Publications.
- Florian, L. (2014). What counts as evidence of inclusive education? *Eur. J. Spec. Needs Educ.* 29, 286–294. doi: 10.1080/08856257.2014.933551
- Florian, L., and Black-Hawkins, K. (2011). Exploring inclusive pedagogy. *Br. Educ. Res. J.* 37, 813–828. doi: 10.1080/01411926.2010.501096
- Friese, S. (2019). *Qualitative Data Analysis With atlas.ti, 3rd Edn.* Thousand Oaks, CA: SAGE Publications.
- Hair, J. F., Black, W. C., Babin, B. J., and Anderson, R. E. (2019). *Multivariate Data Analysis, 8th Edn.* Boston, MA: Cengage Learning.
- Hamid, M., and Mohamed, N. I. A. (2021). Empirical investigation into teachers' attitudes towards inclusive education: a study of future faculty of Qatari schools. *Cypriot J. Educ. Sci.* 16, 580–593. doi: 10.18844/cjes.v16i2.5636
- Hassanein, E. E. A., Alshaboul, Y. M., and Ibrahim, S. (2021). The impact of teacher preparation on preservice teachers' attitudes toward inclusive education in Qatar. *Heliyon* 7:e07925. doi: 10.1016/j.heliyon.2021.e07925
- Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Res. Nurs. Health* 31, 180–191. doi: 10.1002/nur.20247
- Holmqvist, M., and Lelinge, B. (2021). Teachers' collaborative professional development for inclusive education. *Eur. J. Spec. Needs Educ.* 36, 819–833. doi: 10.1080/08856257.2020.1842974
- Kallio, H., Pietilä, A., Johnson, M., and Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *J. Adv. Nurs.* 72, 2954–2965. doi: 10.1111/jan.13031
- Khoaeane, T. J. (2012). *Challenges Facing Teachers With Regard to the Implementation of Inclusive Education in the Maseru District of Lesotho* (Thesis). Bloemfontein: Central University of Technology, Free State. Available online at: <http://ir.cut.ac.za/handle/11462/171> (Accessed April 26, 2025).
- Leijen, A., Arcidiacono, F., and Baucal, A. (2021). The Dilemma of inclusive education: inclusion for some or inclusion for all. *Front. Psychol.* 12:633066. doi: 10.3389/fpsyg.2021.633066
- Mertler, C. A., and Reinhart, R. V. (2016). *Advanced and Multivariate Statistical Methods: Practical Application and Interpretation, 6th Edn.* Thousand Oaks, CA: SAGE Publications. doi: 10.4324/9781315266978
- Ministry of Education and Higher Education (2020). *Policy on Inclusive Education*. Available online at: <https://www.edu.gov.qa/en/Content/SpecialNeedsEducation> (Accessed May 2, 2025).

- Mitchell, D. (2015). Inclusive education is a multi-faceted concept. *Center Educ. Policy Stud. J.* 5:1. doi: 10.26529/cepsj.151
- Mubaiwa, P. (2019). *Challenges Faced by Teachers in the Implementation of Inclusive Education in Lower Gwelo Cluster schools*. Available online at: <https://cris.library.msu.ac.zw/handle/11408/3733> (Accessed April 26, 2025).
- Ngadni, I., Saminder Singh, G. K., Ahmad, I., and Baharudin, S. (2023). Challenges faced by teachers in inclusive classrooms in early childhood education (ECE) setting. *Int. J. Acad. Res. Prog. Educ. Dev.* 12, 1635–1649. doi: 10.6007/IJARPED/v12-i2/17267
- Norwich, B. (2023). *Addressing Tensions and Dilemmas in Inclusive Education: Resolving Democratically, 2nd Edn.* London: Bloomsbury Academic. doi: 10.4324/9781003326472
- Ozel, E., Ganesan, M. Z., Daud, A. K. M., Darusalam, G. B., and Ali, N. A. B. N. (2018). Critical issue teacher training into inclusive education. *Adv. Sci. Lett.* 24, 5139–5142. doi: 10.1166/asl.2018.11288
- Slee, R. (2018). *Defining the Scope of Inclusive Education [Think Piece Prepared for the 2020 Global Education Monitoring Report]*. UNESCO.
- Slee, R. (2019). *Inclusive Education Isn't Dead, It Just Smells Funny*. London: Routledge. doi: 10.4324/9780429486869
- Tabachnick, B. G., and Fidell, L. S. (2013). *Using Multivariate Statistics, 6th Edn.* Boston, MA: Pearson Education.
- Taber, K. S. (2018). The use of Cronbach's Alpha when developing and reporting research instruments in science education. *Res. Sci. Educ.* 48, 1273–1296. doi: 10.1007/s11165-016-9602-2
- UNESCO (1994). *The Salamanca Statement and Framework for Action on Special Needs Education*. UNESCO. Available online at: <https://unesdoc.unesco.org/ark:/48223/pf0000098427> (Accessed May 2, 2025).
- Zwane, S. L., and Malale, M. M. (2018). Investigating barriers teachers face in the implementation of inclusive education in high schools in Gege branch, Swaziland. *Afr. J. Disabil.* 7, 1–12. doi: 10.4102/ajod.v7i0.391