

AMERICAN UNIVERSITY OF BEIRUT

TEACHERS' KNOWLEDGE AND PERCEPTIONS OF
TWICE-EXCEPTIONAL STUDENTS IN INCLUSIVE
LEBANESE SCHOOLS: IDENTIFICATION, CHALLENGES,
AND SUPPORT STRATEGIES

by
DIMA AHMAD SHEHAB

A thesis
submitted in partial fulfillment of the requirements
for the degree of Master of Arts
to the Department of Education
of the Faculty of Arts and Sciences
at the American University of Beirut

Beirut, Lebanon
April 2026

AMERICAN UNIVERSITY OF BEIRUT

TEACHERS' KNOWLEDGE AND PERCEPTIONS OF
TWICE-EXCEPTIONAL STUDENTS IN INCLUSIVE
LEBANESE SCHOOLS: IDENTIFICATION, CHALLENGES,
AND SUPPORT STRATEGIES

by
DIMA AHMAD SHEHAB

Approved by:

Dr. Anies Al-Hroub, Professor
Department of Education

Advisor

Dr. Ghazi Gaith, Professor
Department of Education

Member of Committee

Dr. Farah El Zein, Assistant Professor
Emirates College of Advanced Education
United Arab Emirates

Member of Committee

Date of thesis defense: April 21, 2026

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to all those who supported me and stood by my side throughout this journey.

First, I am deeply thankful to my advisor, Dr. Anies Al-Hroub, for his continuous guidance, insightful feedback, and unwavering support throughout the development of this research. It has been a true honor to work under his supervision, especially on such a meaningful and important topic. I would also like to express my appreciation to my professors and committee members for their valuable comments and academic support, which greatly strengthened this thesis.

I am also truly grateful to the teachers who trusted me to take part in this study and share their experiences. Their honesty and courage were central to this research, and I carry their voices with great respect and responsibility.

To my family and friends, I offer my heartfelt thanks for your constant encouragement, patience, and support throughout this process. Your belief in me, especially during moments of war and exhaustion, gave me the strength to keep moving forward.

Finally, I am deeply thankful to God for granting me this opportunity and for giving me the strength, perseverance, and faith to reach the end of this journey.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS	1
ABSTRACT	7
TABLES	7
INTRODUCTION	9
Background of the Problem	10
Purpose of the Study	12
Research Questions	13
Rationale	13
Significance	16
THEORETICAL BACKGROUND AND LITERATURE REVIEW	18
Theoretical Framework	18
Multidimensional Model	19
Behavioral Theory	20
Labeling Theory	22
Strength-Based Approach	23

Literature Review	25
Giftedness	26
Specific Learning Disabilities.....	27
Twice-Exceptionality.....	28
Prevalence.....	30
Characteristics.....	31
Challenges with Identification	33
Limitations of Standardized and IQ-Based Assessments	33
Masking and Paradoxical Profiles	35
Gaps in Preparation and Professional Training	39
Labeling and Identification Bias.....	41
Disconnect Between Beliefs and Classroom Practice	42
The Need for Collaboration	43
Support Strategies and Programs for Twice-Exceptional Students.....	44
Comprehensive Assessment and Individualized Planning	44
Strengths-Based and Dual-Differentiated Instruction.....	45
Social-Emotional and Counseling Supports	46
Technology, Flexibility, and Learning Autonomy	46
Lebanese Context: Gaps and Challenges.....	47
Policy and Systemic Neglect	47
Inadequate Identification and Assessment Practices	48
Cultural Misconceptions and Marginalization.....	49
Teacher Preparation and Institutional Capacity	50
Summary.....	52
METHODOLOGY	54

Research Design	54
Participants.....	55
Sampling Procedure.....	57
Instruments.....	58
Structured Questionnaire	58
Semi-structured Interview.....	59
Procedure	60
Data Analysis.....	63
Quantitative Analysis.....	63
Reliability of the TPQ.....	64
Qualitative Analysis.....	65
Role of the Researcher.....	65
RESULTS.....	67
Quantitative Results.....	67
Sample Descriptive.....	67
Scale Descriptive	70
Qualitative Results.....	82
Teachers' Knowledge and Perceptions of Twice-Exceptionality.....	83

Identification Challenges	84
Practices and Support Strategies for Twice-exceptional Students.....	85
Training Needs and Institutional Support Systems.....	87
DISCUSSION.....	89
Summary of Key Findings.....	89
Teacher’s Knowledge and Perceptions of Twice-Exceptional Learners	90
Teachers' Identification of Twice-Exceptional Learners	93
Teachers' Training and Preparation Gaps	95
Teachers’ Practices and Systemic Constraints.....	100
General Contribution and Alignment with Research Questions.....	103
CONCLUSION	105
Implications	106
Limitations.....	107
Recommendations.....	108

APPENDIX A.....	112
APPENDIX B.....	113
APPENDIX C.....	116
APPENDIX D.....	119
APPENDIX E.....	122
APPENDIX F.....	124
APPENDIX G.....	128
APPENDIX H.....	131
APPENDIX I.....	132
REFERENCES.....	133

ILLUSTRATIONS

Table

1. <i>Sample Descriptives of the Teachers</i>	68
2. <i>Cut-off Points for Interpreting the TPQ Mean Scores</i>	69
3. <i>Descriptive of the TPQ Domains</i>	70
4. <i>Teachers' Responses to the Existence and Recognition of Gifted Students with SLD</i>	72
5. <i>Teachers' Perceptions of the Identification of Gifted Students with SLD</i>	75
6. <i>Teachers' Education, Support, and Training Needs for Gifted Students with SLD</i>	80
7. <i>Demographic and Professional Characteristics of Teacher Participants</i>	82

ABSTRACT OF THE THESIS

Dima Ahmad Shehab

for

Master of Arts
Major: Education

Title: Teachers' Knowledge and Perceptions of Twice-Exceptional Students in Inclusive Lebanese Schools: Identification, Challenges, and Support Strategies

Gifted learners with specific learning disabilities are an underrecognized group in Lebanese schools. They are known as twice-exceptional learners and considered to have high potential, but their educational needs are complex. These learners are also affected by masking effects, a lack of teacher knowledge, and a lack of guidelines at the school and national levels. Therefore, the purpose of this study is to explore how Lebanese teachers understand, perceive, identify, and support gifted students with specific learning disabilities in an inclusive school. A mixed-methods design was used. Quantitative data were collected from 173 teachers across 10 private inclusive schools in Beirut and Mount Lebanon using the revised Teachers' Perspectives Questionnaire. Then, a semi-structured interview was used with 10 purposively selected teachers from the larger sample. Descriptive statistics were used to analyze the quantitative data, while thematic analysis was used to analyze the qualitative data. From the results, the teachers generally acknowledged the existence of twice-exceptional learners and realized the tendency to overlook them in regular classes. The salient features, especially the gap between cognitive and academic achievement and the "masking effect" in which giftedness and disabilities can coexist, were identified. The findings also revealed that the teachers had difficulty identifying twice-exceptional students and lacked confidence in their preparation and training. The results also revealed that the teachers used flexible, differentiated teaching methods, although these methods remain informal and lack sufficient resources and institutional support.

CHAPTER 1

INTRODUCTION

You might have encountered a child in your class who has a unique way of looking at things. In classroom discussions, the child explains concepts in depth, makes insightful connections, and speaks with confidence. This student's level of understanding leads to insights far beyond those of his peers. However, when it comes to writing, what you get is disappointment. The student's sentences are too brief, the ideas are scattered, and there is no sign of the deep understanding that he or she demonstrated in class. This student represents the reality of twice-exceptional students.

According to Reis et al. (2014), twice-exceptional learners are students who have the potential for advanced achievement or creativity in areas such as math, science, technology, the arts, or other fields of human productivity, while also having one or more disabilities as recognized by federal or state guidelines. These may include learning disabilities, speech or language challenges, emotional or behavioral issues, physical impairments, autism spectrum disorder (ASD), or health conditions such as ADHD. The interaction between their exceptional abilities and their disabilities creates a distinct student profile in which one can often obscure the other, making their talents or difficulties harder to identify and support effectively. As a result, they often do not receive the help they need, leading to frustration, disengagement, and unmet potential.

Twice-exceptionality has begun to receive more attention in education systems worldwide. Schools are trying to identify better ways to support these students. In the United States, for example, the Individuals with Disabilities Education Act (IDEA, 2004), mentioned by Antony et al. (2021), recognizes twice-exceptional students and provides

special services for them. Despite these efforts, twice-exceptional students continue to face difficulties with identification and support. This is mainly because most education systems are not well equipped to address both their giftedness and their learning challenges simultaneously.

Lebanon can be seen as a clear example of this issue. Although policies related to inclusive and gifted education exist, they are not always applied consistently, especially for twice-exceptional students. In fact, Lebanese education laws do not provide specialized services for gifted learners. Also, there is no clear process of identifying twice-exceptional students (El Khoury & Al-Hroub, 2018). This means these students are misunderstood, misdiagnosed, or even completely overlooked, preventing them from reaching their full potential. At this point, the responsibility falls on teachers because they are the first to notice learners' strengths and challenges in the classroom. Teachers' knowledge and understanding strongly influence how these students are perceived. When teachers are not fully familiar with twice-exceptionality, misidentification becomes very likely. This is why examining teachers' knowledge and perceptions is so important, as it helps highlight gaps in both identification and support.

Background of the Problem

Twice-exceptionality is a complex educational phenomenon. It requires careful identification and support. Al-Hroub (2013) classified twice-exceptionality into three groups: gifted students with unnoticed learning disabilities, students with learning disabilities whose giftedness goes unrecognized, and students whose giftedness and disabilities are both identified. Later findings from Al-Hroub's studies conducted in the United Kingdom and Jordan identified two additional subgroups: "students whose giftedness and learning difficulties are recognized and students who are misdiagnosed"

(Al-Hroub, 2014; Al-Hroub & Whitebread, 2019). In many educational systems, especially in the Arab Middle East and Lebanon, most twice-exceptional students fall into the first two categories because teachers and school psychologists are not trained enough to recognize their complex learning profiles (Al-Hroub, 2022; Al-Hroub & Whitebread, 2019). In the Lebanese educational context, this lack of knowledge and preparation among teachers remains a major challenge. It affects both the identification process and the type of support provided to students. Studies show that many Lebanese teachers receive limited formal training and preparation in gifted education. In addition, teacher preparation programs at universities do not always include structured training on twice-exceptionality (Al-Hroub, 2022; Antoun & Plunkett, 2023). Because of this, many twice-exceptional students may remain unidentified or may not receive the support they need throughout their schooling.

The challenge of identification stems from the heavy reliance on specific standardized tests that might not fully reflect students' cognitive potential. Several researchers have raised concerns about psychometric scales, including achievement tests, cognitive tests, and measures of perceptual abilities. These scales have been hampered by biases and strict administration practices, such as timed tests and testing under difficult conditions (Al-Hroub, 2013). Psychometric tests have faced significant criticism for being unfair to vulnerable and marginalized groups, especially those with exceptionalities and twice-exceptionality. Additional concerns arise from reliance on general intelligence and achievement scales, which can lead to misdiagnosis and incorrect labeling. Because of this, twice-exceptional students who struggle in certain areas are often seen as underachievers or as having behavioral issues, rather than being recognized as both gifted

and in need of specialized support. Students' strengths may be overlooked, and their difficulties misunderstood, creating a serious problem in educational practice.

In addition, the schools in Lebanon are not adequately equipped to handle twice-exceptional students. This is because most schools in Lebanon currently use outdated curricula that do not accommodate students' diverse learning needs. Also, Lebanon's education system is underfunded (Al-Hroub, 2022). Besides, teachers often have to work under pressure, such as large class sizes and heavy administrative responsibilities. As a result, it becomes hard to support twice-exceptional students. Alsamani et al. (2023) assert that twice-exceptional students need competent teachers who can apply effective classroom strategies to meet their needs. However, these students may experience frustration and be at greater risk of academic failure if they do not receive support. Overall, these conditions indicate that the Lebanese educational system is still not fully prepared to meet the needs of twice-exceptional learners. This becomes a problem in practice. Hence, examining teachers' knowledge and perceptions is important, as these factors can influence how twice-exceptional students are identified and supported in schools.

Purpose of the Study

The study examined the knowledge, perceptions, and training needs of Lebanese teachers regarding gifted students with specific learning disabilities in inclusive Lebanese schools. Specifically, it explored (a) what knowledge and perceptions do teachers possess about the characteristics, identification, and support of twice-exceptional students, (b) how teachers identify these students in their classrooms, and what challenges they encounter in doing so, and (c) what training or professional preparation teachers have received to effectively identify and support twice-exceptional learners, and what they

report needing. In addition, it sought to understand how, in the absence of formal identification procedures, teachers interpret the profiles of these learners and how it is translated into classroom practice. By addressing these issues, this research aimed to provide context-specific evidence to inform teacher training programs, strengthen identification practices, and support more consistent approaches for twice-exceptional learners within inclusive Lebanese schools.

Research Questions

The following research questions guided the research:

1. What knowledge and perceptions do Lebanese teachers have of students who are gifted yet experience specific learning disabilities in inclusive classrooms?
2. How do Lebanese teachers identify gifted students with specific learning disabilities in their classrooms?
3. What training or professional preparation have teachers received in identifying and supporting GLD students, and what further preparation do they report needing?

Rationale

Twice-exceptional students in Lebanon are not being recognized and supported. This is considered a major gap in the education system, which has not received sufficient attention in research. While the topic of gifted education has been explored in other countries (Al-Hroub, 2022), there remains an important gap in teachers' perceptions and knowledge in Lebanon regarding twice-exceptionality and the success rate of recognizing and supporting twice-exceptional children. Although the topic of twice-exceptionality is receiving more attention in the global literature, very little research has been conducted on it in Lebanon. Previous studies in Lebanon have examined teachers' perceptions in

general, but have not focused on twice-exceptionality. Since teachers play a key role in students' academic success, it is crucial to explore their knowledge and perspectives in order to identify gaps that may contribute to misdiagnoses and missed opportunities for students to reach their full potential. This study is important because it provides context-specific evidence about how teachers in Lebanon understand and respond to twice-exceptionality. This area remains underexplored despite its implications for equity, inclusion, and student achievement.

Teachers' perceptions are shaped by their knowledge, experiences, and beliefs about twice-exceptional students. The perceptions and attitudes of educators significantly influence the success or failure of educational policies and practices (Ryan & Cooper, 2012). Educators also play a crucial role in their students' academic development, especially in relation to giftedness. They are instrumental in providing differentiated curricula and educational services that help twice-exceptional students succeed in school. In contrast, negative attitudes toward providing specialized services for these students may lead to the denial of appropriate support, since perceptions and attitudes can influence behavior.

Teachers' perceptions influence both their professional practice and their ability to identify twice-exceptional students. Moreover, the preconceived ideas teachers hold about twice-exceptional students shape their willingness to teach them and influence the instructional strategies they choose (Berman et al., 2012). Research shows that teachers' perceptions not only affect their teaching methods but also influence the performance of their gifted students (Miller, 2009). Therefore, understanding how teachers in Lebanon perceive twice-exceptionality is essential.

As mentioned previously, identifying and supporting twice-exceptional students is challenging due to their complex learning profiles. According to Guthrie (2019), students with twice-exceptionality often experience frustration, anxiety, depression, and hyperactivity, which affect their social-emotional skills, leading them to be vulnerable to behavioral issues, all of which further complicate their identification and support needs. Many students with twice-exceptionality desire to succeed academically, but they often fail to do so because they are misunderstood and disengaged in the classroom (Owens et al., 2016). In addition, a common misconception persists that gifted students do not need extra help, causing many teachers to overlook students who are both highly intelligent and struggling with learning difficulties (Al-Hroub, 2013). Because of these issues, teachers need a clear understanding of how twice-exceptional students function academically and emotionally to provide appropriate support. However, without proper training or clear guidelines, many Lebanese teachers are left unprepared to meet these challenges. Therefore, this study explores teachers' perspectives to uncover knowledge gaps and the reasons why twice-exceptional students are often misidentified or overlooked.

Lebanon's education system does not provide adequate support for gifted students, let alone those who also have learning disabilities (Sarouphim, 2015). Without clear frameworks, these students are left to rely on their teachers' awareness and judgment. Some end up in remedial programs that fail to nurture their abilities, while others stay in mainstream classrooms without the support they need. The inconsistencies also raise concerns about equity and fairness in education and whether twice-exceptional students are receiving the learning opportunities they need. The study also contributes to

identifying areas for intervention, such as teacher preparation, by examining teachers' knowledge and perceptions.

Lastly, this study is significant to inclusive education in Lebanon, especially because while there are efforts to integrate students with disabilities into mainstream schools, twice-exceptional students are still not included. Such students are likely to get into a vicious circle of poor performance and social isolation, yet they are capable of excelling. Such inconsistencies also bring into question the fairness of the educational system and whether twice-exceptional students are getting the opportunities needed to reach their full potential.

Significance

The findings of this study will be instrumental in guiding educators, school administrators, and policymakers in effectively implementing interventions that support twice-exceptional students. Studies show that when teachers have knowledge of twice-exceptional students and how to accommodate their needs, they can effectively create an inclusive classroom environment that considers students' strengths and needs (Alameddine, 2025). Nevertheless, in Lebanon, there is a lack of recognition and support for twice-exceptional students, leaving teachers without guidance. This study aims to identify areas where professional development is needed. To do this, it examines teachers' perspectives and what they reveal about the knowledge and tools teachers require.

This research will not only provide valuable information for the education system but will also contribute to the emerging discourse about twice-exceptionality in the non-Western world. While the majority of research about twice-exceptional students has been conducted in the Western world, little has been done about the concept of twice-exceptionality in the Middle East (Al-Hroub, 2013). By exploring the challenges faced

by Lebanese teachers, the research will provide a platform for further research into the cultural, social, and systemic factors affecting twice-exceptional students in Lebanon.

In summary, this study aims to advocate for a better educational system in which twice-exceptional students are not overlooked due to insufficient recognition and support. By focusing on the need for teacher training, identification, and teaching strategies, this study contributes to ongoing efforts to improve an inclusive educational system for twice-exceptional students in Lebanon.

CHAPTER 2

THEORETICAL BACKGROUND AND LITERATURE REVIEW

This chapter presents the theoretical framework and literature review for the present study on Lebanese teachers' knowledge and perceptions of twice-exceptional students in inclusive schools. To create an adequate framework for discussing these topics, this chapter is divided into several sections. First, it presents an overview of the theoretical framework for the present study. Next, it presents an overview of the major concepts concerning giftedness, specific learning disabilities, and twice-exceptionality. The chapter is then divided into several sections that present an overview of the literature on the nature of twice-exceptional students, difficulties in identifying them, teachers' knowledge and perceptions, support for them, and the challenges of supporting them within inclusive educational contexts. Furthermore, it presents an overview of how masking, learner profiles, limited support for twice-exceptional students, and contextual difficulties influence misidentification. Finally, it presents an overview of how the Lebanese educational system, policies, and teachers' knowledge influence teachers' identification of twice-exceptional students and their responses to these students' needs.

Theoretical Framework

This study draws on multiple theoretical and conceptual frameworks: the Multidimensional Model of Identification, Behavioral Theory, Labeling Theory, and the Strength-Based Approach. These theories and concepts are used to analyze twice-exceptional learners in inclusive schools in Lebanon on a wider range of educational,

psychological, and contextual levels. These theories and concepts are all relevant to the complexity of twice-exceptional learner profiles as well as the limitations and opportunities that affect teachers' recognition, understanding, and response to twice-exceptional learners in schools.

Multidimensional Model

Al-Hroub (2013) proposed the Multidimensional Model of Identification as a response to the limitations of traditional identification methods. This model offers a more holistic and sensitive way to identify twice-exceptional students. In contrast, older models were primarily based on psychometric measures and achievement scores, which often overlooked the diversity of twice-exceptional learners (Al-Hroub, 2013; Al-Hroub & Whitebread, 2008).

The Multidimensional Model challenges the traditional idea of assessing children based on a single dimension, such as IQ or test scores. Instead, it uses a more flexible and dynamic approach. It relies on multiple sources of information, including cognitive abilities, creative thinking, emotional strengths, social skills, learning styles, and performance across different contexts (Delgado-Valencia et al., 2025). One important aspect of this model is dynamic assessment. This focuses not only on children's current abilities, such as language, but also on their potential to learn and improve over time.

Similarly, other international research has stressed the significance of using multidimensional identification. Foley, Nicpon, et al. (2010) emphasize the need to provide comprehensive evaluations that assess cognitive, academic, emotional, and behavioral abilities, as narrow assessments for identification will not allow for the full expression of the complexity of the twice-exceptional population. Likewise, Baum et al. (2014) recognize flexible, strengths-based, and multidimensional approaches to

identification. They serve as essential tools for the accurate identification and support of twice-exceptional students, in whom traditional signs of giftedness are obscured by a disability.

Another aspect highlighted by Al-Hroub (2013) is the need to be sensitive to cultural and contextual differences in the identification process. Usually, standardized tests rooted in Western cultures may not fully capture the potential of students from non-Western cultures. To address the gap in the current system, the Multidimensional Model introduces observation, interviews, portfolios, and dynamic testing into the identification process.

Al-Hroub's Multidimensional Model of Identification offers an essential framework for this study, taking into consideration the realities of Lebanese schools. The model underscores the need to go beyond limited measures and move towards a more holistic understanding. It is also relevant to this study because it shows that teachers play an active role in the identification process. Understanding and applying such models is crucial for accurately identifying twice-exceptional students and ensuring they receive the support that they need within their educational settings.

Behavioral Theory

The behavioral theory was first introduced in Skinner's (1953) foundational work. Behavioral theory focuses on behaviors that are shaped and maintained by reinforcement, punishment, and environmental modeling. The theory has been applied in educational contexts to understand how teachers' behaviors and perceptions are influenced by their professional experiences, expectations, and reinforcement, if received (Bandura, 1977; Kahveci & Güneyli, 2023).

The implementation of behavioral theory to twice-exceptional students has been shown in recent studies. Kahveci and Güneyli (2023) found that teachers who collaborated with specialists using Conjoint Behavioral Consultation (CBC) responded positively to twice-exceptional learners, resulting in increased academic engagement and reduced behavioral difficulties for these students. This is consistent with the behavioral theory's assumption that changing the environment can change teachers' perceptions.

Likewise, Ronksley-Pavia (2015) found that teachers misinterpret the complex behaviors exhibited by twice-exceptional students. They tend to view the student from a deficit perspective rather than understanding the presence of both giftedness and disability. If the student exhibits behaviors such as frustration, inattention, or emotional disturbances, the teacher, unaware of the student's complex behaviors, may adopt punitive measures. These responses may only encourage the student to misbehave. Such misinterpretations are common in Lebanon's educational system, as discussed above (Alameddine, 2025; Al-Hroub, 2013).

Bandura's Social Learning Theory (1977) is based on the behaviorist approach. Bandura's theory explains that individuals, including teachers, learn behaviors by observing and imitating the behaviors of the people in their environment. This indicates that in schools, teachers' behavior is influenced not only by their knowledge but also by the practices and expectations in their environment. If the environment is not flexible, teachers may adopt a rigid approach based on the achievement-oriented behaviors they observe. This can negatively impact twice-exceptional learners.

In conclusion, behavioral theory looks at how teachers' practices are shaped over time. It shows that teachers do not respond to students in a fixed way. Their responses can vary depending on training, collaboration with others, and the type of support they

receive at their schools (Kahveci & Güneyli, 2023; Ronksley-Pavia, 2015). Teachers' interpretations of students' behaviors play an important role. They can influence what teachers recognize and what they may misunderstand, especially regarding signs of twice-exceptionality.

Labeling Theory

Established by Howard Becker (1963), the Labeling Theory posits that societal labels are a key factor in defining individuals' identities and influencing their life decisions. In pedagogical contexts, the Labeling Theory provides a valuable framework for understanding how educators' perceptions and categorizations of students can affect students' educational experiences, access to opportunities, and sense of self. Building on these ideas, Erving Goffman (1963) explored how stigma further affects the development of individual identity, especially within marginalized groups.

For twice-exceptional students, labeling can have problematic consequences. The lack of proper training in classifying twice-exceptional students might lead educators to focus on students' apparent learning difficulties, such as poor handwriting, attention deficits, or challenging behavior, without considering the coexistence of giftedness and learning difficulties (Ronksley-Pavia, 2015). According to Caffery and Fuchus (2007), when students show inconsistent academic performance, teachers resort to labels that hinder giftedness, showing similar misleading patterns.

Not only does stigmatization affect how teachers deliver instruction and interact with pupils, but it also plays a major role in shaping students' self-perception. The "Pygmalion Effect", as described by Rosenthal and Jacobson (1968) in a prominent study on teacher expectations, indicates that student achievement is strongly influenced by teachers' beliefs about students' academic capabilities. Labeling twice-exceptional

students as “lazy”, “disruptive”, or “incapable” may cause them to internalize these negative perceptions, leading to decreased levels of motivation, self-esteem, and engagement in academic activities (Baum et al., 2014; Ronksley-Pavia, 2015).

Similarly, recent research emphasizes the negative possibilities of mislabeling twice-exceptional students. When teachers give disproportionate attention to students’ disabilities, they disregard the importance of enrichment opportunities that facilitate giftedness, causing emotional challenges and underachievement (Reis et al., 2014). Assouline et al. (2012) similarly stress that labeling twice-exceptional students can hinder effective support and growth and instead demand individualized and modified teaching strategies. Moreover, Demir (2024) demonstrated that few teachers can identify the coexistence of strengths and difficulties in students, yet still hesitate to classify them as twice-exceptional because educational practices do not clearly demonstrate the concept. The findings suggest that teachers’ understanding of twice-exceptional students largely influences labeling, and the resulting uncertainty can lead to inconsistent identification and support.

The labeling theory advocates for school practices that shift from rigid student categorization to more dynamic approaches that understand students' strengths. To address these issues, teachers require frameworks that help them understand complex student profiles. It is important to provide teachers with frameworks that help them identify different manifestations of giftedness, to ensure that twice-exceptional students receive the right motivation for success.

Strength-Based Approach

The Strengths-Based Approach emphasizes identifying, developing, and enhancing students’ potential. In the case of twice-exceptional students, the Strengths-

Based Approach is a significant approach for supporting students' cognitive abilities alongside their areas of weakness (Baum et al., 2014). This approach shifts from a sole focus on the student's weaknesses to a balanced approach that includes developing the student's strengths.

Past educational programs for students with disabilities have emphasized their weaknesses rather than their strengths. However, this approach is not only ineffective for twice-exceptional students but also for all students who are facing difficulties (Baum et al., 2014). Therefore, the authors propose a strengths-based educational approach that recognizes the complexity of twice-exceptional students. It focuses on giving them meaningful opportunities while also supporting them through their challenges and building on their strengths.

Similarly, Reis et al. (2014) stress that educational interventions for twice-exceptional students should focus on their strengths as well as working on their difficulties. There is consensus in the literature that when the focus is solely on difficulties, students may disengage, underachieve, and lack motivation. However, when the focus is on the students' strengths, engagement, resilience, and academic progress are promoted. The development of the student's talents not only enhances their self-esteem but also promotes their academic and emotional development (Reis et al., 2014).

Foley Nicpon et al. (2010) do not use the term "strengths-based" in their method, but they emphasize the need for comprehensive assessments and educational planning that include students' strengths as well as their weaknesses. This follows a strengths-based approach by highlighting how students' weaknesses can obscure their giftedness and limit their opportunities. Their work emphasizes the need for a comprehensive

approach to identifying and intervening with twice-exceptional students, rather than addressing only their weaknesses.

Schools in Lebanon tend to put great emphasis on academic performance and standardized outcomes, making strength-based approaches a highly recommended intervention in such cases. This approach allows teachers to move away from relying on traditional practices to help students succeed academically. It also promotes a balance between remediation and enrichment, better equipping students for the complex needs of twice-exceptional learners.

Literature Review

This literature review aims to explore current research on twice-exceptionality, focusing on identification, teacher perceptions, and support systems within inclusive educational environments. Both regional and international research suggest that a lack of teacher training, assessment tools, and educational systems contributes to the misidentification and under-service provision for twice-exceptional students. As such, a pattern emerges across all studies reviewed, indicating that twice-exceptional students are difficult to identify because their complex profiles are easily hidden. Educational systems are narrow in scope to capture such complex student profiles, so teachers are key in assessing student performance and behavior. Given the lack of research on twice-exceptionality in Lebanon, this literature review draws on not only regional research but also research from Arab and Middle Eastern countries. As such, this literature review aims to provide a foundation for exploring teacher perceptions, identification, and support systems for twice-exceptionality learners within the Lebanese education system.

Giftedness

The definition of giftedness across the fields of psychology and gifted education has long been a subject of debate. Initial research by Terman (1925) and Stanley (1971) prioritized intelligence testing as the primary method for classifying gifted individuals. Their studies helped establish giftedness as inseparably linked to high general intelligence, also referred to as the “g factor” (Bailey & Rose, 2011).

Marland’s (1972) federal report, submitted to the U.S. Congress, extended the concept of giftedness beyond intellectual ability to include creativity, leadership, the arts, and psychomotor skills. Significant differences in its definitions further stretched the concept of giftedness. The report offered a broader concept of giftedness where it could be demonstrated across a range of domains. It also sought recognition and differentiation in the educational field that could meet the needs of diverse students. Building on this concept of giftedness, Renzulli (1978) developed the Three-Ring Model to define gifted behavior in terms of three attributes: above-average ability, creativity, and task commitment. The framework offered by the Three-Ring Model is a dynamic concept of giftedness rather than a static one and is influenced by both motivation and opportunity.

However, recent studies indicate that intelligence is not an unchanging entity but rather something that can change and develop over time. In this regard, VanTassel-Baska (2003), as cited in Bailey and Rose (2011), indicates that intelligence can be compared to a 'rubber band' in the sense that it is perceived as a dynamic entity that can be stretched through appropriate educational facilitation. Further expounding on this premise, Plomin & Petrill (1997), as cited in Bailey & Rose (2011), indicate how neuroscience and genetics can be used to demonstrate how learning conditions can enhance and develop a person's natural potential. Building on this premise, Gagné (2004) presented a clear distinction

between giftedness and talent in his Differentiated Model of Giftedness and Talent (DMGT).

Today, giftedness is more likely defined as exceptional ability within a given domain or area, intellectual, artistic, or otherwise. In the school system, a gifted child is recognized as needing special services based on a variety of measures, including observations, authentic assessments, checklists, and clear evidence of exceptional achievement (Bailey & Rose, 2011). This is a divergence away from the more traditional methods of assessment based on standardized tests. Giftedness is now defined as intelligence, potential, or achievement that is clearly exceptional when compared with peers or exceptional ability in a highly specialized area (Bailey & Rose, 2011). This is particularly pertinent in the context of the Lebanese school system, which emphasizes academic achievement, making it sometimes difficult for teachers to recognize gifted learners who also have learning difficulties.

Specific Learning Disabilities

“Invisible disorders” is a term used to describe specific learning disabilities. These disabilities cannot be detected by physical observation, unlike other disabilities such as blindness and cerebral palsy (Brody & Mills, 1997, as cited in Bailey & Rose, 2011). Learning disabilities involve difficulties in how the brain processes sensory information, and these may not be immediately apparent to those around them. According to the Individuals with Disabilities Education Act (IDEA, 2001, as cited in Bailey & Rose, 2011), a “learning disability” is a disorder of one or more of the following psychological processes: speaking, writing, reading, spelling, thinking, mathematics, and other similar basic learning skills. This includes conditions such as dyslexia, developmental aphasia, perceptual disabilities, brain injury, and minimal brain dysfunction.

There is a detailed, widely used definition of Specific Learning Disabilities (SLD) developed by the National Joint Committee on Learning Disabilities (NJCLD) (as cited in Dzalani & Shamsuddin, 2014). The definition states that SLD is a group of disorders in the acquisition and use of skills in listening, speaking, reading, writing, reasoning, or mathematics. These disorders are characterized by intrinsic difficulties resulting from dysfunction in the central nervous system. Individuals with SLD may have difficulty in self-regulation, social perception, or social interaction, but such characteristics are not included in learning disabilities. Furthermore, SLD may occur with other disabilities, such as sensory or intellectual impairments, or be influenced by cultural or instructional variables. However, SLD is not caused by such variables (NJCLD, 1998, as cited in Dzalani & Shamsuddin, 2014).

Twice-Exceptionality

The definition of gifted students with SLDs is already complex, and the inclusion of the term “twice-exceptional” adds further complications. In technical terms, twice-exceptional students are those who are both identified as gifted and meet the criteria for one or more disabilities recognized under the Individuals with Disabilities Education Act (IDEA), excluding cognitive impairments.

Twice-exceptional learners are students who show high potential or creative talent in one or more areas, including math, science, technology, the arts, or other domains of human productivity, while also meeting criteria for one or more disabilities as defined by state or federal guidelines (Reis et al., 2014). These disabilities may include specific learning disabilities, speech and language disorders, emotional or behavioral challenges, physical impairments, autism spectrum disorders (ASD), or attention deficit hyperactivity disorder (ADHD). What makes this group unique is that its strengths and challenges can

mask each other. Giftedness may hide the presence of a disability, just as a disability can obscure signs of giftedness. As a result, twice-exceptional students are at risk of going unidentified for both giftedness and disability (Reis et al., 2014).

The idea of twice-exceptionality challenges the long-standing belief that giftedness and disability cannot coexist (Baum et al., 2014; Foley Nicpon et al., 2010). Early educational models tended to separate students into distinct categories, identifying gifted learners solely by high achievement or IQ scores, and students with disabilities based mainly on their deficits and struggles (Baum et al., 2014). However, more recent research has shown that students can demonstrate exceptional talents while also facing learning or behavioral challenges (Baum et al., 2014; Foley Nicpon et al., 2010).

Baum (1990) and Brody and Mills (1997) identified three subgroups of twice-exceptional students who are frequently overlooked in school settings (as cited in Al-Hroub & Whitebread, 2019). The first category of students includes those who are gifted but whose learning disabilities hinder them from performing well academically, which creates a gap between their potential and actual achievement. The second category is students with learning disabilities who are often identified based on the severity of their learning difficulties, with no recognition of their exceptional abilities. These students are often defined by their challenges rather than their strengths. The third, and often most invisible, group consists of students whose disabilities and giftedness mask each other so effectively that they appear to be average performers. As a result, they are rarely referred for either gifted or special education programs (Al-Hroub & Whitebread, 2019).

As discussed, there are several subgroups of twice-exceptionality. For this study, the focus will be on gifted students with SLD, as this is a common condition among twice-exceptional students in public school settings (Assouline & Whiteman, 2011). Moreover,

in the literature, the term twice-exceptionality is more commonly used to refer to the broader category of gifted children with learning difficulties (Silverman, 1983, as cited in Al-Hroub & Whitebread, 2019).

Recognizing twice-exceptionality requires educational strategies that support both students' strengths and their areas of need. When educational approaches focus only on disabilities and overlook talents, students may experience disengagement, boredom, and a decline in self-esteem. On the other hand, focusing only on strengths without addressing learning challenges can leave important academic gaps unfilled (Baum et al., 2014; Foley Nicpon et al., 2010).

In Lebanon, where both gifted education and special education remain underdeveloped (Alameddine, 2025; Al-Hroub, 2013), twice-exceptional students are at an even greater risk of misidentification or being overlooked. Without formal systems to recognize complex learner profiles, teachers often rely on personal judgment or limited resources, which may not fully address the unique needs of twice-exceptional learners. Gaining a clearer understanding of twice-exceptionality is therefore critical for exploring how teachers perceive and support these students within the Lebanese school context.

Prevalence

Identification practices for gifted students differ widely across and within states. According to data from the National Association for Gifted Children, between 5% and 20% of the general student population is identified as gifted (as cited in Foley-Nicpon et al., 2013). Some states also track how many of these students have coexisting Individualized Education Plans (IEPs) or 504 accommodations. In Iowa, for instance, 2.8% of all students were identified as gifted (Foley-Nicpon et al., 2013). However, this number is likely an underestimation, as many twice-exceptional students are not formally

identified in school settings due to the masking effects of their abilities and disabilities. Broader estimates suggest that the prevalence of twice-exceptionality may range from 300,000 to 360,000 students nationwide (National Education Association, 2006, as cited in Foley-Nicpon et al., 2013).

In Lebanon, there is currently no official data on the prevalence of twice-exceptional students. Al-Hroub and Jouni (2023) point out that existing identification practices often fail to accurately identify gifted students, leading to an underestimation of their numbers, including twice-exceptional students. Such a gap not only shapes the concept of prevalence but also affects the development of gifted education in the country. The underrepresentation of twice-exceptional students is a pressing issue that warrants further research.

Characteristics

Students with twice-exceptionality, particularly those identified as having both giftedness and LDs, have a complex set of abilities and challenges that sometimes appear contradictory. Al-Hroub (2014) found that four important aspects must be present to identify students who are gifted with LDs: exceptional talent or ability, a discrepancy between aptitude and achievement, a difference between verbal and performance IQ scores, and deficits in processing.

Verbal abilities, advanced analytical thinking, and high creativity are often evident in gifted students with learning disabilities (Alsamani et al., 2023; Mayes, 2016). However, these students encounter academic difficulties that lead to failure (Alsamani et al., 2023). Some of these academic difficulties include disorganization, lack of concentration, difficulties with basic reading and spelling, poor relationships with peers, and low self-esteem. A significant number of twice-exceptional students also possess

poor handwriting and organizational skills (Firat & Bildiren, 2022, as cited in Alsamani et al., 2023). In addition, they may underperform on timed assessments, fall short of learning objectives, and struggle with tasks that demand sustained attention, particularly those involving reading and writing (Alsamani et al., 2023).

Research has shown that gifted students, like their peers, can experience significant psychological challenges due to underachievement, lack of intellectual peers, boredom, and ongoing frustration (Antony et al., 2021). For twice-exceptional learners, these issues are often more pronounced. Perfectionism, a common trait among gifted students, can lead to heightened frustration when learning disabilities interfere with academic success (Mayes, 2016). This frustration may result in learned helplessness, emotional sensitivity, disruptive behavior, and difficulties with self-regulation. Brody and Mills (1997) also highlight emotional tensions that twice-exceptional students may face, including an inner conflict between independence and dependence, a gap between their high aspirations and others' low expectations, low self-esteem, and struggles with anger and interpersonal relationships (as cited in Bailey & Rose, 2011).

Baum (2004) and Silverman (2005) note that the social-emotional challenges faced by twice-exceptional students often become more pronounced during adolescence, a period marked by increased academic demands (as cited in Bailey & Rose, 2011). Baum et al. (2004) also raise the possibility that some signs of ADHD in gifted students may actually stem from boredom rather than a neurological disorder. Many students with learning disabilities also exhibit symptoms of hyperactivity, which makes this distinction important. Expanding on this, Bailey and Rose (2011) highlight the need to distinguish between learning difficulties resulting from boredom or a mismatched curriculum and those resulting from sensory processing problems or learning disabilities.

However, recent studies at the regional and international levels have supported these characteristics while also revealing their interpretations. For instance, Demir (2024) indicated that teachers recognized paradoxical characteristics in twice-exceptional students, such as overconfidence accompanied by sensitivity, as well as creativity in their writing. Oman and others (2025) also indicated that emotional and behavioral characteristics dominate those of gifted students, making teachers more likely to recognize regulation and behavioral traits than cognitive potential. This reveals that twice-exceptional students are not only complex but also difficult to interpret clearly in real-life situations. This is particularly significant in the Lebanese context, where teachers in inclusive classrooms are likely to recognize these characteristics. However, they may not interpret them as related to a twice-exceptional profile.

Challenges with Identification

The identification of twice-exceptional students has proven problematic in the literature. Twice-exceptional students are those who have exceptional abilities as well as learning difficulties. However, these students are often not recognized as such due to inconsistencies in their academic performance, the inflexibility of identification tools, and referral bias. What has been consistent in the literature is that identifying these students is not just a matter of a process or a tool; it also takes into account how teachers interpret and view them. Their knowledge, expectations, and the context in which they work all play a major role in this process.

Limitations of Standardized and IQ-Based Assessments

A major challenge in identifying twice-exceptional students lies in the continued reliance on standardized IQ tests and specific psychometric criteria. More specifically, IQ assessments often fail to capture the complex profiles of twice-exceptional learners,

especially because their learning disabilities can adversely affect their overall scores and may disqualify them from gifted programs despite their strong potential (Al-Hroub, 2013, 2014; Foley Nicpon et al., 2010). Al-Hroub (2020) explains that a student's disability can significantly lower IQ results, and Kaufman (1994) has criticized the use of verbal–performance IQ (VIQ–PIQ) discrepancies, which have shown limited reliability in detecting learning difficulties among twice-exceptional students (as cited in Al-Hroub, 2020).

Similarly, Foley Nicpon et al. (2010) emphasize that heavy reliance on full-scale IQ scores can exclude many twice-exceptional learners and instead advocate for more individualized assessments that examine intra-individual differences rather than overall results. These studies demonstrate that the conventional system has limitations, especially when dealing with students with uneven profiles, in which strengths and weaknesses coexist. This is particularly important in practical classroom applications, where teachers who rely on observable academic performance may overlook students who do not clearly demonstrate their abilities.

In contrast, Al-Hroub (2021) argues for the use of dynamic assessment (DA). The basis of the DA is Vygotsky's concept of the Zone of Proximal Development. The focus of the DA is on evaluating learning potential rather than performance. The DA has proved useful in identifying the hidden talents of students who are otherwise not recognized by static evaluation methods. However, the method has also been criticized for being time-consuming and requiring training (Murphy, 2011; Beckmann, 2006, cited in Al-Hroub, 2021). This reflects the disconnect between the theoretical models of identification and the practical reality. As a result, identification remains inconsistent, especially in an exam-oriented system.

Masking and Paradoxical Profiles

The problem of masking is another significant challenge associated with the detection of twice-exceptional learners. According to Antony et al. (2021), giftedness and special needs can overlap, leading an individual to exhibit average characteristics. In such a case, the educator will not recognize any exceptional traits in the child, as they seem neither particularly strong nor deficient. Consequently, many learners with twice-exceptionalities are often ignored as they do not meet the usual criteria for being too gifted or having special needs.

Reis et al. (2014) note that teachers might have problems identifying twice-exceptional students, especially when they have high potential coupled with significant challenges. Their performance is often inconsistent, or their problems are internalized. This masking effect is crucial in identifying such students, since it clarifies that identification does not depend solely on teachers' ability to detect overt characteristics but also on their ability to consider the bigger picture.

New studies only emphasize the issue at hand. In most instances, educators rely solely on observable children's behavior, which can lead to overlooking their cognitive strengths (Oman et al., 2025). However, even when educators see both strengths and weaknesses, they may be reluctant to interpret this information as evidence of twice-exceptionality (Demir, 2024). This explains why educators might acknowledge the existence of such children in theory while being hesitant to recognize them in practice.

Lack of a Standardized Definition

One persistent problem in this field is the lack of a standardized definition of twice-exceptionality. Al-Hroub (2013) and Foley Nicpon et al. (2010) have highlighted that different definitions of giftedness and learning disabilities across states and school

systems have caused confusion and misidentification in this field. Antony et al. (2021) and Reis et al. (2014) have highlighted a lack of formal systems for tracking twice-exceptional students, which is affecting policy development and interventions in this field.

Across the literature, this lack of clarity has been reported both at systemic and practical levels. When definitions and criteria lack clarity, teachers may be unsure how to identify students and may rely on their own judgment to reach such conclusions. This results in differences in how identification is carried out in educational contexts. This problem becomes even more complex when there is a lack of formal frameworks, forcing teachers to make uninformed interpretations of complex learner profiles.

Referral Biases and Educator Preparedness

The use of teacher referrals to select participants for programs targeting gifted students remains prevalent despite studies showing that teachers lack the necessary training for identifying gifted children with learning disabilities. According to Al-Hroub (2014), teachers refer learners with high achievement and performance levels who are not associated with any learning problems. Hence, teachers continue using a stereotypical understanding of gifted learners. Moreover, according to Foley Nicpon et al. (2010), students with disabilities are referred significantly less than other students as a result of existing biases.

Furthermore, Al-Hroub and Whitebread (2019) report that approximately 60% of the school psychologists in the study had no prior experience working with twice-exceptional students. Therefore, identification goes beyond the use of proper tools since the process relies on teachers' understanding of various issues related to giftedness. The need for ongoing professional development in recognizing diverse expressions of

giftedness, especially among challenging students, has been emphasized in the literature (Al-Hroub & Whitebread, 2019).

Recent studies among Arab communities also draw attention to the issue. The teachers of Saudi primary schools identified the following problems in identifying and assisting twice-exceptional learners: insufficiently qualified specialists, overcrowded classes, and inadequate professional development opportunities (Alsamani et al., 2026). Similarly, Aladsani (2020) reports that, despite teachers' positive attitudes towards SLD and giftedness, identification was difficult. It is essential to pay more attention to the criteria for recognizing gifted children and improve teachers' readiness to identify them at the ministry level.

Such findings were not only prevalent in Arab studies but also across different communities. A similar finding is reported by Oman et al. (2025) based on data from Slovenian primary school teachers. The researchers found that teachers tended to rely on external factors, such as attentiveness and emotion regulation, when identifying giftedness rather than assessing students' cognitive potential.

The Consequences of Misidentification

The problem of misidentification of twice-exceptional learners has several negative implications that can be traced to the academic sphere and the individual level. First of all, the inability of educational systems to recognize twice-exceptional students because of their inability to fit into the narrow frameworks of normality and abnormality results in the fact that many talented individuals receive neither gifted nor special education programs (Al-Hroub, 2013; Antony et al., 2021; Foley Nicpon et al., 2010). Consequently, twice-exceptional learners remain unrecognized and do not have an opportunity to develop their skills and meet their learning needs.

Furthermore, misidentification can have a strong emotional and behavioral impact, especially on neurodivergent students. Kahveci and Güneyli (2023) highlight that classroom settings that do not consider students' strengths are more likely to lead to observed frustration, stress, emotional distance, and avoidant behavior among students. In addition, Reis et al. (2014) explain that when giftedness and disability occur together, students may experience emotional and behavioral difficulties. This can affect their social and academic development. The issue of identification in Lebanon is especially relevant in this regard because the enrollment process for gifted programs and special education remains unequal. Thus, twice-exceptional students are likely to remain unidentified for a long period.

Teacher's Knowledge, Perceptions, and Understanding of Twice-Exceptionality

Teachers' perceptions of twice-exceptional students directly impact the identification process and subsequent interventions. Studies in various countries have shown a general lack of knowledge among teachers regarding the two-sided nature of the profile of twice-exceptional students. Most teachers find it difficult to comprehend the concept of both giftedness and disability coexisting in students.

In the context of this study, it is necessary to distinguish between teachers' perceptions and knowledge. Perceptions involve teachers' beliefs and attitudes, as well as their interpretations of twice-exceptional students. In contrast, knowledge involves teachers' awareness of twice-exceptionality and their ability to recognize and accommodate these students. The separation of perceptions from knowledge is necessary, since teachers may hold positive perceptions yet lack the knowledge or courage to act accordingly. Thus, examining teachers' perceptions is significant, as it can influence how

students are viewed, how issues are handled, which students are referred, and what type of assistance is offered.

This distinction is also evident in research conducted across various regions. For instance, according to Alsamiri (2018), teachers lacked a clear understanding of the definitions of giftedness and learning disabilities, indicating that, despite working closely with students with learning difficulties, they still lacked adequate conceptual knowledge about this group. It was further observed that many teachers struggled to define SGLD and noted that there were very few school-based programs for gifted students and no programs for SGLD students. The findings are significant because they show that this problem goes beyond teachers' attitudes towards students with dual exceptionality to a lack of conceptual knowledge about this student category.

Gaps in Preparation and Professional Training

One common theme in existing research is that many teachers, especially those in general education and in their early years of teaching, lack the skills needed to teach twice-exceptional students effectively. According to Rowan and Townend (2016), despite receiving general training on diversity issues, most teachers lacked the skills to work effectively with students with both exceptional abilities and learning disabilities. Just 42.5% of respondents reported feeling confident working with students with disabilities, while a smaller number reported having skills in differentiating instruction for gifted students. The same problem is evident in other countries as well. As noted by Alsamani et al. (2023), although many teachers can recognize traits such as creativity and problem-solving in their students, most have not received professional training to teach these learners. Gierczyk and Hornby (2021) claim that many teachers do not know what twice-exceptional children are.

Furthermore, Foley-Nicpon et al. (2013) demonstrate that simply knowing about a term does not guarantee that a teacher will use it in practice. It is especially challenging for teachers when applying the concept to specific learners, including students with ASD or ADHD, whose unique characteristics could be misconstrued or ignored entirely. Teachers rely primarily on external cues related to behavior and academic achievement, thereby ignoring vital information obtained during assessment activities.

It is clear across studies that teachers generally grasp the concept of twice-exceptional learners in theory but lack the practical skills to identify and intervene with them properly. The problem is exacerbated by the lack of structured, coherent training programs for teachers, which often provide knowledge in one field while ignoring others. For instance, special education teachers are usually qualified to detect disabilities, but may not have any experience working with gifted students. At the same time, gifted education teachers are aware of methods for detecting giftedness, but are unaware of learning difficulties. To address this issue, Foley-Nicpon et al. (2013) and Gierczyk and Hornby (2021) consistently recommend developing interdisciplinary training programs that involve special educators, general educators, and school psychologists.

This assumption is corroborated by more recent research as well. Thus, according to Alsamiri (2024), a significant increase in teachers' proficiency in recognizing and supporting gifted children with learning disorders can be achieved by providing targeted training and involving them in collaborative workshops. Similarly, Alsamiri et al. (2023) found that teachers working in inclusive learning environments were unaware of giftedness and LD as comorbidities, yet felt a strong need for specialized training in differentiating instruction and identifying gifted children. This finding implies that teachers' knowledge base is not static but can be enhanced through practice-oriented

professional development. It is important to note that the Lebanese educational context does not provide sufficient emphasis on this issue in its initial preparation of teachers.

Labeling and Identification Bias

Another problem is that teachers generally focus on students' weaknesses rather than their strengths, particularly those who have already been diagnosed with a disability. For instance, according to Mayes (2016), educators prefer to identify problems in the learning process rather than pay attention to signs of giftedness. Teachers' professional skills often limit their knowledge of twice-exceptionality. Bailey and Rose (2011) and Alsamani et al. (2023) note that educators consider special education and giftedness as independent areas that have nothing to do with each other.

This limited scope has contributed to the ongoing misconception regarding twice-exceptional students. Although teachers might identify both strengths and weaknesses of their students, they will remain reluctant to refer them for gifted or special educational provisions (Alsamani et al., 2023; Foley-Nicpon et al., 2013). According to Rowan and Townend (2016), recent teacher training programs tend to focus on supporting low-achieving learners but offer few recommendations for working with highly talented children, a pattern considered a deficit-focused approach.

Labeling also influences how educators understand students' behavior. The characteristics of inattention, emotional vulnerability, or inconsistency are viewed as behaviors rather than indicators of asynchronous development or masking. Research by Cody et al. (2022) and Gierczyk and Hornby (2021) indicates that labeling biases lead to distorted perceptions of which traits are considered misbehavior or laziness rather than twice-exceptionality. Such biases influence not only perceptions of students' behavior but also deprive students of appropriate educational opportunities and interventions. As noted

by Demir (2024), some educators recognize abnormalities or inconsistencies in children but refrain from labeling them as twice-exceptional, as the very notion is confusing to many teachers.

Disconnect Between Beliefs and Classroom Practice

Even though teachers exhibit positive attitudes towards twice exceptional students, their beliefs are not always reflected in practice. Cody et al. (2022) found that Grade 3 teachers were aware of students' talents and difficulties and had relatively positive perceptions of them. However, there was no effect on practice following professional development conducted within a relatively short time frame. Even though teachers were aware of the issue, they still struggled to implement necessary strategies when students' behavior deviated from traditional expectations of giftedness.

Gaps in teachers' understanding can affect the type of instruction students receive. Bailey and Rose (2011) found that even when teachers showed compassion toward twice-exceptional students, the instruction did not always meet their needs. Most teachers were unaware of the methods for addressing masking behaviors, asynchronous learning, or socio-emotional difficulties. All these factors contributed to learners' disengagement, or even led others to believe they were simply defiant or unmotivated.

In addition to these issues, there are inadequate opportunities for professional development. According to Rowan and Townend (2016), few teachers have the opportunity to develop skills in areas such as curriculum modification, parental communication, and identifying students' unique traits. Gierczyk and Hornby (2021) stress that enhancing professional support for students with twice-exceptionality does not rely solely on improving attitudes; it also requires organizational-level changes that incorporate coaching, peer support, and observation, rather than conducting independent

workshops. Based on the findings, it can be concluded that positive attitudes alone do little when there is no room for developing knowledge and hands-on training.

The Need for Collaboration

When teacher training and knowledge are fragmented, it shows a larger problem within the system. This includes the need to improve how schools identify and support twice-exceptional students. In this regard, Mayes (2016) argues that many students "slip through the cracks" because the boundaries of their specialization constrain teachers and can only work within the knowledge they possess. Additionally, the hesitation of twice-exceptional individuals to seek help can be explained by concerns about being misunderstood or negatively labeled (Mayes et al., 2014). Foley-Nicpon et al. (2013) and Gierczyk and Hornby (2021) suggest the need for cross-disciplinary teacher preparation. This means combining knowledge from both gifted and special education. They note that collaboration among educators, counselors, and family members is important for meeting the needs of individuals with twice-exceptionality. Otherwise, all such initiatives may prove ineffective.

Collaboration was similarly emphasized within the regional research. According to Alsamiri (2016), teachers in Saudi schools relied heavily on specialists to identify and address giftedness and learning disabilities among their students because general teachers were unprepared to do so. Although this evidence demonstrates the usefulness of having specialists available to assist, it might lead to accountability being confined to only a few people rather than involving all participants in the school setting. In this sense, the present paper relates to current research by examining how teachers' attitudes, professional development, and school structures facilitate identification and intervention processes.

Support Strategies and Programs for Twice-Exceptional Students

It is important to incorporate both gifted education and special education approaches when providing appropriate assistance to twice-exceptional students. They demonstrate higher abilities but suffer from academic struggles, thus requiring personalized, flexible, and strengths-oriented interventions. There is a consensus in the literature on the importance of employing a holistic model that addresses not only educational but also emotional, social, and behavioral aspects.

Comprehensive Assessment and Individualized Planning

An initial step towards meeting the needs of twice-exceptional children is a holistic assessment to design a program that caters to their specific needs. According to Antony et al. (2021), a psychoeducational assessment that goes beyond grade-appropriate expectations and covers intellectual, academic, and psychosocial domains is valuable. Such assessments must also take into account the student's overall profile rather than relying solely on test results, which tend to overlook instances of giftedness alongside academic challenges. The scholars caution against depriving such learners of enrichment opportunities because of behavioral or social problems they exhibit.

Similarly, Mayes (2016) calls for the development of IEPs developed collaboratively among an interdisciplinary team consisting of educators, parents, and students, addressing areas of strength as well as those requiring attention. Individualization is also highlighted in the Multi-Perspective Process Model proposed by Baum et al. (2014). It is a student-centered framework that covers talents, learning styles, social and emotional readiness, and the influence of the familial context. The emphasis on individualized planning aligns with the current need to develop more multidimensional and collaborative assessment models, in which teacher perceptions complement existing

support frameworks, particularly for students whose profiles are not easily captured by standardized measures.

Strengths-Based and Dual-Differentiated Instruction

A recurring theme across the literature is the link between strength-based instruction and differentiation. As Baum et al. (2014) and Foley Nicpon et al. (2010) note, approaches to instruction that focus on talent development are likely to increase engagement and self-regulation. Models such as the Schoolwide Enrichment Model (SEM) and the Enrichment Triad Model (Renzulli & Reis, 1997) offer flexible learning opportunities that help students strengthen executive functioning, communication, and critical thinking skills through authentic and personalized tasks.

Willard-Holt et al. (2013) confirm these results from the perspective of twice-exceptional students. Learners reported that strategies such as flexible pacing, project-based learning, and opportunities for self-advocacy and goal-setting were especially effective. Instruction that builds on student strengths, such as integrating reading or writing to support working memory, or using assistive technology to manage ADHD, was key to their success. These findings reinforce that effective support requires balancing challenge with accommodation, rather than prioritizing one over the other.

Nevertheless, according to Rowan and Townend (2016) and Alsamiri et al. (2023), teachers may not receive sufficient training to deliver appropriate instruction for twice-exceptional learners, including subject acceleration, flexible pacing, independent learning opportunities, and curriculum modifications. Thus, it becomes apparent that assisting twice-exceptional learners should depend not only on selecting the appropriate type of instruction but also on teachers' readiness and the availability of facilities in schools. It can be argued that, in the context of Lebanon, the matter will concern not only

determining the appropriate strategies but also ensuring their consistent delivery within the school environment.

Social-Emotional and Counseling Supports

In the literature, the emotional state of students with twice-exceptionality has been regarded as important as academic growth. It was mentioned earlier that many twice-exceptional learners experience difficulties, including frustration, low self-esteem, and confusion about their strengths and challenges (Antony et al., 2021). Hence, any effective strategy should support learners' social-emotional well-being. Social mentoring, extracurricular activities, and good relationships with educators can all help in this regard and foster self-advocacy and a stronger connection to school.

The importance of psychological safety, healthy relationships, and an acceptance of different paces in developing talents are among the most prominent points in the model created by Baum et al. (2014). When twice-exceptional individuals are protected, understood, and valued as unique individuals, they become more resilient and able to take an active part in classes and express their ideas freely. This component of the intervention becomes crucial when school systems focus primarily on performance, as emotional well-being may be the only tool to mitigate the impact of misidentification or under-identification.

Technology, Flexibility, and Learning Autonomy

Modern assistance provided to twice-exceptional students includes technological and organizational tools that facilitate learner independence. According to Willard-Holt et al. (2013), these include using study applications, various visual and audio tools, and organizing assistance for executive function problems. Similarly, Foley Nicpon et al.

(2010) emphasize the need to incorporate assistive technology into a dual-pathway approach that includes both academic development and targeted remediation.

It is apparent in the literature that the use of support is more effective when students have at least some autonomy over its implementation. Self-directed learning and strengths-based adaptations ensure that students with twice-exceptional status design their own compensatory systems rather than relying on standard accommodations, which may be insufficient. However, Willard-Holt et al. (2013) and Foley Nicpon et al. (2010) note that, in practice, supports are used inconsistently, forcing students to solve problems independently without structured assistance or guidance.

Lebanese Context: Gaps and Challenges

Even though there is growing global awareness of the needs of 2e learners, Lebanon's educational system has failed to prepare to meet these children's needs. Public and private schools have been found to lack adequate policies and structures to support twice-exceptional learners. The literature indicates a clear gap in current policies, pedagogy, and cultural perspectives that prevents twice-exceptional students from receiving appropriate attention. This study focuses on teachers' knowledge and perceptions. Because of this, the issue is not only whether policy and structural gaps exist. It also looks at how these gaps affect teachers' daily decisions, referrals, and support practices. In the Lebanese context, teachers often serve as the primary link between twice-exceptional learners and a fragmented educational system.

Policy and Systemic Neglect

Among the main challenges preventing support for twice-exceptional children in Lebanon is the lack of consistent policy implementation, despite existing policies on inclusion and gifted education. Although the 1997 curriculum reform recognized the

needs of students with disabilities, it did not address the needs of gifted or twice-exceptional children (Alameddine, 2025; Sarouphim, 2015). In Lebanon, there are no clear legal mandates from the Ministry of Education to support this population. As a result, most efforts are limited and often fragmented. Additionally, although many of these initiatives are led by private schools or NGOs, they do not operate on an evidence-based model (Alameddine, 2016, 2019; Al-Hroub, 2022). In practice, inclusive education in the Lebanese public sector remains limited and largely theoretical. Antoun (2022) and Al-Hroub and Jouni (2023) highlight this issue. Although Law 220/2000 supports the right to education for individuals with disabilities, it is not effectively implemented. This is related to weak enforcement, lack of funding, and ongoing political challenges.

The ongoing crisis and war in Lebanon have affected the education system. These conditions have increased existing institutional gaps. This has led to school closures, teacher strikes, and a lack of educational resources (Alameddine, 2025; Al-Hroub, 2013). Public schools, already struggling with various challenges, lack the necessary facilities, qualified professionals, and flexible curricula to support students with dual exceptionalities. In many cases, children who need special support, including twice-exceptional learners, are placed in specialized schools run by the Ministry of Social Affairs. These schools provide limited academic support and are not always well-regulated. As a result, students may have limited access to quality education (Al-Hroub & Jouni, 2023).

Inadequate Identification and Assessment Practices

Research highlights a gap in Lebanon regarding the identification of twice-exceptional learners. There is a lack of valid and culturally responsive systems. Gifted children are generally identified through instruments developed in the West that are then

translated into Arabic. These instruments may be conducted in English or French and may not account for possible linguistic biases (Antoun, 2022; Sarouphim, 2015). In addition, these tests do not take into consideration the effects of refugee status and other learning disabilities in gifted children, which leads to under-identification of gifted/ twice-exceptional students. The identification process largely relies on teachers' observations, with little consideration of multiple intelligences or psychosocial issues (Alameddine, 2025; Antoun et al., 2020; Diab, 2006).

Assessment practices in Lebanon still depend heavily on medical diagnoses, which often have limited value for educational purposes (Al-Hroub & Jouni, 2023). In addition, many private assessment centers operate without official licensing. The professionals who conduct these evaluations do not always have specialized training. As a result, misdiagnoses are common, and support is often delayed. This issue becomes more concerning when looking at research in the field. There is still a lack of local studies on twice-exceptionality, despite many years of research on giftedness in general (Alameddine, 2025). At the same time, this study focuses on teachers. It is important to note that teacher observation is not a problem in itself. However, in many cases, this observation takes place without clear criteria, consistent procedures, or proper training. Because of this, teachers may find it difficult to interpret what they observe. In this sense, the issue is not the observation itself. The main concern is the lack of systems that support teachers in understanding students' needs and responding to them consistently.

Cultural Misconceptions and Marginalization

Moreover, cultural attitudes toward giftedness in Lebanon hinder recognition and support for twice-exceptional learners. The term "gifted" is commonly understood to refer to excellence in fundamental academic disciplines, namely mathematics and language. It

implies that gifted people will become outstanding individuals who pursue high-profile careers in adulthood (Al-Hroub, 2022; Antoun et al., 2020; Sarouphim, 2015). Some students may be overlooked because of this limited view. These include students with strengths in non-traditional areas such as the arts, leadership, or creative problem-solving. In addition, students whose learning difficulties mask their talents may also not be recognized.

In Lebanon, the medical model of disability plays a role in identifying learners. According to Al-Hroub and Jouni (2023), the medical model of disability may cause discrimination against learners since the identification process may overlook children with psychological, behavioral, or neurological issues. Thus, they are not considered to be gifted or disabled. Moreover, this issue is even more pronounced in remote communities, public schools, and refugee camps due to the lack of high-quality education and the prevalence of non-traditional teaching practices (Antoun, 2022; Al-Hroub, 2022). In this context, cultural factors increase the burden on educators, who should assess the complex situations in a setting marked by strict criteria for abilities.

Teacher Preparation and Institutional Capacity

The issue of teacher preparation in Lebanon remains a key barrier to the recognition of students with two exceptionalities. The vast majority of courses offered in both in-service and pre-service training at Lebanese universities do not include content on the teaching of gifted students and dual exceptionalities (Al-Hroub, 2022; Sarouphim, 2015). As a result, teachers often lack the skills needed to provide differentiated instruction and address hidden abilities when relying on traditional lecturing strategies (Antoun, 2022). In addition, even at resource-rich private institutions, where enrichment programs are offered, assistance is provided only to the most successful students from

more privileged social groups, reinforcing educational inequities and failing to accommodate learners with more complex needs.

The lack of professional development training on this matter makes things even more difficult. According to Alameddine (2025), most teachers receive no training on recognizing asynchronous development, behavioral difficulties, or indicators of gifted underachievement. Without this training, schools fail to develop their institutional capacity for excellence in inclusiveness, and twice-exceptional learners remain without proper attention. In such an environment, teachers' knowledge and perceptions can be crucial factors in identifying the giftedness of twice-exceptional learners.

Regional studies provide additional proof to this point. For example, research carried out by Alsharif and Alasiri (2022) in Saudi Arabia showed that teachers were aware of both educational challenges that prevented the provision of proper care for gifted children with LDs, such as the absence of specialist teachers, and other obstacles associated with administration, families, and society. Similar results were obtained by Alsamiri (2024), who reported that teachers' ability to identify gifted children with LDs and provide assistance increased after participating in professional development programs and collective workshops aimed at supporting students. As a result, such studies provide that effective support relies on both teacher awareness with structured training, collaboration, and wider institutional support systems.

On the other hand, the current studies conducted in Lebanon are more limited than the recent studies conducted in Saudi Arabia and other regions, in which researchers have examined the views of teachers concerning identification, differentiation, training, and support (Aladsani, 2020; Alsamiri, 2016, 2024; Alsamani et al., 2026). The reason for mentioning this distinction is that although regional research is beginning to investigate

teachers' perceptions of twice-exceptional learners, there is no empirical evidence from Lebanon on the relationship between teachers' perceptions and identification, referral, and support within schools.

Summary

Despite the growing recognition in international literature of twice-exceptional students, it is evident that current educational institutions, in general, and particularly those in Lebanon, lack the capacity to address and meet these children's needs. Even though research recommends a more complex approach to identifying and addressing the issues these children face, many educational systems continue to rely on deficiency models. In Lebanon, the situation is even more complicated due to the absence of a national policy and limited teacher training. Also, many schools depend on foreign tests that do not reflect the cultural and linguistic diversity of the population. Differences related to social class and school type also affect the system. Research on gifted students is starting to receive more attention. However, studies focusing on Lebanese teachers' awareness of twice-exceptional learners remain very limited.

Literature on twice-exceptional students, as noted above, reflects an educational environment in which teachers' perceptions are shaped by insufficient preparation, institutional constraints, and the challenges posed by their profiles. The result is that twice-exceptional students are often misidentified, misunderstood, and even unrecognized as having special needs. When systems for identifying and supporting such students are inadequate, teachers play a critical role in ensuring this happens. This study thus investigates Lebanese teachers' knowledge and perceptions of twice-exceptional students and how these factors contribute to understanding, identifying, and supporting these children. The investigation into the knowledge and perceptions of Lebanese

teachers is informed by a gap in the literature regarding the contextual aspects of twice-exceptionality and their effects on teachers' identification and referral processes.

CHAPTER 3

METHODOLOGY

This chapter presents an overview of the methodology employed for conducting this study. It starts with an explanation of the adopted research design and the reasons for it. This is followed by a description of the study participants and their selection process, as well as the instruments used for data collection. Next, the procedures followed throughout the research process will be described, followed by the data analysis. Lastly, the researcher's role and ethical considerations will be discussed.

Research Design

The purpose of the present study is to investigate Lebanese teachers' knowledge and perceptions of gifted learners with learning disabilities (GLDs). Specifically, it examines what knowledge teachers possess about twice-exceptional students, how they perceive and identify them in inclusive classrooms, and what formal training or professional preparation they have received and what they report needing.

In view of the above purposes, a mixed-methods approach is most appropriate for this study, particularly because the questions and objectives call for an explanatory and interpretative approach. Given the complex and relatively under-researched phenomenon of twice-exceptionality in Lebanon, a mixed-methods approach appears highly applicable in this case. As pointed out by Creswell (2012), the sequential explanatory research design is most frequently used in educational research because educational issues often have many facets to explore. Using quantitative or qualitative approaches alone would not be sufficient to address the research objectives. Therefore, combining both methods allowed for a more comprehensive and balanced understanding.

The methodological framework adopted by the researcher was relevant, as the quantitative data and findings contributed to a general overview of the problem under study (Creswell, 2012). The findings from the quantitative phase provided a general overview of teachers' knowledge, attitudes, and practices regarding twice-exceptional children, gathered through structured surveys.

After the overall picture was outlined, the next step was to gather qualitative information to enable a more thorough analysis and reflection through semi-structured interviews. Given that the subject of gifted students with learning disabilities is not widely studied in the Lebanese educational system, the inclusion of qualitative data was necessary to clarify further and analyze the preliminary quantitative data (Creswell, 2012). The interviews helped investigate participants' perspectives on the relevance of the existing process and its alignment with the desired objectives and results within their educational setting (Love et al., 2022).

In addition, this design enabled evaluation of the effects of current practices and the specific conditions under which they occurred (Love et al., 2022). This provided insights into teachers' perceptions of their roles in supporting these students, especially in situations where resources were insufficient or barriers were present. Linking between the results of each phase contributed to the study's analysis using triangulation (Molina-Azorín, 2016). It also led to a broader picture of the identification and the support of twice-exceptional students within the Lebanese educational system.

Participants

In the present study, the target population included teachers working in inclusive private Lebanese schools with practical experience working with both gifted and learning-disabled children in classrooms. Specifically, with a focus on teachers who worked at the

upper elementary and middle school levels (grades 4-9). As explained by Villanueva and Huber (2019), intervention is recommended only in the later elementary school grades for a gifted child with mild dyslexia. In other words, delayed intervention can affect the child's development of reading and literacy skills and even result in a lack of interest in education. That is why this particular developmental stage is crucial, as during this time the child may show signs of giftedness and certain learning problems (Baum et al., 2014). Moreover, according to Subotnik et al. (2011), creative skills such as metaphorical thinking and problem-solving are intentionally developed during middle childhood and adolescence, making these years even more critical for proper support.

The sample for the quantitative part of the study comprised 173 teachers, drawn from the ten private inclusive schools in Beirut and Mount Lebanon. The criterion for choosing the sample was the accessibility of the schools. As for the qualitative part, the researcher selected a purposive sample of 10 teachers from the larger group 1. The reason for this selection was the teachers' willingness to conduct the interviews and their prior experience with twice-exceptional children, which would ensure that the data gathered would be authentic and based on real-life cases. When conducting such a study, it was important to reach a group of teachers who truly reflected the diversity of classrooms in Lebanon. The 173 teachers were chosen carefully to include different grade levels (4–9) and school types across Beirut and Mount Lebanon. Several respondents were quite realistic, considering the limited number of inclusive schools that opened their doors to participate, yet it was large enough to capture meaningful patterns and perspectives.

This sample size provided a good foundation for conducting descriptive analysis. The second stage was more personalized; hence, a small sample of about 10 teachers was interviewed. This focused number allowed for rich discussion and thematic depth; enough

to reach saturation, as shown in similar mixed-method studies exploring teachers' perceptions of twice-exceptional learners (Creswell, 2014; Guest et al., 2006).

Sampling Procedure

Participant selection in this study used a mix of purposive and convenience sampling. A purposive approach was used to select teachers who could share meaningful and relevant insights into the challenges and practices involved in identifying and supporting twice-exceptional students (Cohen, 2007). Teachers were selected based on their experience working with students who were gifted, had learning difficulties, or showed signs of both, and who taught grades 4–9 in private inclusive schools.

Since the goal of this study was to explore how teachers understood, identified, and supported twice-exceptional students in inclusive Lebanese classrooms, it was important to select participants who were not only familiar with giftedness and learning difficulties but had also worked directly with such students. At the same time, there were practical challenges and accessibility issues within the Lebanese educational system. This is why convenience sampling was also used to recruit teachers who were accessible and willing to participate, particularly at institutions easier to reach through pre-existing connections.

Diversity in terms of geographical location and teaching experience in education was ensured during the recruitment process to encompass a broad spectrum of viewpoints. The research received ethical clearance from the appropriate educational authorities, and all participants signed informed consent forms. Voluntary participation and anonymity were ensured throughout the procedure.

Instruments

The data collection in this study involved two main instruments: a structured questionnaire and a semi-structured interview guide. Both were selected and modified to fit within the scope of the research questions and theoretical framework.

Structured Questionnaire

The first instrument used was a structured questionnaire, one of the most popular survey methods for data collection. It provides structured, often numerical data, can be administered without the researcher being present, and is usually easy to analyze (Cohen, 2007). In this study, the questionnaire was useful because it helped in collecting data from 173 teachers, making it an efficient and practical way to reach a large sample.

To explore how teachers in Lebanon perceived gifted children with learning disabilities, often referred to as "twice exceptional," this study used the revised Teachers' Perspectives Questionnaire (TPQ). The TPQ was originally developed and validated by Alsamiri (2016) for use in Saudi Arabia. In 2020, Aladsani, in his doctoral dissertation conducted in Saudi Arabia, modified the 49-item version of the TPQ into a 24-item version and name it the TPQ-Revised. This questionnaire was designed to study teachers' perceptions about the presence, identification, and provision of services to gifted children with learning problems.

The TPQ-Revised consisted of 24 items divided into three main parts. The first part examined the existence of gifted students with specific learning disabilities (Items 1–4), the second part addressed identification practices (Items 5–15), and the third part explored how those students were supported and included in the classroom (Items 16–24). Aladsani (2020) adopted and modified 20 items from the original TPQ and added four additional items (items 1-4) to investigate teachers' perspectives on the existence of

gifted students with SLD (Domain 1). Moreover, the demographic part of the questionnaire was improved to align with the new study design.

The questionnaire was rated on a 7-point Likert scale, with responses ranging from 1 (strongly disagree) to 7 (strongly agree). It should be noted that the original TPQ was constructed through an extensive literature review, expert suggestions, and pilot testing conducted by Alsamiri (2016). The TPQ demonstrated high reliability, as reported by Alsamiri (2016), with Cronbach's alpha coefficients across all three domains ranging from .87 to .91. These results indicated high internal consistency, supporting the tool's validity for measuring teacher perceptions in Arab educational settings. As for the validation of the TPQ-Revised, the Cronbach's alpha for its overall scores was 0.68, indicating acceptable internal consistency.

The TPQ-Revised underwent professional review and translation into both Arabic and English, and its content validity was confirmed by experts (Aladsani, 2020). Given that it aligned with the purpose of the current study, the TPQ-Revised was considered as appropriate for adaptation in Lebanon. Thus, any modification required by the use of this tool in Lebanon was carefully examined to maintain its validity (see Appendix F).

Semi-structured Interview

The study also relied on semi-structured interviews as an essential data collection tool. According to Hendricks (2017), one strength of using semi-structured interviews is that they help gain insights into how participants view a specific topic. This technique not only helps educators and researchers gather rich data but also increases the validity of the research, as it is based on participants' real-life experiences (Hendricks, 2017). Additionally, Sreejesh and Mohapatra (2014) argue that semi-structured interviews serve as a bridge between qualitative and quantitative research, enabling participants to reflect

on their understanding of reality within a mixed-methods study design. In the context of understanding how teachers identify and support twice-exceptional learners, such interviews became extremely helpful. Semi-structured interviews provided an opportunity to address educators' particularities, focusing on their views and experiences.

The interviews, with a semi-structured design, included questions concerning teachers' perceptions of twice-exceptional students, the identification of such learners, collaboration with specialists, and practical classroom interventions (see Appendix H). Open-ended questions were prioritized to gather as much information as possible from participants with extensive experience working with students from the target group. As Hendricks (2017) argues, flexibility is one of the advantages of semi-structured interviews, helping researchers better understand participants' ideas and thoughts. Interview questions were carefully prepared following a comprehensive review of the literature, which identified gaps that future research needed to address. The interviews took around 45 to 60 minutes to conduct and were recorded with each participant's consent to support accurate transcription and thematic analysis.

Procedure

The initial phase involved contacting the administrative teams of 10 private inclusive schools in Beirut and Mount Lebanon. Schools were selected based on ease of access and geographic representation to ensure relevant feedback regarding the education sector. The researcher then sent an email to the school principals and coordinators, highlighting the study's objectives, significance, ethical considerations, and scope. Permission to conduct this survey of teachers of students in grades 4-9 (Cycles 2 and 3) was sought in the same email. As noted earlier, it is during these ages that giftedness and learning problems begin to manifest. The schools that consented

provided the researcher with a permission letter and the name of an administrative assistant who would act as a neutral intermediary.

The only person authorized to send the email containing the invitation and the survey link was the administrative assistant, not the principal, coordinator, or any other supervisor, to avoid creating any impression of coercion. The school did not share its staff list with the researcher, and the contact person did not monitor who received the email, clicked the link, or completed the survey. Participation was totally voluntary. It was made clear to teachers that they were free to withdraw from the research study at any time, and that all their answers would remain confidential. They were assured that there would be no consequences whatsoever regarding their employment and that ignoring the email invitation was acceptable. At most, the liaison sent two neutral reminders in weeks 2 and 5 of the survey window.

Data collection was done using LimeSurvey, an online platform for conducting secure surveys. At the end of each survey, there was an invitation to participate in a 45–60-minute semi-structured interview for any interested participant. Once the participants agreed to take part in the interview, LimeSurvey redirected them to another independent survey, where only their minimum contact details were captured for scheduling purposes. Because this was an independent survey, contact details could not be linked to anonymous responses, and contact information was erased immediately after the interview or upon withdrawal.

Access to administrative rights was restricted to the researcher, who required a password. Once the data collection period ended, the researcher downloaded the data from LimeSurvey and saved it on a password-protected, encrypted device. The use of features such as mobile responsiveness made data collection convenient and minimized

data loss. Questionnaire data collection took about two months. Afterward, the surveys were examined for incomplete or empty questionnaires, and the remaining surveys were prepared for analysis. Only surveys that were completed were included in the final dataset.

Following the analysis of quantitative data, the next step in the research process was the qualitative section, stage two of the study. A purposive sample of 10 teachers was selected from among those who responded to the questionnaire, indicating familiarity with twice-exceptional children and willingness to be contacted for an interview. This ensured representation across school type, teaching experience, and geographic location.

The selected participants were contacted via e-mail, where they were briefed on the next steps, and an appropriate time for the interviews was scheduled. The interviews were conducted in person, which helped boost participation. They were held in a private room within the participants' schools, out of sight of school administrators. Prior to each interview, the participants were reminded of the aims of the study and their rights to refuse participation. They were informed of the confidentiality of their answers and of their right to withdraw at any time. Participants' consent to be recorded was requested, and they were encouraged to answer openly and informed that they were at liberty to decline any questions if they so desired. Each interview lasted between 45 and 60 minutes to allow sufficient time for meaningful discussion without causing participant fatigue.

All interviews were conducted using the semi-structured format outlined above. During the process, prompts such as "Can you elaborate on that?" and "How did that affect your approach?" were used to elicit more information from the participants. Apart from audio-taping the interviews, the researcher kept field notes to record the non-verbal cues and relevant contextual observations.

Once all interviews were done, the recordings were transcribed. Verification was performed by comparing the transcripts with the actual audio recording to ensure accuracy. Interviews conducted in Arabic or other languages were translated into English to facilitate cross-case comparison. All digital files, whether recorded audio files or transcripts, were saved in an encrypted storage device accessible only by the researcher. Print materials were placed in a lockable file box.

In the closing stages of the interviews, all the respondents were asked whether they had anything else to add or share about their thoughts on the topic. The participants were then briefed on what would follow in the study, and they were provided with the researcher's contact details in case they decided to contact the researcher in the future. Their cooperation was appreciated, and their experience and perspectives were noted for their significance in improving the identification and educational practices for twice-exceptional learners in Lebanon.

Lastly, to raise awareness without providing incentives, a brochure about twice-exceptional students was distributed to all teachers at the schools participating in this study via the administrative assistant following the conclusion of the survey period. The brochure discussed the definition of twice-exceptional students, common characteristics, principles of identification, classroom interventions and accommodations, collaboration with specialists and families, exposing myths and listing facts, and a brief reading list for practitioners. No additional identifiers were collected for this part of the study.

Data Analysis

Quantitative Analysis

SPSS (Version 27) was used to analyze the survey data and descriptive statistics for the quantitative data analysis. Means and standard deviations were computed for every

item and for all TPQ domains. Before conducting the main analysis, the data set was reviewed for missing values. An initial data set included 201 respondents. However, 28 surveys were removed due to missing data. Consequently, the final sample size comprised 173 teachers. A missing-value analysis further showed that all retained items had 0% missing data, allowing the analysis to proceed. Moreover, frequencies and percentages for respondents' demographic characteristics and distributions by survey items were computed.

The interpretation of the means was based on establishing cut-off points for low, moderate, and high responses, using methods frequently employed in educational studies (Al-Hroub, 2009, 2010; Tannir & Al-Hroub, 2013). With TPQ having a Likert scale of 1 to 7 points, where 1 signified strongly disagree and 7 strongly agree, the ranges of interpretation were determined using the Likert Scale Interval method. Accordingly, mean scores were interpreted as follows: low ($1.00 \leq M \leq 2.99$), moderate ($3.00 \leq M \leq 4.99$), and high ($5.00 \leq M \leq 7.00$).

Reliability of the TPQ

The reliability of the TPQ scale in the current study was measured via Cronbach's alpha (Cohen, 2006; Sreejesh & Mohapatra, 2014). The overall reliability analysis of the TPQ questionnaire and its three dimensions confirmed adequate reliability ($\alpha = .86$), indicating high internal consistency across all 24 items. For each of the three domains, Dimension 1 (Existence) had a reliability coefficient ($\alpha = .58$) that was insufficiently strong due to inadequate internal consistency among the four items. Dimension 2 (Identification) had marginally acceptable reliability ($\alpha = .68$) while Dimension 3 (Education and Support) had acceptable reliability ($\alpha = .73$). Despite the insufficiently

low reliability coefficient of Dimension 1 (below .70), a rather small number of items (four) in the dimension can be considered a contributing factor.

Qualitative Analysis

Analysis of the qualitative data collected through the semi-structured interviews was conducted using thematic analysis to identify recurrent themes and patterns related to teachers' experiences teaching twice-exceptional students (Hendricks, 2017). Qualitative data were analyzed using techniques such as open coding, theme organization, and interpretation of findings. Four major themes were identified during the analysis of qualitative data collected from the interviews.

The final step was to integrate the findings from both phases for interpretation. In fact, the information collected through the interviews contributed to providing better insight into the survey results by explaining and enriching them. In this way, integrating both sets of findings has made it possible to obtain an overview of the issue under investigation.

Role of the Researcher

The researcher participated in all phases of the study. Going from the administration of the survey to interviewing participants and analyzing both quantitative and qualitative data. In the qualitative part of the study, the researcher personally transcribed the interviews and, where needed, translated them into English to ensure accuracy. Since the researcher was familiar with Lebanon's education system and already had some information on twice-exceptionality, reflexivity was applied continuously across the phases, ensuring that personal biases did not affect the research.

To ensure impartiality and adhere to ethical considerations, a non-directive approach was used during the interviews, employing open-ended questions to allow

participants to discuss their experiences. Confidentiality and voluntariness were paramount throughout the process, and care was taken to ensure that everyone's opinions were accurately and appropriately reflected in the discussion. During the research, it was imperative to be transparent, respectful when discussing opinions, and to analyze the data carefully to produce valid results.

CHAPTER 4

RESULTS

This chapter presents the study results. To answer the research questions, the findings were presented in tables and descriptive summaries to illustrate the collected data. This chapter also presents the results of the analysis of the semi-structured interviews, based on common themes identified in the interviewees' responses. These themes are based on the participants' answers. The findings are presented in two sections: the quantitative findings, followed by the qualitative findings.

Quantitative Results

Sample Descriptive

The sample consisted of 173 teachers in inclusive Lebanese schools. The majority of the teachers were female (76.3%, $n = 132$), while the rest 23.7% ($n = 41$) were male. As for age distribution, the majority were aged 25-34 (39.3%). This was followed by teachers aged 35–44 years (21.4%), those under 25 years (18.5%), and those aged 45–54 years (15.6%). A smaller proportion of participants was aged 55 years and above (5.2%). As for teaching experience, 35.3% ($n = 61$) of teachers had 0-5 years of experience, while 32.4% ($n = 56$) reported 6–10 years. In addition, 20.2% ($n = 35$) had 11–15 years of experience, and 12.1% ($n = 21$) had more than 15 years of teaching experience. Regarding the grades currently taught (multiple responses allowed), over half of the teachers reported teaching Grade 6 (52.6%, $n = 91$). Approximately one-third of participants taught Grade 8 (36.4%), Grade 7 (35.8%), and Grade 9 (35.8%). Furthermore, 32.9% taught Grade 5, and 30.6% taught Grade 4. Moreover, 22.0% of teachers reported holding a

degree in SPED or gifted education, whereas 15.0% reported completing training, workshops, or specialized courses related to special or gifted education. On the other hand, 63.0% of teachers reported not receiving any special education training (see Table 1).

Table 1.
Sample Descriptives of the Teachers

Variables		N	%
Gender	Male	41	23.7
	Female	132	76.3
Age	Under 25	32	18.5
	25–34	68	39.3
	35–44	37	21.4
	45–54	27	15.6
	55 and above	9	5.2
Years of Teaching Experience	0–5 years	61	35.3
	6–10 years	56	32.4
	11–15 years	35	20.2
	More than 15 years	21	12.1
Grades Taught*	Grade 4	53	30.6
	Grade 5	57	32.9
	Grade 6	91	52.6
	Grade 7	62	35.8
	Grade 8	63	36.4
	Grade 9	62	35.8
	No	109	63.0

Received Formal Training	A degree in SPED or gifted education	38	22.0
	Special education (courses, training workshops)	26	15.0

Note: *Grades taught were a multiple-response item; therefore, percentages exceed 100%

To analyze the findings quantitatively, three indicators were used to interpret the mean scores and cut-off points for the questionnaire items. These indicators classify teachers' responses into low, moderate, and high, following procedures commonly used in educational research (Al-Hroub, 2009, 2010; Tannir & Al-Hroub, 2013). Since the TPQ questionnaire used a seven-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), the interpretation ranges were calculated using the Likert scale interval formula. Accordingly, mean scores were interpreted as follows: low ($1.00 \leq M \leq 2.99$), moderate ($3.00 \leq M \leq 4.99$), and high ($5.00 \leq M \leq 7.00$).

Table 2.

Cut-off Points for Interpreting the TPQ Mean Scores

TPQ Domains	Cut-off Points	Quantitative Indicators
Existence	$1.00 \leq M \leq 2.99$	Low
	$3.00 \leq M \leq 4.99$	Moderate
	$5.00 \leq M \leq 7.00$	High
Identification	$1.00 \leq M \leq 2.99$	Low
	$3.00 \leq M \leq 4.99$	Moderate
	$5.00 \leq M \leq 7.00$	High
Education & Support	$1.00 \leq M \leq 2.99$	Low
	$3.00 \leq M \leq 4.99$	Moderate

Scale Descriptive

The description of the three domains of the TPQ in this study is shown in Table 3. In general, teachers reported relatively high levels of agreement across the domains. The Education and Support of gifted students with SLD domain was the highest mean score ($M = 5.23$, $SD = 0.75$), followed closely by the Existence of gifted students with SLD domain ($M = 5.22$, $SD = 0.96$). The Identification of gifted students in the SLD domain showed a slightly lower mean ($M = 4.91$, $SD = 0.63$), though it still indicated moderate-to-high agreement.

Table 3.

Descriptive of the TPQ Domains

Domain	Min	Max	M	SD	Quantitative Indicator
Existence of gifted students with SLD	1.00	7.00	5.22	0.96	High
Identification of gifted students with SLD	1.00	7.00	4.91	0.63	Moderate
Education and support for gifted students with SLD	1.11	7.00	5.23	0.75	High

Note: Domain scores were calculated as the mean of the items belonging to each TPQ domain using a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree).

Table 4 presents the descriptive statistics for the four items on teachers' perspectives on the existence of gifted students with SLD, along with the percentage distribution of teachers' responses to these items in the "identification of gifted students with SLD" domain. The results showed a generally high level of agreement among

teachers regarding the presence of gifted students with SLD in regular education classrooms. The highest mean score was recorded for the statement “Gifted students with SLD exist in regular classrooms” ($M = 6.10$, $SD = 1.41$), followed by “Gifted students with SLD are often overlooked” ($M = 5.56$, $SD = 1.48$), both reflecting a high level of agreement. At the same time, the statements “Some gifted students in enrichment programs have SLD” ($M = 4.91$, $SD = 1.39$) and “Some gifted students receive services in resource rooms” ($M = 4.32$, $SD = 1.50$) showed moderate levels of agreement among the teachers.

Most teachers strongly agreed with the statement about the presence of gifted students with SLD in regular classrooms, as 60.1% chose “strongly agree” and 17.3% “moderately agree.” Moreover, the majority of teachers agreed that gifted students with SLD are often overlooked: 32.9% strongly agreed, and 30.1% moderately agreed. Almost half of the teachers were neutral about the presence of gifted students in enrichment programs (48.6%). At the same time, the rest of the teachers expressed their agreement or disagreement with the statement, suggesting some uncertainty among teachers. The answers about whether gifted students with SLD receive services in resource rooms were more varied. 28.9% of the teachers were neutral about the statement, with the remainder distributed across the agreement and disagreement categories. These findings indicate high levels of teacher recognition of gifted students with SLD in regular classrooms. In contrast, perceptions of their placement in enrichment programs and resource rooms appear more mixed.

Table 4*Teachers' Responses to the Existence and Recognition of Gifted Students with SLD*

Item	Strongly Disagree (%)	Moderately Disagree (%)	Slightly Disagree (%)	Neutral (%)	Slightly Agree (%)	Moderately Agree (%)	Strongly Agree (%)	M	SD	Quantitative Indicator
Gifted students with SLD exist in regular classrooms	1.7	1.7	0.6	14.5	4.0	17.3	60.1	6.10	1.41	High
Gifted students with SLD are often overlooked	1.7	3.5	2.9	16.8	12.1	30.1	32.9	5.56	1.48	High
Some gifted students in enrichment programs have SLD	0.6	1.7	4.6	48.6	9.8	12.7	22.0	4.91	1.39	Moderate
Some gifted students receive services in resource rooms	1.7	13.9	10.4	28.9	22.5	14.5	8.1	4.32	1.50	Moderate

Note: Results are presented as %, M, SD, and a quantitative indicator. Domain scores were calculated as the mean of the items within each TPQ domain, using a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree).

Table 5 presents the descriptive statistics for the eleven items related to the identification of gifted students with SLD, along with the percentage distribution of teachers' responses to the items in the "identification of gifted students with SLD" domain. The results showed strong agreement in identifying these students. The highest mean value was found for the statement "Ministry should create identification criteria" ($M = 6.31, SD = 1.23$). The second-highest mean value was found for the statements "Teachers need knowledge of the identification process" ($M = 6.23, SD = 1.24$) and "Importance of teacher knowledge for identification" ($M = 6.10, SD = 1.24$), indicating strong consensus on the need for clear guidelines and teacher preparation. Teachers also agreed that the identification process could involve a discrepancy between cognitive ability and academic achievement ($M = 5.69, SD = 1.06$). Furthermore, teachers agreed that SLD students could achieve at an average level compared to their peers ($M = 5.26, SD = 1.27$). Moreover, teachers agreed that SLD students could be hiding their talents to avoid appearing different ($M = 5.40, SD = 1.34$). Teachers also agreed that the identification process is best handled by learning disabilities teachers ($M = 5.64, SD = 1.26$). A moderate agreement was stated for the statements "Difficulty identifying them in regular classrooms" ($M = 4.90, SD = 1.38$) and "Can be identified in regular classrooms" ($M = 3.27, SD = 1.68$). This shows that teachers had mixed opinions about identification in inclusive classrooms. In contrast, teachers reported low agreement on the statements "General education teachers are better at identifying these students" ($M = 2.65, SD = 1.23$) or "They have adequate training" ($M = 2.57, SD = 1.27$). This reveals perceived gaps in preparation and capacity for identification among general education teachers.

Most teachers agreed that identification usually involves a discrepancy between the students' cognitive ability and academic achievement, with 56.1% moderately agreeing and 17.3% strongly agreeing. Teachers also agreed that the students may be performing at an average level relative to their peers and may be hiding their talents to avoid standing out. Contrary to the above statements, most teachers disagreed with the assertion that students with SLD in regular classrooms can be easily identified as gifted. This was observed among 43.9% who moderately disagreed. In addition, the majority of teachers agreed that the identification process is effective when carried out by learning disabilities (LD) teachers. Specifically, 54.9% moderately agreed, and 19.7% strongly agreed on the effectiveness of the identification process when carried out by LD teachers. However, most teachers disagreed with the effectiveness of the identification process when conducted by general education teachers. Specifically, 55.5% and 59.0% of respondents moderately disagreed with the training received by general education teachers. Nevertheless, the majority of the teachers strongly emphasized the importance of the teacher's knowledge in the identification process. Specifically, 54.3% strongly agreed on the importance of the teacher's knowledge in the identification process. Furthermore, the majority of the teachers strongly agreed on the development of national identification criteria. Specifically, 68.2% strongly agreed on the establishment of national guidelines by the Ministry. Consequently, the results pinpoint teachers' acknowledgment of the complexity of identifying gifted students with SLD and the need for specialized knowledge, professional training, and clear national identification standards.

Table 5*Teachers' Perceptions of the Identification of Gifted Students with SLD*

Item	Strongly Disagree (%)	Moderately Disagree (%)	Slightly Disagree (%)	Neutral (%)	Slightly Agree (%)	Moderately Agree (%)	Strongly Agree (%)	M	SD	Quantitative Indicator
Discrepancy between cognitive ability and achievement	0.6	1.2	0.0	15.6	9.2	56.1	17.3	5.69	1.06	High
Achieve at an average level compared to peers	1.7	1.2	2.9	25.4	13.9	42.2	12.7	5.26	1.27	High
Hide their talents to avoid appearing different	1.7	2.3	2.3	22.0	8.1	46.2	17.3	5.40	1.34	High
Can be identified in regular classrooms	5.8	43.9	9.2	20.8	5.2	8.7	6.4	3.27	1.68	Moderate

Identification is better by learning disabilities teachers	2.3	0.6	1.2	17.3	4.0	54.9	19.7	5.64	1.26	High
---	-----	-----	-----	------	-----	------	------	------	------	------

Identification is better by general education teachers	7.5	55.5	13.9	17.3	2.3	0.6	2.9	2.65	1.23	Low
---	-----	------	------	------	-----	-----	-----	------	------	-----

Importance of teacher knowledge for identification	0.6	0.6	0.6	16.8	4.0	23.1	54.3	6.10	1.24	High
---	-----	-----	-----	------	-----	------	------	------	------	------

Difficulty identifying them in regular classrooms	1.7	4.0	6.4	30.1	15.6	32.9	9.2	4.90	1.38	Moderate
--	-----	-----	-----	------	------	------	-----	------	------	----------

General teachers have sufficient training	10.4	59.0	7.5	15.6	4.0	1.2	2.3	2.57	1.27	Low
--	------	------	-----	------	-----	-----	-----	------	------	-----

Teachers need knowledge of the identification process	0.6	1.2	0.6	13.9	2.9	18.5	62.4	6.23	1.24	High
--	-----	-----	-----	------	-----	------	------	------	------	------

The Ministry should create identification criteria	1.2	0.0	0.0	15.0	1.7	13.9	68.2	6.31	1.23	High
---	-----	-----	-----	------	-----	------	------	------	------	------

Note: Results are presented as %, M, SD, and a quantitative indicator. Domain scores were calculated as the mean of the items within each TPQ domain, using a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree).

Table 6 presents the descriptive statistics for the nine items in the education domain of gifted students with specific learning disabilities (SLD). In general, teachers expressed strong agreement on the importance of providing appropriate educational support for these students. The highest mean scores were recorded for the statements “Support of learning disabilities teachers is essential” ($M = 6.28, SD = 1.20$), “Teachers need greater knowledge of their characteristics” ($M = 6.24, SD = 1.22$), and “Should receive services in enrichment programs” ($M = 6.23, SD = 1.27$), demonstrating strong agreement on the need for specialized expertise and enriched learning opportunities. The teachers also agreed that inclusion in inclusive classrooms is beneficial ($M = 6.06, SD = 1.34$). In addition, they agreed on providing support for students in resource rooms ($M = 5.97, SD = 1.54$). Furthermore, the teachers agreed that the needs of these students are often not considered in schools ($M = 5.34, SD = 1.41$). Also, they agreed that teachers of students with learning disabilities are better equipped than general education teachers to support these students ($M = 5.82, SD = 1.13$). However, low levels of agreement were found for the statements “General teachers have sufficient training” ($M = 2.75, SD = 1.47$) and “Ministry provides enough resources” ($M = 2.39, SD = 1.40$). This suggests perceived gaps in teacher preparation and institutional support for effectively educating gifted students with SLD.

Moreover, the results revealed high agreement among teachers regarding the importance of providing appropriate educational support for these students. The majority of the teachers agreed that including these students in inclusive classrooms is beneficial, with 58.4% strongly agreeing and 15.6% moderately agreeing. Similarly, the majority agreed with providing services to these students in enrichment programs (65.9% strongly agreed) and in resource rooms (60.1% strongly agreed). Another need teachers

emphasized was greater knowledge of the characteristics of gifted students with SLD; in fact, 61.3% of teachers strongly agreed with this need. Teachers also emphasized the importance of support from LD teachers; in fact, 65.3% strongly agreed with this. Moreover, teachers believed that LD teachers can support students more than general education teachers; in fact, 52.0% moderately agreed, while 25.4% strongly agreed. Teachers stressed that the needs of gifted students with SLD were not taken into consideration at the school; in fact, 43.9% moderately agreed, and 17.3% strongly agreed. In contrast, most teachers disagreed that general education teachers have sufficient training (60.7% moderately disagreeing) or that the Ministry provides enough resources to support these students (39.3% moderately disagreeing and 28.3% strongly disagreeing). These results show teachers' acknowledgment of the importance of specialized support, professional knowledge, and institutional resources in effectively educating gifted students with SLD.

Table 6*Teachers' Education, Support, and Training Needs for Gifted Students with SLD*

Item	Strongly Disagree (%)	Moderately Disagree (%)	Slightly Disagree (%)	Neutral (%)	Slightly Agree (%)	Moderately Agree (%)	Strongly Agree (%)	M	SD	Quantitative Indicator
Inclusion in inclusive classrooms is beneficial	0.6	0.6	1.7	19.1	4.0	15.6	58.4	6.06	1.34	High
Should receive services in enrichment programs	0.6	1.2	0.0	15.6	4.0	12.7	65.9	6.23	1.27	High
Should receive support in the resource room	1.7	1.2	6.4	12.7	5.2	12.7	60.1	5.97	1.54	High
General teachers have sufficient training	6.9	60.7	6.9	13.3	4.6	2.9	4.6	2.75	1.47	Low
Teachers need greater knowledge of their characteristics	0.6	1.2	0.6	12.7	2.9	20.8	61.3	6.24	1.22	High

Support for teachers with learning disabilities is essential	0.6	0.6	0.6	13.3	3.5	16.2	65.3	6.28	1.20	High
Their needs are often ignored in schools	2.9	1.7	2.9	22.5	8.7	43.9	17.3	5.34	1.41	High
LD teachers are better equipped than general teachers	0.6	1.7	0.6	12.7	6.9	52.0	25.4	5.82	1.13	High
The Ministry provides enough resources	28.3	39.3	11.0	13.9	2.9	2.9	1.7	2.39	1.40	Low

Note: Results are presented as %, M, SD, and a quantitative indicator. Domain scores were calculated as the mean of the items belonging to each TPQ domain using a 7-point Likert scale (1 = strongly disagree to 7 = strongly agree).

Qualitative Results

Qualitative results were based on responses to semi-structured interviews with teachers in inclusive Lebanese schools. Teachers' profiles, in terms of demographic and professional characteristics, of those who participated in the qualitative part of the study are presented in Table 7. The sample consisted of ten teachers from private schools in Beirut and Mount Lebanon, with different subject areas and grade levels, with teaching experience ranging from three to ten years. The interviews addressed their knowledge and perceptions of twice-exceptional students, identification challenges, the practices and strategies used, and any training received. The collected data were organized into themes that emerged from the thematic analysis of the participants' responses. Hence, four main themes emerged from the analysis of the interviews.

Table 7

Demographic and Professional Characteristics of Teacher Participants

Teacher	Gender	Subject	Grades Taught	Years of Experience	School Type	Location
Teacher 1	Female	English	6, 7, 8	4	Private	Beirut
Teacher 2	Female	Science	8, 9	6	Private	Beirut
Teacher 3	Female	Special Education	4, 5, 6	8	Private	Mount Lebanon
Teacher 4	Male	Math	7, 8, 9	3	Private	Beirut
Teacher 5	Female	Special Education	8, 9	6	Private	Mount Lebanon
Teacher 6	Female	English	4, 5, 6	6	Private	Beirut

Teacher 7	Female	Science	5, 6	5	Private	Beirut
Teacher 8	Female	Ethics	4, 5, 6	9	Private	Mount Lebanon
Teacher 9	Female	Math	6, 7	4	Private	Beirut
Teacher 10	Female	Special Education	6, 7, 8, 9	10	Private	Beirut

Teachers' Knowledge and Perceptions of Twice-Exceptionality

Teachers' knowledge and perceptions of twice-exceptional students emerged as a key theme following iterative analysis of teachers' interview responses.

Teachers' knowledge of twice-exceptionality was clear and consistent as they defined it as the coexistence of high intellectual ability and learning difficulties. For instance, most of the teachers viewed twice-exceptional students as individuals with advanced cognitive abilities while experiencing, at the same time, many difficulties such as dyslexia, executive functioning difficulties, autism, or ADHD.

Teacher 1, a female English teacher for grades 6, 7, and 8 with four years of experience from a private school in Beirut, defined twice-exceptional students as “gifted learners with exceptional cognitive abilities simultaneously existing with learning disabilities.” Similarly, Teacher 2, a female Science teacher for grades 8 and 9 with six years of experience from a private school in Beirut, described them as “very strong in certain areas like reasoning, creativity, or problem-solving, but at the same time they struggle with something like reading, writing, attention, or organization.” Teacher 3, a female Special educator for grades 4, 5, and 6 with 8 years of experience at a private

school in Mount Lebanon, noted that they have a dual identity: “their strengths can often hide their challenges, and their challenges can mask their intelligence.”

Moreover, many teachers stressed that twice-exceptional students cannot be categorized. In other words, they cannot be considered either high achievers or struggling learners. Teacher 4, a male Math teacher for grades 7, 8, and 9 with three years of experience at a private school in Beirut, noted that they are “not simply high achievers or struggling learners; they are both.” Teacher 7, a female Science teacher for grades 5 and 6 with five years of experience from a private school in Beirut, also stressed the same idea, stating that such students “do not fit into only one category.”

Teachers also noted certain characteristics of twice-exceptional students from their classroom observations. They included uneven academic achievement, high verbal reasoning skills, difficulties in written expression, emotional frustration, perfectionism, and sometimes social withdrawal. It was agreed among teachers 2, 4, 6, and 8 that some characteristics of twice-exceptional students include struggling with written assignments, despite having high verbal reasoning skills. Teacher 7 added that students are frustrated when tasks are either below their intellectual level or too difficult because of their learning difficulties.

Identification Challenges

The theme “Identification Challenges” describes how teachers identify twice-exceptional students in practice and the challenges they encounter. Several teachers discussed what Teacher 3 called the “masking effect”. From teacher 3’s point of view, this term describes how giftedness can mask students’ learning difficulties and, at the same time, how these difficulties can mask their giftedness. Teachers 2 and 3 explained

their perspective on identification, stating that these students “do not fit one category,” which makes them vulnerable to misdiagnosis in widespread assessment tools that focus on identifying either giftedness or academic challenges, but rarely both.

On the other hand, many teachers stated that identification is limited to teachers’ observations rather than to screening tools. Teachers 2, 4, and 6 emphasized two steps before referring any student: carefully documenting patterns over time and consulting school specialists. Teacher 2 explained this process by stating that, after observing strong cognitive skills alongside noticeable behavioral difficulties, she “discussed it with the school counselor and suggested evaluation,” after which the student was formally evaluated as twice-exceptional. However, Teachers 7, 9, and 10 showed limited experience in initiating referrals for identification. Teacher 7 explained, “I have never referred a student who might be twice-exceptional.” This could be due to their limited experience and lack of information about the identification requirements.

Apart from masking, identification is affected by different factors, as explained by Teachers 1, 4, 5, 6, 8, and 9. These factors, recognized as major impediments in schools, include large class sizes, curriculum pressures, and examination systems. Teacher 8 explained that “With large classes like my class, it is hard to observe each student”. Teacher 10 stated that the lack of official procedures, strategies, and guidelines leads to inconsistencies in practices at different schools.

Practices and Support Strategies for Twice-exceptional Students

Another key theme derived from the teachers' interview responses was "Practices and Support Strategies for Twice-exceptional Students." This theme described the

strategies teachers used to support twice-exceptional students, focusing on balancing enrichment and accommodation.

Teachers 2, 4, 5, 6, and 8 agreed on the importance of using flexible strategies in assessing the twice-exceptional students. Teacher 2 said, “I allow them to present verbally instead of writing a long essay.” In contrast, Teacher 4 stated that this includes “giving students choices in how they demonstrate learning, such as oral presentations, projects, or visual tasks instead of only written exams.”

Scaffolding strategies were also employed by the teachers. Teacher 1 said she employed “checklists and instructions” in scaffolding the students. She said, “I provide learners with checklists and instructions to make sure they are well organized and ready for their lessons.” Teacher 3 said she uses Quality First Teaching (QFT), which involves breaking instruction into “chunks” and using assistive technology to help students understand concepts.

The majority of the teachers emphasized the need to help the students build on their strengths in the face of challenges. Teacher 3 emphasized the need for teachers to “feed the talent while supporting the struggle.” According to Teacher 7, collaboration among teachers at the school was essential to “challenge the child in one subject and support the child in the other.” According to Teacher 4, emotional support was essential because “many of them struggle with confidence”.

Despite these efforts, teachers identified significant systemic constraints that limit the effectiveness of their strategies. Teachers were concerned about the Lebanese education system's ability to properly support twice-exceptional children. Teachers 1, 4, 5, 6, 8, 9, and 10 all described the Lebanese education system as strict and exam-based

evaluation. Teacher 9 said, “The Lebanese system is very rigid... Students must still sit for standardized exams.” Teacher 1 added that the reliance on memorization and curriculum coverage limits the flexibility of teaching practices.

All teachers consistently pointed out the inconsistency in teaching methods in Lebanese schools. According to Teacher 10, there are no clear policies in Lebanese schools regarding supporting twice-exceptional children. This leads to a big gap between schools. Teacher 7 said that schools' readiness to support twice-exceptional children varies from case to case.

Training Needs and Institutional Support Systems

The theme “Training Needs and Institutional Support Systems” presents teachers’ views on the lack of resources, such as training programs and institutional support systems, to address the needs of twice-exceptional students.

When asked about formal preparation, the majority of teachers reported receiving little to no specialized training in twice-exceptionality through their university programs or school-level professional development. Teachers are highly recommended to undergo specialized training. Teachers 1, 2, 5, 6, 8, 9, and 10 agreed that teachers need specialized training to address twice-exceptionality; however, such training is lacking. Teacher 2 added that teachers might think students are “lazy or careless” due to the lack of such training. Teacher 5, a female Special educator for grades 8 and 9 with six years of experience from a private school in Mount Lebanon, noted the importance of both theoretical knowledge and practical workshops, while Teacher 9, a female Math teacher for grades 6 and 7 with four years of experience from a private school in Beirut, stressed the general need for technical training for education teachers.

Furthermore, teachers emphasized the need for stronger collaborative systems and greater access to specialists, such as those with expertise in learning difficulties and learning support teachers. Teacher 10, a female Special educator for grades 6, 7, 8, and 9 with 10 years of experience at a private school in Beirut, highlighted the need to implement the assessment process across multiple dimensions, aligned with the standards set by the ministry.

CHAPTER 5

DISCUSSION

This chapter will present and interpret the major findings of this study, which sought to investigate teachers' knowledge, perspectives, and identification of twice-exceptional students, as well as the training they have received and report needing. Additionally, it will consider the significance of these findings in relation to prior research and the theoretical framework. The next section of this chapter will seek to address the two research questions of this study:

1. What knowledge and perceptions do Lebanese teachers have of students who are gifted yet experience specific learning disabilities in inclusive classrooms?
2. How do Lebanese teachers identify gifted students with specific learning disabilities in their classrooms?
3. What training or professional preparation have teachers received in identifying and supporting GLD students, and what further preparation do they report needing?

Summary of Key Findings

Quantitative results showed moderate-to-high agreement across the three domains of the TPQ. The highest mean scores were found in the Existence and Education & Support domains, while a relatively lower mean score was reported for the Identification domain. All in all, the findings point to a pattern in which teachers demonstrate understanding and a willingness to support, but continue to face challenges related to identification, role clarity, and system-level structures.

The qualitative findings provided a more in-depth explanation of this pattern. From the interview results, several significant themes emerged across all the teachers' answers. Qualitative findings further highlighted barriers related to masking, limited training, unclear procedures, and inconsistent school support.

Both data sources also revealed a clear training gap that appears to affect teachers' confidence in identification and support. Teachers also reported reliance on specialists and pointed to contextual barriers such as class size, curriculum demands, and the exam system.

The above findings suggest that the problem may not lie in teachers' awareness but in the gap between their knowledge and practice. This gap might be attributed to training and the practical challenges affecting the teaching and learning process.

Teacher's Knowledge and Perceptions of Twice-Exceptional Learners

This section addresses the first research question by examining the knowledge base and perceptions Lebanese teachers hold regarding twice-exceptional students. Teachers' acknowledgment of the existence of twice-exceptional learners in their classrooms is itself a marker of conceptual knowledge, and their descriptions of these students' characteristics reveal the depth and limits of that knowledge.

The findings of this study show that Lebanese teachers are aware of the presence of twice-exceptional children and have positive attitudes towards teaching these children. This was evident in the quantitative and qualitative findings. From the quantitative study findings, there was strong agreement with statements about the presence of gifted students with SLD in regular classrooms and that they are likely to be overlooked. This implies that the teachers do not see giftedness and SLD as exclusive characteristics. This is similar to the findings of other researchers who conducted similar studies in Saudi Arabia.

Aladsani (2020) found that Saudi Arabian teachers generally held a positive view of the existence of gifted students with SLD and acknowledged that they could be found in mainstream classrooms. Alsamiri (2016) found that Saudi Arabian primary school teachers generally held a positive attitude towards students with giftedness and SLD, despite lacking the required expertise to address these students.

In addition, the findings support the above interpretation. Specifically, the qualitative results revealed that teachers' perceptions of twice-exceptional students were relatively multifaceted. The teachers participating in the study described the twice-exceptional students as having exceptional cognitive or intellectual capacities, such as reasoning or creativity, along with difficulties such as dyslexia, ADHD, executive functioning deficits, autism, or writing difficulties. At the same time, teachers highlighted that these students cannot be characterized as being either at the high end or the struggling end of the achievement continuum. The above teachers' views suggest that the teachers participating in the study had a relatively clear conceptual understanding of twice-exceptionality. This finding differs somewhat from Alsamiri's (2018) study, which found that Saudi educators had limited and often unclear definitions of students with giftedness and learning disabilities. It also extends the work of Alsamiri (2016) by suggesting that, at least among the Lebanese teachers interviewed in inclusive private schools, conceptual awareness may be more developed than procedural readiness.

The teachers were also able to identify some of the characteristics of twice-exceptional students. Teachers explained that giftedness can mask learning difficulties, while learning difficulties can simultaneously conceal giftedness. For example, they described them as students with uneven academic achievements, advanced verbal reasoning skills, poor writing skills, emotional frustration, perfectionism, and social

withdrawal. The description, however, suggests that teachers' perceptions of twice-exceptional students are not all negative. Instead, it is an appreciation of these students as complex learners. The description is also in line with literature, as suggested by the arguments presented by Demir (2024), which described twice-exceptionality as "a paradoxical construct consisting simultaneously of ability and disability," and as suggested by the arguments presented by Oman et al. (2025), which described students with high potential as those who may also experience emotional and behavioral difficulties.

The quantitative data revealed that teachers strongly agreed that a discrepancy between cognitive ability and academic achievement characterizes the process of identifying twice-exceptional students. These results suggest that teachers are aware of one of the defining characteristics of twice-exceptionality: high potential coupled with academic struggles that can mask both giftedness and disability. This is supported by Alsamiri (2016), who noted that while discrepancies in ability and achievement were observed among teachers, they did not necessarily recognize them as indicative of a unique twice-exceptional student population. This is further supported by Oman et al. (2025), who noted that twice-exceptional students are not easily identified because behavioral or emotional challenges mask their giftedness.

As discussed, teachers recognize the coexistence of strengths and difficulties in their students; however, they hesitate to name that coexistence as twice-exceptionality. This gap can be explained through a theoretical perspective grounded in Labeling Theory (Becker, 1963). Teachers often focused on the more visible learning difficulties and were less able to name or claim the giftedness that coexisted with them. As Becker (1963) explains, once a familiar label is used, it tends to shape how the student is seen moving

forward. In the Lebanese classrooms described in this study, this pattern appears in two ways. First, when students show clear academic struggles, they are quickly understood through a deficit lens, which can hide signs of higher-level thinking or creativity. This reflects the masking effect that teachers described. Second, teachers themselves seemed hesitant to use the label “twice-exceptional,” mainly because, unlike learning disabilities, it is not formally recognized within the system.

This directly addresses the first research question, showing that although teachers have some knowledge and their perceptions are generally positive, this is not yet sufficient to support accurate identification and effective intervention.

Teachers' Identification of Twice-Exceptional Learners

This section addresses the second research question by examining how Lebanese teachers identify twice-exceptional students in their classrooms and what challenges they encounter that limit accurate identification. Identification remains the most difficult area due to low confidence, masking, and the absence of clear procedures and guidance.

The quantitative study found varying levels of agreement regarding the possibility of identifying twice-exceptional learners in regular classrooms. Moreover, teachers had low agreement that general education teachers are better at identifying twice-exceptional learners. They also had low agreement that general education teachers are better trained to identify twice-exceptional learners. These findings indicate that teachers are not fully prepared to identify twice-exceptional learners on their own. This interpretation is supported by the interview responses, in which teachers described relying mainly on observation, ongoing documentation, and consultation with specialists before suggesting an evaluation. While some teachers had experience referring students when they recognized exceptional reasoning abilities alongside academic and behavioral difficulties,

others had never made a referral for a potentially twice-exceptional student. This difference reveals that identification remains largely dependent on teachers' knowledge and willingness, rather than on a school-wide approach.

Another significant finding is that teachers perceived special educators as better equipped than general education teachers to identify twice-exceptional students. This result is reflected in the strong agreement that identification is more effective when led by special educators and the low agreement that general education teachers are better at doing so. Similar findings were reported by Alsamiri (2016), who stated that teachers often refer these students to learning disabilities programs rather than to gifted programs, and by Alsharif and Alasiri (2022), who identified a lack of specialized teachers as one of the most important obstacles to supporting gifted students with learning disabilities.

In addition, the interviews revealed that identification is affected by structural barriers within schools, demonstrating that it is not just student-centered but also context-centered. The factors identified as major barriers included large class sizes, a lack of freedom to teach, a lack of official procedures, and a lack of screening tools. This is in line with the findings of Alsamani et al. (2026), which indicated that overcrowded classrooms, lack of professional development, and the lack of clear policy responsibility were significant barriers in the identification of twice-exceptional students in Saudi Arabia's primary schools. Furthermore, whereas past studies have primarily focused on the limitations of psychometric tools in identifying students with special needs (Al-Hroub, 2013; Foley Nicpon et al., 2010), this study shows that identification in the classroom setting itself remains unclear. It is not just the lack of tools for teachers to use; they are not even provided with tools to interpret their observations. This shifts the focus

from the availability of tools to the availability of frameworks for interpreting teachers' observations of students' behavior.

The Behavioral Theory, as presented by Skinner (1953) and Bandura (1977), also offers an understanding of this phenomenon. In the quantitative results, teachers agreed more with statements based on visible and measurable evidence, such as the gap between cognitive ability and academic achievement, average performance relative to peers, and the idea that talent can be hidden. At the same time, they were less likely to agree that these students can be identified in regular classrooms or that general education teachers are well prepared to do so. This reflects Skinner's (1953) idea that people tend to focus on what is observable and measurable. In an exam-driven system, what counts as evidence is often limited to what can be easily seen and assessed. Bandura (1977) adds another layer by showing that teachers often adopt the same ways of interpreting student behavior that they see in their colleagues and school leadership. This means that focusing first on difficulties becomes a shared way of thinking within the school.

These findings directly answer the first and second questions, demonstrating that Lebanese teachers understand key conceptual features of twice-exceptionality but do not yet feel adequately prepared or structurally supported to accurately identify these students. These identification challenges are inseparable from the training gaps reported by teachers, which are examined in the following section.

Teachers' Training and Preparation Gaps

This section addresses the third research question by examining the formal training Lebanese teachers have received to recognize and support GLD students, the gaps they perceive in their preparation, and how those gaps shape the informal classroom strategies they currently employ.

Regarding preparation, the findings indicate low preparedness to support twice-exceptional learners. This finding is similar to findings in the previous literature (Alsamani et al., 2026; Gierczyk & Hornby, 2021; Rowan & Townend, 2016), suggesting that teachers lack the preparedness to support twice-exceptional learners. However, this study indicates an interesting difference from the previous literature. While previous literature indicates that teachers have received some preparation to support twice-exceptional learners, this study finds that such preparation is absent in the Lebanese context. This suggests that the issue is not only one of improving the quality of training, but also of establishing it in the first place. This difference may be related to differences in teacher education structures, as the studies tend to focus on countries with existing teacher education systems. In contrast, the current study is conducted in an environment with very low or nonexistent preparation. The mixed-methods approach can support this interpretation: the quantitative study demonstrated low levels of confidence. In contrast, the qualitative study provides further insight into what this looks like in practice, including uncertainty in identifying masking and confusion in the referral process.

This distinction between conceptual awareness and practical preparedness is theoretically grounded in the Strengths-Based Approach (Baum et al., 2014), which argues that effective support for twice-exceptional students requires not only recognition of their complex profiles but also practical tools for responding, including differentiated instruction, flexible assessment, and strengths-based planning. The present findings suggest that Lebanese teachers are at the awareness stage, but have not yet reached the competence stage, and that without structured professional development, this gap is unlikely to close on its own.

About the training and assistance, the findings showed that they have received limited formal training and uneven institutional support. The quantitative findings indicated low agreement among teachers that general education teachers have sufficient training to identify these students and to educate them. Also, teachers reported low agreement that the Ministry provides sufficient resources to support gifted students with SLD. At the same time, these teachers strongly agreed that they need specific knowledge for the identification process, a better understanding of these students' characteristics, and support from special educators. The conclusion drawn from the above results is that the teachers recognize the gap between what is required and what is available. In other words, they are aware of the importance of training and institutional support, but they do not have confidence that the current systems are providing it adequately. These findings are consistent with the findings of many other studies. To exemplify this, Aladsani (2020) conducted a study and found that teachers in Saudi Arabia held positive views towards educating gifted students with SLD, but at the same time, they felt that general education teachers were not adequately prepared and that more resources and collaboration were required. This finding is consistent with Alsamiri (2016), who found that the majority of teachers had not received formal training on twice-exceptional students.

The qualitative findings revealed the consequences of the absence of this training. Teachers have developed their own strategies to support twice-exceptional students. All teachers explained that educators are generally not trained in twice-exceptionality and emphasized the danger of misinterpreting students without such training. One participant explained: "They might think those students are lazy or careless because they do not get the whole idea of being both gifted and having learning difficulties". This reveals that a lack of training is not merely a neutral factor; it affects how students are perceived and

can even lead to direct misjudgments of their capacities or attitudes. Similar concerns were noted in other studies. In a study conducted by Alsamiri et al. (2023), it was found that teachers in mixed-ability classrooms in Saudi Arabia were not trained in differentiation and identification and therefore felt they could not handle students who showed signs of giftedness and learning disabilities. In another study conducted by Alsamiri (2018), it was established that, in mixed-ability classrooms, the educators did not receive any formal training on students who showed signs of giftedness and learning disabilities and, therefore, could not understand the category of students with learning disabilities. Alsharif and Alasiri (2022) highlighted that, as teachers lack experience, this is an essential factor to consider when working with twice-exceptional students.

Besides, the findings show that teachers receive some types of support; however, teachers have stated that they did not receive adequate training. Nevertheless, the support is characterized as informal, school-based, and highly dependent on interprofessional collaboration at the local level rather than on national policies. Teachers interviewed reported referring students to school counselors, special educators, and specialists after observing patterns of strengths and difficulties over time. While such collaboration is valuable, the findings imply that it is inconsistent and may vary from one school to another. This interpretation is consistent with the findings of Alsamani et al.'s (2026) study, which found that teachers need collaboration time, role clarity, and ministry-led systems to identify and support twice-exceptional students effectively. This understanding is consistent with the findings of Alsamiri's (2024) study, which found that collaborative workshops and professional dialogue improve teachers' competence in identifying and supporting gifted students with learning disabilities. This study found that

Lebanese teachers value similar forms of collaboration support, though this support has not been adequately formalized.

The dependency on informal, school-based collaboration rather than formally structured professional networks is a finding that the Behavioral Theory framework helps explain. Teachers are not choosing to collaborate informally out of preference — they are doing so because the system provides no formal alternative. Formal collaborative structures, as recommended by Alsamiri (2024) and Alsamani et al. (2026), would need to be established at the institutional level and reinforced through consistent policy and professional expectations before they become embedded in teacher practice.

Importantly, teachers' training needs are not limited to identification alone. Teachers also require assistance in how to teach these learners once they are recognized. This is reflected in the strong agreement that teachers need greater knowledge of the characteristics of twice-exceptional students, as well as in the emphasis in interviews on practical workshops, multidimensional assessment, differentiated teaching, and collaborative planning. In other words, participants were not merely asking for awareness sessions about the concept of twice-exceptionality. Rather, they were calling for applied professional development that helps them translate recognition into effective classroom responses. The study by Alsamiri (2024) showed that professional development helped teachers improve their awareness and competence, and that the collaborative workshop helped them better appreciate differences among students and work together to support them. This is also in line with Oman et al. (2025) study which noted that while teachers need to be aware of twice-exceptionality, they need more than just awareness and need tools and criteria and assessment practices that can help them recognize students' complex characteristics.

Overall, as shown, the results regarding the third research question suggest that Lebanese teachers receive little formal training and only partial assistance in dealing with twice-exceptional students. The most significant sources of support for these teachers are collaboration within schools with specialists and teachers' own flexible teaching practices. However, Lebanese teachers clearly acknowledge the importance of specialists' contribution, opportunities for enrichment activities, and inclusive support services. Nevertheless, there is a significant gap in general teacher training and Ministry-level provision. Thus, as revealed, there are grounds to believe that the current support system is reactive and fragmented rather than proactive and integrated.

Teachers' Practices and Systemic Constraints

In the absence of formal preparation, teachers reported developing informal and largely self-directed strategies to support twice-exceptional students. While these practices reflect positive intentions, they also illustrate the direct consequences of the training gap identified above.

The qualitative findings revealed several informal strategies teachers have developed on their own to support twice-exceptional students. The strategies mentioned included flexible assessments, oral presentations, project-based options, visual assignments, checklists, scaffolded instruction, chunking, assistive technology, and emotional support. Teachers also emphasized the need to balance challenge and accommodation, or as one teacher put it, "feed the talent while supporting the struggle." The data suggests that teachers are trying to reach both sides of the twice-exceptional coin, supporting strengths while also supporting areas of need. This is consistent with the arguments put forth by Alsamiri et al. (2023), that differentiation is critical in the mixed-ability classroom, as well as the arguments put forth by Alsamiri (2024), that professional

development and dialogue can positively impact teachers' ability to identify and support students with giftedness and learning disabilities.

The use of these strategies, though encouraging, must be understood within their proper context. These are not the outcomes of formal training in twice-exceptionality; they are the product of individual teacher creativity and general pedagogical experience. This distinction matters because it means the strategies are neither consistent across schools nor specifically calibrated to the twice-exceptional profile. A teacher using oral presentations as an alternative assessment may be doing so for general differentiation purposes, not because they have identified a student as twice-exceptional and are responding to that specific profile. Without this specificity, even well-intentioned strategies may miss the mark. This is precisely what the Strengths-Based Approach (Baum et al., 2014) warns against: support must be purposeful, informed by a strengths assessment, and responsive to the dual nature of the student's profile, not simply a generic accommodation.

These informal strategies are further constrained by systemic factors within the Lebanese educational context, which limit what individual teachers can accomplish without institutional support. The qualitative results showed a significant lack of training, collaboration, and access to specialists. This shows that there is a gap between the perceived value of inclusive and differentiated practices and the perceived ability of the system to meet the teacher's needs in these areas. This is consistent with the results obtained by Aladsani (2020), where, although the teachers were generally positive and willing to help students with SLD and giftedness, they felt that with more training and collaboration, they would be able to help students with these issues more effectively. This is consistent with the results obtained by Alsamiri (2016), in which a majority of the

teachers did not have training on twice-exceptional students, and with the emphasis on training and collaboration noted in the results obtained by Alsamani et al. (2026).

The interview data provide concrete examples of how teachers attempt to teach twice-exceptional students despite limited formal preparation. These accounts suggest that teachers are already engaging in forms of differentiation and responsive teaching, even if they do not always label them in formal theoretical terms. This is an encouraging finding because it indicates that classroom practice may, in some cases, be more adaptive than institutional systems themselves. At the same time, the reliance on individual teacher initiative again points to inconsistency across schools and classrooms. The use of flexible and tailored approaches by teachers corresponds with the literature on the importance of individualized approaches for twice-exceptional students (Demir, 2024), and with Alsamiri's (2024) research supporting teachers' competence in recognizing and supporting students with giftedness and learning disabilities through professional development and collaborative workshops. This also corresponds with Alsamiri et al.'s (2023) focus on differentiation as a critical aspect of teaching in mixed-ability classrooms.

However, the findings also make clear that teachers' effort alone is not enough. Teachers in the present study reported that the needs of twice-exceptional students are often ignored in schools, and they described the Lebanese system as rigid, exam-based, and insufficiently responsive to individual differences. They also highlighted that practices are diverse and depend on the school and the specific situation rather than on the school's structure. This implies that the support provided to teachers is fragmented and situation-dependent rather than stable and systematic. In this regard, the current findings are similar to the views of Alsamani et al. (2026), who highlighted that evidence-based training and structures established by the ministry are essential for teachers to

identify and support twice-exceptional students effectively. This is similar to the views of Alsamiri (2016), who highlighted that teachers need more than good intentions to support students with special needs; they need recognition of the category and additional support systems with proper funding and guidance. Alsharif and Alasiri (2022) highlighted that proper support systems are required for students with giftedness and learning disabilities at the institutional and familial levels, with appropriate expertise and awareness.

General Contribution and Alignment with Research Questions

The findings of the study clearly align with the research questions. For instance, the findings indicate that the Lebanese teachers acknowledge the existence of twice-exceptional students and have positive perceptions about them. However, the same teachers experience difficulties in the identification process, such as masking, training, and procedures. Additionally, the study has indicated that teachers provide support to twice-exceptional students, but this support is informal and relies on specialists due to low confidence levels and the absence of a system. When the findings are considered collectively, they provide a comprehensive picture by relating perceptions, identification, and support within a single context.

Taken together, these findings confirm previous research while also offering something more. For instance, the difficulty teachers face in recognizing twice-exceptional learners is not a new phenomenon. However, this study shows that it is even more complicated in fragmented systems with little training. This calls for consideration of the study's findings within the local context, rather than applying the implications of similar overseas studies. More so, this study goes a step further in recognizing teachers'

perceptions, knowledge, and the context in which they operate as interrelated issues, rather than treating them as separate problems.

Most notably, these findings reveal a clear contradiction. While teachers are aware of the concept of twice-exceptionality and show their willingness to provide support to these students, they still face difficulties in accurately identifying them. This points to a mismatch between what teachers know, how teachers are trained, and how the system functions. This also suggests that improving the situation cannot rely on a single change. Rather, changes must occur simultaneously. In this respect, the importance of this research is based not only on the information provided about teachers' perceptions but also on the reasons why those perceptions do not necessarily lead to effective identification and support in the Lebanese context.

CHAPTER 6

CONCLUSION

This study investigated Lebanese teachers' knowledge, perceptions, and identification of twice-exceptional students in inclusive schools, as well as the training they have received and report needing. This study used a mixed-method approach combining survey data with interview responses to obtain a clearer and more complete picture of teachers' knowledge and perspectives.

Quantitatively, the results showed moderate-to-high agreement across different aspects. Teachers were aware of the presence of twice-exceptional students and had positive attitudes towards supporting them in inclusive classrooms. However, identification results were lower, indicating that teachers are unsure and face challenges in identifying these students.

The qualitative findings offered contextual depth to the quantitative results. The teachers described twice-exceptionality as consisting of both giftedness and learning difficulties. They identified uneven performance and the masking effect as the main difficulties in identifying students with twice-exceptionality. They shared their approaches in different ways to help and support students with twice-exceptionality, but they face many difficulties. These difficulties include limited formal training, a lack of clear procedures, and broader systemic constraints within the Lebanese educational context.

In general, the findings show that Lebanese teachers are aware of twice-exceptionality at a conceptual level and have positive intentions towards inclusive practice. However, this is not enough. To effectively identify and support twice-exceptional learners, appropriate training is required, along with clear referral procedures,

collaborative support structures within schools, and stronger guidance at the national level.

By representing both what is functioning and what remains missing in practice, this study contributes to the growing body of research on twice-exceptionalities in underexplored contexts. This research highlights the importance of moving towards more flexible and inclusive approaches based on students' strengths, while acknowledging the complexity of students who are both gifted and have learning difficulties. To achieve this, there is a clear need to develop teacher training programs, coordinate efforts within schools, and implement policies to ensure that twice-exceptional students in Lebanon receive equitable learning opportunities.

Implications

Several implications arise from the findings of this study. One of the main points that has clearly emerged is the need to move beyond awareness of twice-exceptionality toward a more practical understanding. Although the teachers held positive views of the concept of twice-exceptionality, they demonstrated low confidence in working with twice-exceptional students. This implies that awareness alone is insufficient and that practical competence remains a major issue.

At the school level, the results suggest that the system of support may be inadequate. The heavy emphasis on specialists in this study may imply that the identification and intervention for twice-exceptional students are fragmented rather than coordinated. This means that schools may lack adequate systems for shared accountability and decision-making regarding twice-exceptional students.

In the classroom context, the study's findings show that teachers indeed strive to support students by using differentiated and flexible strategies. However, the study also

indicates that such support might be disorganized and inconsistent. This suggests that the support provided to twice-exceptional students may be overly dependent on teachers' initiatives and attitudes.

Additionally, schools need to support teachers in the effective, more organized implementation of strengths-based and differentiated instruction. This can involve elements such as enrichment and accommodation, flexible assessment approaches, assistive technology, and organizational skills. Thus, there is a need to shift from practices that rely solely on teachers to approaches implemented across the whole school to ensure consistency and fairness for all learners.

At the policy level, the findings point to the need to develop stronger national frameworks within the Lebanese educational system. The absence of integrated guidelines leads to differences in how students are identified and supported across schools. This indicates disparities in the current system that may affect equal opportunity for twice-exceptional students.

Taken together, these findings make it clear that there is a need for a more coordinated approach, one that operates at multiple levels. Supporting twice-exceptional learners is not just about how teachers can improve their practice, but also about strengthening school systems and national policies. In other words, it is about considering the big picture. The combined influence of teacher preparation, school structures, and policy determines how these learners are recognized, understood, and supported.

Limitations

Although this study has several advantages, it is necessary to point out its limitations to provide a more balanced view of the results. The first limitation lies in the generalization of the results. The participants were volunteers selected from inclusive schools in

Lebanon. The sample size (N=173) for the quantitative section was adequate for the analysis. However, the sample might not be representative of all schools in Lebanon, especially public schools or those with limited inclusion practices. Moreover, it might be the case that schools that participated in the research were more informed about the issue. Therefore, the results should be considered in the specific context in which they were collected. This limitation does not apply to the research's purpose of exploring teachers' knowledge in Lebanon.

The other limitation concerns self-reported data. This type of data is usually obtained through questionnaires and interviews and is limited by social desirability bias. This means the information obtained might not accurately represent what teachers do, as it may be based on what is considered professionally acceptable. However, to address this limitation, the researcher used a mixed-methods design, which allows comparison between quantitative results and qualitative insights.

Despite these limitations, the research still provides important, context-specific information on teachers' knowledge, perceptions, and practices regarding twice-exceptionality. The congruence between quantitative and qualitative results and their alignment with prior literature contribute to the robustness of the conclusions. Thus, while results are considered within their particular context, they are important for answering the research questions and addressing an area still under-researched in the Lebanese education context.

Recommendations

Based on the study's findings, the following recommendations can be proposed. For teachers, education and professional development programs should focus more on practical application and support for twice-exceptional students. These education and

professional development programs should cover the basics of twice-exceptionality, the masking effect, uneven achievement, multiple pathways to twice-exceptionality, and differentiation. Moreover, it should also cover the basics on strength-based teaching approaches and methods to support organization, self-regulation, and executive skills. To ensure relevance, training should move beyond theory and include case studies, practical examples, and modeling of effective practices. The quantitative finding directly supports this recommendation: 63% of teachers reported receiving no formal training in special or gifted education (Table 4.1), and the qualitative finding that all ten interviewed teachers described the absence of specialized preparation as a barrier to accurate identification and effective support.

About the school system, more structured and collaborative approaches to twice-exceptional students should be established. Instead of relying solely on specialists to address the situation, more shared-responsibility approaches are necessary, such as those involving general education teachers, specialists, school counselors, and school administrators. Such approaches would allow for a more standardized process in the identification and support of twice-exceptional students, while also providing a more collaborative basis for intervention decisions. This recommendation is supported by the qualitative finding that teachers currently rely on informal, school-based interprofessional collaboration as their primary source of support, and by teachers' expressed need for clearer referral pathways and more consistent access to specialists.

In addition, schools should help teachers to implement differentiation more systemically. Although teachers might make an effort to differentiate, it should be enhanced. A more systemic approach to strengths-based and differentiated teaching might involve blending enrichment and accommodations, offering flexible assessment methods,

including assistive technologies, and teaching organizational skills. This approach would promote fairness and consistency in support for twice-exceptional students. This recommendation is supported by the qualitative finding that teachers are already attempting informal differentiation strategies, including flexible assessments, scaffolding, and oral alternatives, but report that these strategies are inconsistent and unsupported by school-wide policy or formal training.

The results also suggest several areas for further research. There is a need for studies to investigate how teachers' knowledge and practice change as a result of receiving targeted professional development. Longitudinal studies may be conducted to explore how training affects identification and student outcomes. Further research is also important to examine other aspects and perspectives, including those of the school administration, specialists, parents, and children. This will enable a more complete understanding of identification and support. In addition, comparisons between public and private schools in Lebanon, as well as across different regions, could provide deeper insight into how context and available resources shape practice. Observational studies are also important, as they provide a more accurate understanding of what is actually occurring in classrooms than self-reported data do. Finally, more research is needed on the academic and social-emotional outcomes of twice-exceptional children to understand better how to support them more effectively.

In conclusion, the study's recommendations indicate a need for a more coherent and integrated approach to addressing twice-exceptionality in Lebanon. Enhancing outcomes for these learners requires not only better classroom practice but also stronger professional preparation, more collaborative school structures, and clearer national policy frameworks. Only through such coordinated efforts can twice-exceptional learners be

more accurately identified, more effectively supported, and more fully included in educational settings.

APPENDIX A

IRB ACCEPTANCE LETTER



**AMERICAN
UNIVERSITY
OF BEIRUT**

Institutional Review Board
لجنة الأخلاقيات

APPROVAL OF RESEARCH

January 27, 2026

Dr. Anies El-Hroub
American University of Beirut
01-350000 ext.: 3064/3060
aa111@aub.edu.lb

Dear Dr. El-Hroub,

On January 27, 2026, the IRB reviewed the following protocol:

Type of Review:	Initial, Expedited
Project Title:	Teachers' Knowledge and Perceptions of Twice-Exceptional Students in Inclusive Lebanese Schools: Identification, Challenges, and Support Strategies
Investigator:	Dr. Anies El-Hroub
IRB ID	SBS-2025-0401
Funding Agency:	None
Documents reviewed:	Received January 27, 2026 : <ul style="list-style-type: none">• Questionnaire (English & Arabic versions).

The IRB approved the protocol from **January 27, 2026**, to **January 26, 2027**, inclusively. Before **November 26, 2026**, or within 30 days of study close, whichever is earlier, you are to submit a completed "FORM: Continuing Review Progress Report" and required attachments to request continuing approval or




**AMERICAN
UNIVERSITY
OF BEIRUT**

Institutional Review Board
لجنة الأخلاقيات

Thank you.

Sincerely,


Lina El-Onsi Daouk, MSc, CIM
IRB Administrator, Social & Behavioral Sciences

Cc: Lara Nasreddine, PhD, LD
Professor of Human Nutrition,
Co-Chair, Institutional Review Board, Social & Behavioral Sciences

Rami Mahfouz, MD, MPH
Professor of Pathology and Laboratory Medicine
Chair Institutional Review Board

Ali K. Abu-Alfa, MD
Chairperson and Professor, Department of Internal Medicine
Director, Human Research Protection Program
Director for Research Affairs (AUBMC)

American
PO Box 1
1107 2020
T +961 1 1
irb@aub.edu.lb
www.aub.edu.lb

The American University of Beirut and its Institutional Review Board, under the Institution's Federal Wide Assurance with OHRP, comply with the Department of Health and Human Services (DHHS) Code of Federal Regulations for the Protection of Human Subjects ("The Common Rule") 45CFR46, subparts A, B, C, and D, with 21CFR56; and operate in a manner consistent with the Belmont report, FDA guidance, Good Clinical Practices under the ICH guidelines, and applicable national/local regulations.

APPENDIX B

CONSENT TO PARTICIPATE IN AN ONLINE RESEARCH STUDY

This notice is for an AUB-IRB Approved Research Study for

Dr. Anies Al Hroub at AUB.

aa111@aub.edu.lb

****It is NOT an Official Message from AUB****

You are invited to participate in a research study entitled **Teachers' Knowledge and Perceptions of Twice-Exceptional Students in Lebanese Schools: Identification, Challenges, and Support Strategies**. Conducted by Dr. Anies Al Hroub, Faculty of Arts and Sciences at the American University of Beirut.

The conduct of this study will adhere to the IRB-approved protocol.

*Teachers are invited **indirectly** through a **neutral administrative assistant** (non-supervisory staff) at each participating school. The assistant emails the IRB-approved invitation and **LimeSurvey** link to eligible teachers. I will first email schools for permission; if there is no reply within **5–7 business days**, one follow-up call is placed using the phone number on the school's official website. At most **two neutral reminders** may be sent during the survey window. School leadership will **not** know who participates.*

The purpose of the study is to explore the knowledge and perception of Lebanese teachers on a group of twice exceptional students who exhibit giftedness and learning disabilities (GLDs). This study will focus on how teachers identify these students, the challenges they face, and the strategies they use to support them. Additionally, this study explores whether teachers depend on informal observations, standardized tests, or external diagnoses to identify GLD students. By tackling these issues, this research aims to guide policy changes and push for reforms that better support GLD students in Lebanon.

PROCEDURES:

Read the consent document and decide whether you want to be involved in the study.

- Participation is completely voluntary.
- Completing the questionnaire will take around 15 - 20 minutes.

- Only the data you provide in the questionnaire will be collected and analyzed. The research team will not have access to your name or contact details.
- The results of the survey will be published in a thesis that will be available in electronically at AUB Libraries.
- The inclusion and exclusion criteria: 200 teachers in grades 4–9 in private inclusive schools in Beirut or Mount Lebanon; teachers who have experience teaching students with giftedness and/or learning difficulties will be considered in the inclusion criteria. Interns, student teachers, or purely administrative staff with no classroom teaching. Teachers not teaching grades 4–9, or teachers with no current/prior exposure to learners showing high ability and/or specific learning difficulties will be considered in the exclusion criteria.

POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY:

You will not receive payment for participation in this study.

The results of the study will guide teacher preparation, in-service training, and school policy. It can also point researchers toward feasible, context-sensitive interventions for 2e learners. In short, the work adds both practical and theoretical value: it helps classrooms today and shapes the research agenda tomorrow.

POTENTIAL RISKS TO SUBJECTS AND/OR SOCIETY:

The risks of the study are minimal. The main risks are small and well controlled: privacy/confidentiality; perceived workplace sensitivity; and ordinary burdens like time or mild discomfort during reflection. I store de-identified data on a password-protected, encrypted device and report only aggregate results with de-identified quotations scrubbed of contextual clues. Given those safeguards, the likelihood of harm is low and the magnitude is no greater than what teachers encounter in routine professional reflection. In return, the study offers meaningful educational and societal benefit: clearer identification and support pathways, more consistent practices across schools, and a needed evidence base for Lebanon. On balance, the risks are reasonable in relation to the benefits and the importance of knowledge to be gained. If a participant becomes upset or uncomfortable, I will pause immediately, remind them they can skip/stop/withdraw, and only continue if they wish. If someone wants support beyond study, I will share publicly available counseling/help resources or suggest speaking with a school counselor or community mental health clinic, according to their preference. They can reach out to the Lebanese National Lifeline “Embrace” at 1564. No deception is used, no biomedical procedures are involved, and no sensitive personal data is solicited. Overall, the advantages (raising awareness, informing practice/policy, and building a local evidence base for 2e learners) clearly outweigh the limited, well-mitigated disadvantages (time, mild discomfort, very small confidentiality risk).

CONFIDENTIALITY:

The collected data will remain confidential *and anonymous*. Records will be monitored and may be audited by the IRB while assuring confidentiality.

PARTICIPATION AND WITHDRAWAL:

If you voluntarily consent to take part in this study, you can change your mind and withdraw at any time without consequences of any kind.

Refusal to participate or withdrawal from the study will involve no penalty or loss of benefits to which the subject is otherwise entitled, and neither will it affect their relationship with their organization and AUB/AUBMC. Please note that incomplete or partially filled questionnaires will not be withdrawn from the study; any answers submitted will still be used anonymously for aggregate analysis.

QUESTIONS ABOUT THE STUDY:

If you have any questions about the study, you can contact me, Dima Shehab Education, Faculty of Arts & Sciences, AUB.

Email: das39@mail.aub.edu or Phone: 81608705

ACCESS TO THE SURVEY:

If after reading the consent document and having your questions answered, you voluntarily agree to take part in the study; you can access the survey by clicking on the following link (<https://dshehab.limesurvey.net/663574?lang=en>)

CONCERNS OR QUESTIONS ABOUT YOUR RIGHTS:

If you have concerns about the study or questions about your rights as a participant, you can contact the **AUB IRB Office** at irb@aub.edu.lb or **5445**.

APPENDIX C

CONSENT TO PARTICIPATE IN AN ONLINE RESEARCH STUDY IN ARABIC

هذه الرسالة تتعلق بدراسة بحثية معتمدة من لجنة الأخلاقيات في الجامعة الأميركية في بيروت (AUB-IRB)

بإشراف الدكتور أنيس الحروب - AUB
Aa111@aub.edu.lb

هذه ليست رسالة رسمية صادرة عن الجامعة الأميركية في بيروت (AUB).

أنت مدعو/ة للمشاركة في دراسة بحثية بعنوان:
"معرفة المعلمين وتصوراتهم حول الطلاب مزدوجي التميز في المدارس اللبنانية: التحديد، التحديات، واستراتيجيات الدعم".
تجرى هذه الدراسة بإشراف الدكتور أنيس الحروب، كلية الآداب والعلوم – الجامعة الأميركية في بيروت، وبالتفويض التام ببروتوكول البحث الموافق عليه من لجنة الأخلاقيات (IRB).

يتم توجيه الدعوة للمعلمين بطريقة غير مباشرة من خلال مساعد إداري محايد (موظف غير إشرافي) في كل مدرسة مشاركة. يقوم المساعد بإرسال الدعوة المعتمدة من لجنة الأخلاقيات وربط الاستبيان عبر LimeSurvey إلى المعلمين المؤهلين. سأقوم بالمراسلة الرسمية للمدارس طلباً للإنز، وإذا لم يصل الرد خلال 5-7 أيام عمل، سيتم إجراء اتصال متابعة واحد بالرقم الموجود على الموقع الرسمي للمدرسة. قد يتم إرسال تذكيرين محايدين كحد أقصى خلال فترة جمع البيانات. لن يعرف مسؤولو المدرسة من يشارك ومن لا يشارك.

تهدف هذه الدراسة إلى استكشاف معرفة وتصورات المعلمين اللبنانيين حول فئة من الطلاب الذين يجمعون بين المهوبة وصعوبات التعلم (GLDs) ستركز الدراسة على كيفية تحديد المعلمين لهؤلاء الطلاب، التحديات التي يواجهونها، والاستراتيجيات التي يستخدمونها لدعمهم في الصف. كما تستكشف الدراسة ما إذا كان المعلمون يعتمدون على الملاحظات غير الرسمية، أو الاختبارات المعيارية، أو التشخيصات الخارجية في تحديد الطلاب مزدوجي التميز.
ومن خلال معالجة هذه القضايا، تهدف الدراسة إلى المساهمة في توجيه السياسات ودعم الإصلاحات التي تحسن الخدمات المقدمة للطلاب مزدوجي التميز في لبنان.

الإجراءات:

- يرجى قراءة وثيقة الموافقة واتخاذ قرار بشأن رغبتك بالمشاركة.
- المشاركة طوعية بالكامل.
 - يستغرق تعبئة الاستبيان حوالي 15-20 دقيقة.
 - سيتم جمع وتحليل البيانات التي تقدمها فقط عبر الاستبيان. لن يكون لدى فريق البحث أي وسيلة للوصول إلى اسمك أو معلومات الاتصال الخاصة بك.
 - سيتم نشر نتائج الدراسة ضمن رسالة ماجستير، وستكون متاحة إلكترونياً في مكتبات AUB.
 - معايير الاشتمال والاستبعاد:
 - الاشتمال: حوالي 200 معلم من الصفوف 4-9 في المدارس الخاصة الدامجة في بيروت أو جبل لبنان، ممن لديهم خبرة في تعليم الطلاب الموهوبين و/أو ذوي صعوبات التعلم.

○ الاستبعاد: المتدربون، المعلمون المتدرجون، الموظفون الإداريون الذين لا يدرسون، المعلمون الذين لا يدرسون الصفوف 4-9، أو غير الذين لديهم خبرة حالية/سابقة مع الطلاب ذوي القدرات العالية و/أو صعوبات التعلم المحددة.

الفوائد المتوقعة للمشاركين والمجتمع:

لن تحصل على أي مقابل مادي مقابل المشاركة في الدراسة. لكن نتائج الدراسة ستساهم في: تطوير إعداد المعلمين والتدريب أثناء الخدمة، دعم السياسات المدرسية، توجيه الباحثين نحو تدخلات واقعية وحساسة للسياق المحلي للطلاب مزدوجي التميز. بذلك تقدم الدراسة قيمة عملية ونظرية—تدعم الصفوف الحالية وتوجه البحوث المستقبلية.

المخاطر المحتملة على المشاركين والمجتمع:

المخاطر قليلة جدا ومسيطر عليها جيدا. تشمل مخاطر بسيطة تتعلق بالخصوصية/السرية، حساسية مهنية محتملة، عبء الوقت أو شعور طفيف بعدم الراحة أثناء التفكير. ألنتم بتخزين البيانات منقحة الهوية على جهاز مشفر محمي بكلمة مرور، استخدام نتائج مجمعة وإخفاء أي تفاصيل قد تعرف المشاركين، عدم وجود أي إجراءات طبية أو بيانات شخصية حساسة، ومنحك الحق في تخطي أي سؤال أو الانسحاب في أي لحظة. عند شعور أي مشارك بعدم الارتياح، سأقوم بالتوقف فورا وتذكيره بإمكانية تخطي الأسئلة أو وقف المشاركة أو الانسحاب.

وإذا رغبت في دعم إضافي، سأزوده بموارد مساعدة عامة مثل الخط الوطني للدعم النفسي "Embrace" عبر الرقم 1564

بشكل عام، الفوائد التعليمية والمجتمعية تفوق بكثير المخاطر المحدودة.

السرية:

ستبقى جميع البيانات التي يتم جمعها مجهولة الهوية وسرية. قد يتم الاطلاع على السجلات من قبل لجنة الأخلاقيات (IRB) بهدف المراقبة والتدقيق مع الحفاظ على السرية التامة.

المشاركة والانسحاب:

إذا وافقت طوعا على المشاركة، يمكنك تغيير رأيك والانسحاب في أي وقت من دون أي تبعات. رفض المشاركة أو الانسحاب لن يؤدي إلى أي عقوبة، ولن يؤثر على علاقتك بمؤسستك أو بـ

AUB/AUBMC.

الاستبيانات غير المكتملة أو المعبأة جزئيا لن تستثنى من الدراسة؛ سيتم تحليل أي إجابات واردة بشكل مجهول.

الأسئلة حول الدراسة:

إذا كانت لديك أي أسئلة حول الدراسة، يمكنك التواصل معي:

ديما شهاب – كلية التربية، كلية الآداب والعلوم - AUB

البريد الإلكتروني das39@mail.aub.edu

الهاتف 81608705

الوصول إلى الاستبيان:

إذا وافقت طوعا على المشاركة بعد قراءة وثيقة الموافقة والإجابة على أسئلتك، يمكنك الوصول إلى الاستبيان عبر الرابط التالي:

<https://dshehab.limesurvey.net/663574>

الأسئلة أو المخاوف حول حقوقك كمشارك:
إذا كانت لديك مخاوف حول الدراسة أو أسئلة حول حقوقك كمشارك، يمكنك التواصل مع مكتب لجنة الأخلاقيات في AUB عبر:
irb@aub.edu.lb أو الاتصال على الرقم 5445

APPENDIX D

SAMPLE ORAL CONSENT SCRIPT

**Teachers' Knowledge and Perceptions of Twice-Exceptional Students in
Inclusive Lebanese Schools: Identification, Challenges, and Support Strategies
Dr. Anies Al Hroub**

Hello. My name is Dima Shehab. I am a researcher in the Department/School of Education at AUB. I would like to invite you to participate in a **research study** about how Lebanese teachers identify, perceive, and support students who are **twice-exceptional**—that is, both gifted and experiencing specific learning difficulties.

Before we begin, I would like to take a few minutes to explain why I am inviting you to participate and what will be done with the information you provide. You will be asked to **take part in a semi-structured interview** lasting about **45 to 60 minutes**. The questions will focus on your experience with identifying twice-exceptional learners, the challenges you face in supporting them, and the strategies or accommodations you use in your classroom. Please stop me at any time if you have questions about the study.

I am doing this study as part of my research at AUB. I will be interviewing approximately **ten teachers** from private inclusive schools in Beirut and Mount Lebanon. The information you provide will be used in my **master's thesis** and may later appear in academic presentations or journal publications and this collected information will be used in published research as well as in academic presentations. Your individual privacy and **confidentiality of the information** you provide will be maintained in all published and written data analysis resulting from the study. Your name, school, or any identifying details will **not** appear in any report. Only Dr. Al Hroub and I will have access to the data. All recordings and transcripts will be stored on **encrypted, password-protected devices** and destroyed on the stated timelines. If you prefer not to be recorded, I will take written notes instead.

Participation should take approximately **45 to 60 minutes**. Please understand your **participation is entirely on a voluntary basis** and you have the right to withdraw your consent or **discontinue participation at any time without penalty**. **Some questions may ask you to reflect on** classroom challenges; if any question makes you uncomfortable, you may skip it. The study involves minimal risk—no greater than those encountered in ordinary professional reflection. The study involves minimal risk, meaning the likelihood and seriousness of harm are no greater than those encountered in normal professional reflection. The only foreseeable risks relate to minor discomfort when discussing classroom challenges or professional experiences. To minimize these risks, you may skip any question, pause, or stop the interview at any point. No sensitive personal, medical, or financial questions will be asked.

There are no direct benefits to you for participating. However, your insights may contribute to better understanding of how teachers in Lebanon can identify and support twice-exceptional learners. The results may help inform teacher training, inclusion

practices, and future educational policies that benefit students with diverse learning profiles.

If at any time and for any reason, you would prefer not to answer any questions, please feel free to skip those questions you may simply say “*skip this question.*” If at any time you would like to stop participating, please tell me. We can take a break, stop and continue at a later date, or stop altogether. You will not be penalized for deciding to stop participation at any time.

I would like to audio record this interview so as to make sure that I remember accurately all the information you provide. The recording will be stored securely on my encrypted device and used only by me for transcription. Once I verify the transcript, the audio file will be permanently deleted within 30 days. You may still participate even if you choose not to be recorded.

If you have any questions, you are free to ask them now. If you have questions, concerns or complaints about this research study later, you may contact me at **das39@mail.aub.edu** or **81 608 705**.

Are not satisfied with how this study is being conducted, or if you have any concerns, complaints, or general questions about research or your rights as a participant, please contact the AUB Social & Behavioral Sciences Institutional review Board (SBSIRB) at AUB at **irb@aub.edu.lb** or by phone at **5445**.

Are you interested in participating in this study?

Consent to Record Interview

(Question should be posed before any recording begins)

May I record this interview?

Consent to Quote from Interview

I may wish to quote from this interview either in the presentations or articles resulting from this work. A pseudonym will be used in order to protect your identity, unless you specifically request that you be identified by your true name.

Do you allow me to quote from this interview?

Consent to Use Name

There may be reasons for which you prefer that your true name be used in presentations and articles related to this research.

Would you like your true name to be used in any oral presentations or written documents resulting from this research?

Yes, you may use my real name

No, please use a pseudonym

Confirmation of Consent to Record Interview

(Question will be posed once recording has begun)

May I record this interview

APPENDIX E

SAMPLE ORAL CONSENT SCRIPT IN ARABIC

معرفة المعلمين وتصوراتهم حول الطلاب مزدوجي التميز في المدارس اللبنانية الدامجة: التحديد، التحديات، واستراتيجيات الدعم
الدكتور أنيس الحروب

أود (AUB) مرحبا. اسمي ديما شهاب، وأنا باحثة في كلية/قسم التربية في الجامعة الأميركية في بيروت دعوتك للمشاركة في دراسة بحثية حول كيفية قيام المعلمين اللبنانيين بتحديد، وفهم، ودعم الطلاب مزدوجي التميز—أي الطلاب الذين يجمعون بين الموهبة ووجود صعوبات تعليمية محددة. قبل أن نبدأ، أود أن أشرح لك سبب دعوتك للمشاركة وما الذي سنقوم به خلال هذه المقابلة. سنطلب مشاركتك في مقابلة شبه مهيكلة مدتها بين 45 و60 دقيقة. ستركز الأسئلة على خبرتك في تحديد الطلاب مزدوجي التميز، والتحديات التي تواجهك في دعمهم، والاستراتيجيات أو التعديلات التي تستخدمها داخل الصف. يرجى إبقائي في أي وقت إذا كانت لديك أي أسئلة حول الدراسة. سأجري مقابلات مع حوالي عشرة معلمين من مدارس خاصة AUB أقوم بهذه الدراسة كجزء من بحثي في دامجة في بيروت وجبل لبنان. سيتم استخدام المعلومات التي تقدمها في رسالتي للماجستير وقد تظهر لاحقا في عروض أكاديمية أو منشورات علمية. ستستخدم البيانات المجموعة أيضا في أبحاث منشورة وفي عروض أكاديمية، مع الحفاظ الكامل على خصوصيتك وسرية جميع المعلومات التي تقدمها. لن يظهر اسمك، أو اسم مدرستك، أو أي تفاصيل تعريفية في أي تقرير. فقط الدكتور الحروب وأنا سنكون قادرين على الوصول إلى البيانات. سيتم تخزين جميع التسجيلات والنصوص على أجهزة مشفرة محمية بكلمات مرور، وسيتم إتلافها ضمن المهل المحددة. إذا فضلت عدم تسجيل المقابلة، يمكنني الاعتماد على تدوين الملاحظات بدلا من ذلك.

ستستغرق المشاركة تقريبا بين 45 و60 دقيقة. المشاركة طوعية بالكامل، ولديك الحق في الانسحاب أو التوقف عن المشاركة في أي وقت بدون أي عقوبة. قد تتضمن بعض الأسئلة انعكاسا على تحديات صعبة، وإذا شعرت بأي انزعاج من أي سؤال، يمكنك تخطيه. تنطوي هذه الدراسة على حد أدنى من المخاطر—أي لا تتجاوز المخاطر التي يواجهها الفرد في التأمل أو التفكير المهني اليومي. المخاطر المتوقعة تقتصر على الشعور الطفيف بعدم الراحة عند مناقشة التحديات الصعبة أو التجارب المهنية. ولتقليل هذه المخاطر، يمكنك تخطي أي سؤال، أو التوقف، أو إنهاء المقابلة في أي وقت. لن تطرح أي أسئلة شخصية حساسة أو طبية أو مالية. لا توجد فوائد مباشرة لك من المشاركة، إلا أن أرائك قد تساهم في تعزيز فهم كيفية تحديد ودعم الطلاب مزدوجي التميز في لبنان. قد تساعد النتائج في تطوير تدريب المعلمين، وممارسات الدمج، والسياسات التربوية المستقبلية الداعمة للمتعلمين ذوي الاحتياجات المتنوعة. إذا رغبت في عدم الإجابة على أي سؤال في أي وقت، يمكنك ببساطة قول "تخطي هذا السؤال". وإذا رغبت في التوقف عن المشاركة، يمكنك إخباري بذلك. يمكننا أخذ استراحة، أو مواصلة المقابلة لاحقا، أو إيقافها بالكامل. لن تتعرض لأي عقوبة نتيجة توقفك عن المشاركة. أرغب في تسجيل هذه المقابلة صوتيا لضمان تذكر جميع المعلومات التي تقدمها بدقة. سيتم تخزين التسجيل بشكل آمن على جهاز مشفر ولن يتم استخدامه إلا لغرض التفرغ النصي. بعد التأكد من صحة النص، سيتم حذف التسجيل بشكل دائم خلال 30 يوما. يمكنك المشاركة حتى لو اخترت عدم الموافقة على التسجيل.

إذا كان لديك أي أسئلة الآن، فالرجاء طرحها. وإذا كانت لديك أي أسئلة أو مخاوف أو شكاوى حول هذه الدراسة لاحقا، يمكنك التواصل معي عبر:

das39@mail.aub.edu

أو عبر الهاتف 81 608 705

وإذا لم تكن راضيا عن كيفية تنفيذ هذه الدراسة، أو إذا كانت لديك أي مخاوف، شكاوى، أو أسئلة عامة حول في (SBS IRB) البحث أو حقوق المشاركين، يمكنك التواصل مع لجنة الأخلاقيات للعلوم الاجتماعية والسلوكية

الجامعة الأميركية في بيروت عبر:

irb@aub.edu.lb

أو على الرقم 5445

هل ترغب في المشاركة في هذه الدراسة؟

الموافقة على تسجيل المقابلة

(يجب طرح السؤال قبل بدء أي تسجيل)

هل تسمح بتسجيل هذه المقابلة؟

الموافقة على استخدام الاقتباسات من المقابلة

قد أرغب في استخدام اقتباسات من هذه المقابلة في العروض الأكاديمية أو المقالات العلمية الناتجة عن هذا البحث. سيتم استخدام اسم مستعار لحماية هويتك، ما لم تطلب استخدام اسمك الحقيقي.

هل تسمح لي باستخدام اقتباسات من هذه المقابلة؟

الموافقة على استخدام الاسم

قد تكون هناك أسباب تفضل فيها استخدام اسمك الحقيقي في العروض أو المنشورات المرتبطة بهذا البحث. هل ترغب في استخدام اسمك الحقيقي في أي عروض شفوية أو وثائق مكتوبة ناتجة عن هذا البحث؟

نعم، يمكن استخدام اسمي الحقيقي

لا، الرجاء استخدام اسم مستعار

تأكيد الموافقة على تسجيل المقابلة

(يطرح السؤال بعد بدء التسجيل)

هل تسمح بتسجيل هذه المقابلة؟

APPENDIX F

QUESTIONNAIRES

Section 1: Background Information

1. What is your gender?
 Male Female Prefer not to say

2. What is your age range?
 Under 25
 25–34
 35–44
 45–54
 55 and above

3. What type of school do you currently teach in?
 Public
 Private

4. How many years of teaching experience do you have?
 0–5 years
 6–10 years
 11–15 years
 More than 15 years

5. What grades do you currently teach? (Check all that apply)
 Grade 4
 Grade 5
 Grade 6
 Grade 7
 Grade 8
 Grade 9

6. Have you received any formal training related to gifted education, special education, or inclusive education?
 Yes
 No
If yes, please specify:

Section 2: Questionnaire

<i>Please rate how strongly you agree or disagree with the following statements. In answering each question, use a range from (1) to (7) where (1) stands for strongly disagree and (7) stands for strongly agree. Please choose only one response choice per question. Please answer as spontaneously as possible.</i>	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	slightly Agree	Moderately Agree	Strongly Agree
First domain: Teachers' perspectives of the existence of gifted students with SLD							
Gifted students with SLD do exist in the regular education classroom.	1	2	3	4	5	6	7
Gifted students with SLD are often overlooked.	1	2	3	4	5	6	7
Some gifted students who are receiving education in enrichment programs have SLD.	1	2	3	4	5	6	7
Some gifted students are receiving special education services in the resource room.	1	2	3	4	5	6	7
Second domain: Teachers' perspectives of the identification of gifted students with SLD							
Gifted students with SLD have a discrepancy between their cognitive abilities and education achievements.	1	2	3	4	5	6	7
Gifted students with SLD often achieve at average level compared with their peers in the regular education classroom.	1	2	3	4	5	6	7
Gifted students with SLD try to hide their talents because they do not want to seem different.	1	2	3	4	5	6	7
Gifted students with SLD can be identified in the regular education classroom.	1	2	3	4	5	6	7
Identifying gifted students with SLD is better done by learning disabilities teachers instead of general classroom teachers.	1	2	3	4	5	6	7
Identifying gifted students with SLD is better done by general education teachers instead of learning disabilities teachers.	1	2	3	4	5	6	7
It is important to determine what teachers know about the characteristics of gifted students with SLD in order to more accurately identify them.	1	2	3	4	5	6	7
It is difficult to identify gifted students with SLD in the regular education classroom.	1	2	3	4	5	6	7

General education teachers have sufficient training to identify gifted students with SLD.	1	2	3	4	5	6	7
Teachers need essential knowledge of the process of identification of gifted students with SLD.	1	2	3	4	5	6	7
The Ministry of Education in Lebanon should create specific criteria for identifying gifted students with SLD.	1	2	3	4	5	6	7
Third domain: Teachers' perspectives of the education of gifted students with SLD							
The inclusion of gifted students with SLD into an inclusive classroom is beneficial for them.	1	2	3	4	5	6	7
Gifted students with SLD should receive appropriate educational services in the enrichment programs with gifted students.	1	2	3	4	5	6	7
Gifted students with SLD should receive special educational services in the resource room along with their education in regular educational classroom.	1	2	3	4	5	6	7
General education teachers have sufficient training to teach gifted students with SLD.	1	2	3	4	5	6	7
Teachers need greater knowledge of the characteristics of gifted students with SLD in order to meet their individual needs.	1	2	3	4	5	6	7
The support of learning disabilities teachers is essential to the success of the educational experience for gifted students with SLD.	1	2	3	4	5	6	7
The specific educational needs of gifted students with SLD are too often ignored in our schools.	1	2	3	4	5	6	7
Learning disabilities teachers are better equipped to teach gifted students with SLD than general classroom teachers.	1	2	3	4	5	6	7
The Ministry of Education provides enough resources to teachers to meet the educational needs of gifted students with SLD.	1	2	3	4	5	6	7

Section 3: Opportunity to participate in a follow-up interview

The interview will focus on teachers' knowledge and perceptions of twice-exceptional students, strategies for identifying these learners, collaboration with specialists, and classroom interventions. The interview will last approximately 45–60 minutes, will be audio-recorded with your consent, and will take place in a private setting within your school.

Participation is entirely voluntary. Teachers with experience or knowledge of gifted students with learning disabilities are encouraged to participate.

Would you like to participate in an interview?

Yes

No

Please share your contact information so we could reach out to you.

All of these information are confidential and secure. They will only be used to get in touch with you to schedule the interview.

First Name: _____

Last Name: _____

Email or Phone Number: _____

Survey Link:

<https://dshehab.limesurvey.net/663574?lang=en>

APPENDIX G

QUESTIONNAIRES IN ARABIC

القسم الأول: المعلومات العامة

1. ما هو جنسك؟

- ذكر أنثى أفضل عدم الإجابة
2. ما هي فئة عمرك؟

أقل من 25

25-34

35-44

45-54

فما فوق 55

3. في أي نوع من المدارس تدرس حالياً؟

رسمية

خاصة

4. كم عدد سنوات خبرتك في التعليم؟

سنوات 0-5

سنوات 6-10

سنة 11-15

أكثر من 15 سنة

5. ما الصفوف التي تدرسها حالياً؟ (اختر كل ما ينطبق)

الصف الرابع

الصف الخامس

الصف السادس

الصف السابع

الصف الثامن

الصف التاسع

6. هل تلقيت أي تدريب رسمي يتعلق بتعليم الموهوبين، التربوية الخاصة، أو التعليم الدامج؟

نعم

لا

إذا كانت الإجابة نعم، يرجى التحديد:

القسم الثاني: الاستبيان							
موافق بشدة	موافق بدرجة متوسطة	موافق بدرجة بسيطة	محايد	غير موافق بدرجة بسيطة	غير موافق بدرجة متوسطة	غير موافق بشدة	يرجى تقييم مدى موافقتك على العبارات التالية باستخدام المقياس من (1) الى (7). حيث يشير الرقم (1) إلى عدم الموافقة الشديدة و(7) إلى الموافقة الشديدة. يرجى اختيار إجابة واحدة فقط لكل سؤال.
المجال الأول: وجهات نظر المعتمين حول وجود الطلاب الموهوبين ذوي صعوبات التعلم.							
7	6	5	4	3	2	1	الطلاب الموهوبون ذوو صعوبات التعلم موجودون بالفعل في صفوف التعليم العام.
7	6	5	4	3	2	1	غالبا ما يتم تجاهل الطلاب الموهوبين ذوي صعوبات التعلم.
7	6	5	4	3	2	1	بعض الطلاب الموهوبين الذين يتلقون تعليما في برامج الإثراء لديهم صعوبات تعلم
7	6	5	4	3	2	1	بعض الطلاب الموهوبين يتلقون خدمات التربية الخاصة في غرفة الموارد.
المجال الثاني: وجهات نظر المعلمين حول تحديد الطلاب الموهوبين ذوي صعوبات التعلم.							
7	6	5	4	3	2	1	يواجه الطلاب الموهوبون ذوو صعوبات التعلم تباينا بين قدراتهم المعرفية وإنجازاتهم الأكاديمية.
7	6	5	4	3	2	1	غالبا ما يحقق الطلاب الموهوبون ذوو صعوبات التعلم مستوى أداء متوسطا مقارنة بزملائهم في صفوف التعليم العام.
7	6	5	4	3	2	1	يحاول الطلاب الموهوبون ذوو صعوبات التعلم إخفاء مواهبهم لأنهم لا يرغبون في الظهور بشكل مختلف.
7	6	5	4	3	2	1	يمكن تحديد الطلاب الموهوبين ذوي صعوبات التعلم داخل صفوف التعليم العام.
7	6	5	4	3	2	1	يفضل أن يقوم معلمو صعوبات التعلم بعملية تحديد الطلاب الموهوبين ذوي صعوبات التعلم بدلا من معلمي الصفوف العامة.
7	6	5	4	3	2	1	يفضل أن يقوم معلمو الصفوف العامة بعملية تحديد الطلاب الموهوبين ذوي صعوبات التعلم بدلا من معلمي صعوبات التعلم.
7	6	5	4	3	2	1	من المهم معرفة مدى إدراك المعلمين لخصائص الطلاب الموهوبين ذوي صعوبات التعلم من أجل تحديدهم بدقة أكبر.
7	6	5	4	3	2	1	من الصعب تحديد الطلاب الموهوبين ذوي صعوبات التعلم داخل صفوف التعليم العام.
7	6	5	4	3	2	1	يمتلك معلمو الصفوف العامة تدريبا كافيا لتحديد الطلاب الموهوبين ذوي صعوبات التعلم.
7	6	5	4	3	2	1	يحتاج المعلمون إلى معرفة أساسية بعملية تحديد الطلاب الموهوبين ذوي صعوبات التعلم.
7	6	5	4	3	2	1	يجب على وزارة التربية والتعليم في لبنان وضع معايير محددة لتحديد الطلاب الموهوبين ذوي صعوبات التعلم.
المجال الثالث: وجهات نظر المعلمين حول تعليم الطلاب الموهوبين ذوي صعوبات التعلم.							
7	6	5	4	3	2	1	إن دمج الطلاب الموهوبين ذوي صعوبات التعلم في صفوف شاملة يعود بالفائدة عليهم.

7	6	5	4	3	2	1	يجب أن يحصل الطلاب الموهوبون ذوو صعوبات التعلم على خدمات تعليمية مناسبة ضمن برامج الإثراء الخاصة بالطلاب الموهوبين.
7	6	5	4	3	2	1	يجب أن يتلقى الطلاب الموهوبون ذوو صعوبات التعلم خدمات التربية الخاصة في غرفة الموارد بالإضافة إلى تعليمهم في الصفوف العادية.
7	6	5	4	3	2	1	يمتلك معلمو الصفوف العامة تدريباً كافياً لتعليم الطلاب الموهوبين ذوي صعوبات التعلم.
7	6	5	4	3	2	1	يحتاج المعلمون إلى معرفة أكبر بخصائص الطلاب الموهوبين ذوي صعوبات التعلم من أجل تلبية احتياجاتهم الفردية.
7	6	5	4	3	2	1	يعد دعم معلمي صعوبات التعلم أساسياً لنجاح التجربة التعليمية للطلاب الموهوبين ذوي صعوبات التعلم.
7	6	5	4	3	2	1	يتم تجاهل الاحتياجات التعليمية الخاصة بالطلاب الموهوبين ذوي صعوبات التعلم في مدارسنا بصورة متكررة.
7	6	5	4	3	2	1	معلمو صعوبات التعلم أكثر قدرة على تعليم الطلاب الموهوبين ذوي صعوبات التعلم من معلمي الصفوف العامة.
7	6	5	4	3	2	1	توفر وزارة التربية موارد كافية للمعلمين لتلبية الاحتياجات التعليمية للطلاب الموهوبين ذوي صعوبات التعلم.

القسم الثالث: الفرصة للمشاركة في مقابلة متابعة

ستركز المقابلة على معرفة المعلمين وتصوراتهم للطلاب المتميزين دراسياً، واستراتيجيات تحديد هؤلاء الطلاب، والتعاون مع المتخصصين، والتدخلات الصفية. تستغرق المقابلة ما بين 45 و60 دقيقة تقريباً، وسيتم تسجيلها صوتياً بموافقتكم، وستجرى في بيئة خاصة داخل مدرستكم. المشاركة طوعية تماماً. يشجع المعلمون ذوو الخبرة أو المعرفة بالطلاب الموهوبين ذوي صعوبات التعلم على المشاركة.

هل ترغب بالمشاركة في المقابلة؟

نعم

لا

يرجى مشاركة معلومات الاتصال الخاصة بك حتى نتتمكن من التواصل معك. جميع هذه المعلومات سرية وآمنة. سيتم استخدامها فقط للتواصل معك لتحديد موعد المقابلة.

الاسم الأول: _____

اسم العائلة: _____

البريد الإلكتروني أو رقم الهاتف: _____

رابط الاستبيان:

<https://dshehab.limesurvey.net/663574>

APPENDIX H

INTERVIEW QUESTIONS

Introductory Questions:

1. Would you please begin by telling me a little about yourself?
2. How many years have you been teaching?
3. Why did you decide to become a teacher?
4. How many years at your current intermediate grade level?

Interview Questions:

1. In your own words, how would you define a twice-exceptional student?
2. What features or behaviors have you noticed in students who are both gifted and have learning difficulties?
3. Can you describe any experiences you've had in identifying or referring a student you believed might be twice-exceptional?
4. What challenges do you face in your classroom when trying to identify twice-exceptional students?
5. How do you currently support students who are both gifted and have learning difficulties?
6. What resources, training, or support do you think are necessary to help teachers meet the needs of twice-exceptional students?
7. How do your school's policies or practices influence the identification and support of twice-exceptional learners?
8. In your opinion, do you feel the Lebanese school system is equipped to serve twice-exceptional students? Why or why not?
9. How did your views on twice-exceptionality changed throughout your teaching career, if at all?
10. What recommendations would you offer to better support the identification and education of twice-exceptional students in Lebanese schools?

APPENDIX I

INTERVIEW QUESTIONS IN ARABIC

الأسئلة التمهيدية:

1. هل يمكنك أن تبدأ/تبدئي بإخباري قليلا عن نفسك؟
2. كم سنة مضت عليك في مجال التعليم؟
3. لماذا قررت أن تصبح/تصبحي معلما؟
4. كم عدد السنوات التي درستها في المرحلة المتوسطة (الصفوف الحالية)؟

أسئلة المقابلة:

1. كيف تعرف/تعرفين الطالب مزدوج التميز (2e) بكلماتك الخاصة؟
2. ما الخصائص أو السلوكيات التي لاحظتها لدى الطلاب الذين يجمعون بين الموهبة وصعوبات التعلم؟
3. هل يمكنك وصف أي تجربة مررت بها في تحديد أو إحالة طالب كنت تعتقد/تعتقدين أنه قد يكون مزدوج التميز؟
4. ما التحديات التي تواجهها في صفك عند محاولة تحديد الطلاب مزدوجي التميز؟
5. كيف تقدم حاليا الدعم للطلاب الذين يجمعون بين الموهبة وصعوبات التعلم؟
6. ما الموارد أو التدريب أو أشكال الدعم التي تعتقد/تعتقدين أنها ضرورية لمساعدة المعلمين على تلبية احتياجات الطلاب مزدوجي التميز؟
7. كيف تؤثر سياسات المدرسة أو ممارساتها على عملية تحديد ودعم الطلاب مزدوجي التميز؟
8. برأيك، هل النظام التعليمي اللبناني مجهز لخدمة الطلاب مزدوجي التميز؟ لماذا أو لماذا لا؟
9. هل تغيرت نظرتك نحو مفهوم "التميز المزدوج" مع مرور سنوات خبرتك في التعليم؟ وإن كان كذلك، كيف؟
10. ما التوصيات التي تود/تودين تقديمها لتحسين عملية تحديد وتعليم الطلاب مزدوجي التميز في المدارس اللبنانية؟

REFERENCES

- Aladsani, M. (2020). *Investigating teachers' perspectives of gifted students with specific learning disabilities in Saudi Arabia* (Doctoral dissertation, Duquesne University). Duquesne Scholarship Collection. <https://dsc.duq.edu/etd/1925>
- Alameddine, M. M. (2025). What can educators do to accommodate twice-exceptional learners in Lebanon: A case study. *South Florida Journal of Development*, 6(1), 1-13. <https://doi.org/10.46932/sfjdv6n1-009>
- Al-Hroub, A. (2009). Charting self-concept, beliefs and attitudes towards mathematics among mathematically gifted pupils with learning difficulties. *Gifted and Talented International*, 24(1-2), 93-106. <https://doi.org/10.1080/15332276.2009.11674864>
- Al-Hroub, A. (2010). Perceptual skills and Arabic literacy patterns for mathematically gifted children with specific learning difficulties. *British Journal of Special Education*, 37(1), 25-38. <https://doi.org/10.1111/j.1467-8578.2010.00453.x>
- Al-Hroub, A. (2013). A multidimensional model for the identification of dual-exceptional learners. *Gifted and Talented International*, 28(1-2), 51-69. <https://doi-org.ezproxy.aub.edu.lb/10.1080/15332276.2013.11678403>
- Al-Hroub, A. (2014). Identification of dual-exceptional learners. *Procedia - Social and Behavioral Sciences*, 116, 63-73. <https://doi.org/10.1016/j.sbspro.2014.01.169>
- Al-Hroub, A. (2020). Use of the Jordanian WISC-III for twice-exceptional identification. *International Journal for Talent Development and Creativity*, 8(1-2), 121-144. <https://doi.org/10.7202/1076752ar>

- Al-Hroub, A. (2021). Utility of psychometric and dynamic assessments for identifying cognitive characteristics of twice-exceptional students. *Frontiers in Psychology*, 12, 747872. <https://doi.org/10.3389/fpsyg.2021.747872>
- Al-Hroub, A. (2022). Gifted education in Lebanon: Re-examining the role of educational and learning capitals. *Cogent Education*, 9(1), 2073644. <https://doi-org.ezproxy.aub.edu.lb/10.1080/2331186X.2022.2073644>
- Al-Hroub, A., Jouni, N. (2023). Special education and inclusion in Lebanon. In A. Jouni & A. Al-Hroub, *School inclusion in Lebanon: Integrating research on students with giftedness and learning disabilities into practice*. Springer, Cham. https://doi-org.ezproxy.aub.edu.lb/10.1007/978-3-031-34779-5_6
- Al-Hroub, A., & Whitebread, D. (2019). dynamic assessment for identification of twice-exceptional learners exhibiting mathematical giftedness and specific learning disabilities. *Roeper Review*, 41(2), 129–142. <https://doi-org.ezproxy.aub.edu.lb/10.1080/02783193.2019.1585396>
- Alsamani, O. A., Alsamiri, Y. A., & Alabdulwahab, R. A. (2026). Twice-exceptionality in primary schools: Teachers perceived barriers to identifying and supporting twice-exceptional students. *Acta Psychologica*, 262, Article 106031. <https://doi.org/10.1016/j.actpsy.2025.106031>
- Alsamani, O. A., Alsamiri, Y. A., & Alfaidi, S. D. (2023). Elementary school teachers' perceptions of the characteristics of twice-exceptional students. *Frontiers in Education*, 8, 1150274. <https://doi.org/10.3389/feduc.2023.1150274>
- Alsamiri, Y. (2016). *Teachers' perspectives of the identification and support of Saudi primary students with giftedness and learning disabilities (SGLD)* [Doctoral

dissertation, University of New South Wales]. UNSWorks.
<https://doi.org/10.26190/unsworks/20369>

Alsamiri, Y. A. (2018). How learning disabilities teachers in the Kingdom of Saudi Arabia define students with giftedness and learning disabilities. *Jurnal Cakrawala Pendidikan*, 38(3), 356–365. <https://doi.org/10.21831/cp.v38i3.21566>

Alsamiri, Y. A. (2024). Enhancing elementary school teachers' competence in recognizing and supporting gifted students with learning disabilities in Saudi Arabia. *Frontiers in Education*, 9, Article 1363175. <https://doi.org/10.3389/educ.2024.1363175>

Alsamiri, Y. A., Hussain, M. A., Aljohani, M. M., & Alsawalem, I. M. (2023). Primary school teachers' knowledge of differentiation for students with giftedness and learning disabilities in mixed-abilities classrooms in Saudi Arabia. *South African Journal of Education*, 43(1), Article 2181. <https://doi.org/10.15700/saje.v43n1a2181>

Alsharif, N., & Alasiri, H. (2022). Teachers' perspectives on obstacles facing gifted students with learning disabilities in Saudi Arabia. *International Journal of Computer Science & Network Security*, 22(4), 254–260. <https://doi.org/10.22937/IJCSNS.2022.22.4.32>

Antony, S., Ramnath, R., Kalaiyarasan, G., Selvan, A., Govindarajan, K., Catherin Jayanthi, A., Sasikumar, N., & Mahendraprabhu, M. (2021). Teachers' understanding in identifying twice-exceptionality - an issue analysis. *Ilkogretim Online*, 20(5), 2535–2551. <https://ilkogretim-online.org/index.php/pub/article/view/5566>

- Antoun M. (2022). Framing the education for gifted Lebanese and gifted refugees in Lebanon. *Frontiers in psychology*, 13, 1077278. <https://doi.org/10.3389/fpsyg.2022.1077278>
- Antoun, M., & Plunkett, M. (2023). A roadmap for change: Charting the course of gifted educational provision in Lebanon. *International Journal of Educational Reform*, 32(3), 279–293. <https://doi.org/10.1177/10567879231163538>
- Bailey, C. L., & Rose, V. C. (2011). Examining teachers' perceptions of twice exceptional students: Overview of a qualitative exploration. *Ideas and Research You Can Use: VISTAS*, 1-12. https://www.researchgate.net/publication/307582895_Examining_Teachers'_Perceptions_of_Twice_Exceptional_Students_Overview_of_a_Qualitative_Exploration
- Bandura, A. (1977). *Social learning theory*. Prentice-Hall.
- Baum, S. M., Schader, R. M., & Hébert, T. P. (2014). Through a different lens: Reflecting on a strengths-based, talent-focused approach for twice-exceptional learners. *Gifted Child Quarterly*, 58(4), 311-327. <https://doi-org.ezproxy.aub.edu.lb/10.1177/0016986214547632>
- Becker, H. S. (1963). *Outsiders: Studies in the sociology of deviance*. Free Press.
- Berman, K. M., Schultz, R. A., & Weber, C. L. (2012). A lack of awareness and emphasis in preservice teacher training: preconceived beliefs about the gifted and talented. *Gifted Child Today*, 35(1), 18-26. <https://doi-org.ezproxy.aub.edu.lb/10.1177/1076217511428307>

- Caffrey, E., & Fuchs, D. (2007). Differences in performance between students with learning disabilities and mild mental retardation: Implications for categorical instruction. *Learning Disabilities Research & Practice*, 22(2), 119-128. <https://doi-org.ezproxy.aub.edu.lb/10.1111/j.1540-5826.2007.00236.x>
- Caffrey, E., & Fuchs, D. (2007). Differences in Performance between Students with learning disabilities and mild mental retardation: implications for categorical instruction. *Learning Disabilities Research & Practice*, 22(2), 119-128. <https://doi-org.ezproxy.aub.edu.lb/10.1111/j.1540-5826.2007.00236.x>
- Cody, R. A., Boldt, G. T., Canavan, E. J., Gubbins, E. J., Hayden, S. M., Bellara, A. P., & Kearney, K. L. (2022). Teachers' reported beliefs about giftedness among twice exceptional and culturally, linguistically, and economically diverse populations. *Frontiers in Psychology*, 13, 953059. <https://doi.org/10.3389/fpsyg.2022.953059>
- Cohen, L., Manion, L., & Morrison, Keith R. B.. (2007). *Research methods in education* (6th ed.). Routledge. <https://doi.org/10.4324/9780203029053>
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson Education.
- Delgado-Valencia, L., Delgado, B., Navarro-Soria, I., Torrecillas, M., Rosales-Gómez, M., Sánchez-Herrera, M. d. l. C., & Soto-Díaz, M. (2025). The identification of giftedness in children: A systematic review. *Education Sciences*, 15(8), Article 1012. <https://doi.org/10.3390/educsci15081012>
- Demir, Y. (2024). *An investigation of twice exceptionality in the UK context: The paradoxical combination of exceptionalities* [Doctoral thesis, University of Plymouth]. <https://pearl.plymouth.ac.uk/sc-theses/3>

- Dzalani, H., & Shamsuddin, K. (2014). A review of definitions and identifications of specific learning disabilities in Malaysia and challenges in provision of services. *Pertanika Journal of Social Sciences & Humanities*, 22(1), 1–18. [http://www.pertanika.upm.edu.my/resources/files/Pertanika%20PAPERS/JSSH%20Vol.%2022%20\(1\)%20Mar.%202014/01%20Page%201-18%20\(JSSH%200620-2012\).pdf](http://www.pertanika.upm.edu.my/resources/files/Pertanika%20PAPERS/JSSH%20Vol.%2022%20(1)%20Mar.%202014/01%20Page%201-18%20(JSSH%200620-2012).pdf)
- Foley Nicpon, M., Allmon, A., Sieck, B., & Stinson, R. D. (2010). Empirical investigation of twice-exceptionality: Where have we been and where are we going? *Gifted Child Quarterly*, 55(1), 3-17. <https://doi-org.ezproxy.aub.edu.lb/10.1177/0016986210382575>
- Foley-Nicpon, M., Assouline, S. G., & Colangelo, N. (2013). Twice-exceptional learners: Who needs to know what? *Gifted Child Quarterly*, 57(3), 169-180. <https://doi-org.ezproxy.aub.edu.lb/10.1177/0016986213490021>
- Fuchs, D., & Fuchs, L. S. (2006). Introduction to response to intervention: What, why, and how valid is it? *Reading Research Quarterly*, 41(1), 93–99. <https://doi.org/10.1598/RRQ.41.1.4>
- Gagné, F. (2004). Transforming gifts into talents: The DMGT as a developmental theory. *High Ability Studies*, 15(2), 119–147. <https://doi.org/10.1080/1359813042000314682>
- Gagné, F., & Nadeau, L. (1985). Opinions about gifted students: The perception of elementary school teachers. *Gifted Child Quarterly*, 29(4), 155–159. <https://doi.org/10.1177/001698628502900407>

- Gierczyk, M., & Hornby, G. (2021). Twice-exceptional students: Review of implications for special and inclusive education. *Education Sciences*, 11(2), 85. <https://doi.org/10.3390/educsci11020085>
- Goffman, E. (1963). *Stigma: Notes on the management of spoiled identity*. Prentice-Hall.
- Guthrie, K. H. (2019). “Nothing is ever easy”: Parent perceptions of intensity in their gifted adolescent children. *The Qualitative Report*, 24(8), 2080-2101. <https://doi.org/10.46743/2160-3715/2019.3598>
- Hendricks, C. C. (2017). *Improving schools through action research: A reflective practice approach*. Pearson.
- Kahveci, G., & Güneyli, A. (2023). Examining conjoint behavioral consultation to support twice-exceptional -autism spectrum disorder and gifted students in preschool with academic and behavior concerns. *Behavioral Sciences*, 13(8), 674. <https://doi.org/10.3390/bs13080674>
- Leighton, K., Kardong-Edgren, S., Schneidereith, T., & Foisy-Doll, C. (2021). Using social media and snowball sampling as an alternative recruitment strategy for research. *Clinical Simulation in Nursing*, 55, 37–42. <https://doi.org/10.1016/j.ecns.2021.03.006>
- Love, H. R., Cook, B. G., & Cook, L. (2022). Mixed-methods approaches in special education research. *Learning Disabilities Research & Practice*, 37(4), 314-323. <https://doi.org/10.1111/ldrp.12295>
- Marland, S. P., Jr. (1971). *Education of the gifted and talented: Volume 1. Report to the Congress of the United States by the U.S. Commissioner of Education* (OE Document No. 44018; ERIC Document Reproduction Service No. ED056243). U.S. Government Printing Office.

- Mayes, R. D. (2016). Educators' perceptions of twice-exceptional African American males. *Journal of African American Males in Education*, 7(1), 1-15. <https://doi-org.ezproxy.aub.edu.lb/10.1080/00461520.2025.2473901>
- McCallum, R. S., Bell, S. M., Coles, J. T., Miller, K. C., Hopkins, M. B., & Hilton-Prillhart, A. (2013). A model for screening twice-exceptional students (gifted with learning disabilities) within a response to intervention paradigm. *Gifted Child Quarterly*, 57(4), 209–222. <https://doi.org/10.1177/0016986213500070>
- McCoach, D. B., & Siegle, D. (2007). What predicts teachers' attitudes toward the gifted? *Gifted Child Quarterly*, 51(3), 246–254. <https://doi.org/10.1177/0016986207302719>
- Miller, E. M. (2009). The effect of training in gifted education on elementary classroom teachers' theory-based reasoning about the concept of giftedness. *Journal for the Education of the Gifted*, 33(1), 65-105. <https://doi-org.ezproxy.aub.edu.lb/10.1177/016235320903300104>
- Molina-Azorín, J. F. (2016). Mixed methods research: An opportunity to improve our studies and our research skills. *European Journal of Management and Business Economics*, 25(2), 37–38. <https://doi.org/10.1016/j.redeen.2016.05.001>
- Oman, D., Kukanja Gabrijelčič, M., & Kiswarday, V. R. (2025). Identifying and supporting twice-exceptional students with emotional and behavioral disorders: Perspectives of primary school teachers. *International Journal of Instruction*, 18(4), 459–476. <https://doi.org/10.29333/iji.2025.18425a>
- Owens, C. M., Ford, D. Y., Lisbon, A. J., & Owens, M. T. (2016). Shifting paradigms to better serve twice-exceptional African-American learners. *Behavioral*

Disorders, 41(4), 196-208. <https://doi-org.ezproxy.aub.edu.lb/10.17988/bedi-41-04-196-208.1>

Reis, S. M., Baum, S. M., & Burke, E. (2014). An operational definition of twice-exceptional learners: Implications and applications. *Gifted Child Quarterly*, 58(3), 217-230. <https://doi-org.ezproxy.aub.edu.lb/10.1177/0016986214534976>

Reis-Jorge, J., Ferreira, M., Olcina-Sempere, G., & Marques, B. (2021). Perceptions of giftedness and classroom practice with gifted children – an exploratory study of primary school teachers. *Qualitative Research in Education*, 10(3), 291–315. <https://doi.org/10.17583/qre.8097>

Renzulli, J. S. (1978). What makes giftedness? Reexamining a definition. *Phi Delta Kappan*, 60(3), 180–184.

Ronksley-Pavia, M. (2015). A model of twice-exceptionality: explaining and defining the apparent paradoxical combination of disability and giftedness in childhood. *Journal for the Education of the Gifted*, 38(3), 318-340. <https://doi-org.ezproxy.aub.edu.lb/10.1177/0162353215592499>

Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectation and pupils' intellectual development*. Holt, Rinehart & Winston.

Rowan, L., & Townend, G. (2016). Early career teachers' beliefs about their preparedness to teach: Implications for the professional development of teachers working with gifted and twice-exceptional students. *Cogent Education*, 3(1). <https://doi-org.ezproxy.aub.edu.lb/10.1080/2331186X.2016.1242458>

- Ryan, K., & Cooper, J. M. (2012). *Those who can, teach* (13th ed.). Wadsworth Publishing.
- Sarouphim, K. M. (2015). Slowly but Surely: Small steps toward establishing gifted education programs in Lebanon. *Journal for the Education of the Gifted*, 38(2), 196-211. <https://doi-org.ezproxy.aub.edu.lb/10.1177/0162353215578278>
- Skinner, B. F. (1953). *Science and human behavior*. Macmillan.
- Sreejesh, S., & Mohapatra, S. (2014). *Mixed method research design: An application in consumer-brand relationships (CBR)*. Springer.
- Subotnik, R. F., Olszewski-Kubilius, P., & Worrell, F. C. (2011). *Rethinking giftedness and gifted education: A proposed direction forward based on psychological science*. *Psychological Science in the Public Interest*, 12(1), 3–54. <https://doi.org/10.1177/1529100611418056>
- Tannenbaum, A. J. (1979). Chapter I: Pre-Sputnik to Post-Watergate Concern about the Gifted. *Teachers College Record the Voice of Scholarship in Education*, 80(5), 5–27. <https://doi.org/10.1177/016146817908000501>
- Tannir, A., & Al-Hroub, A. (2013). Effects of character education on the self-esteem of intellectually able and less able elementary students in Kuwait. *International Journal of Special Education*, 28(1), 47–59. <https://files.eric.ed.gov/fulltext/EJ1023237.pdf>
- Vaughn, S., & Fuchs, L. S. (2003). Redefining learning disabilities and inadequate response to instruction: The promise and potential problems. *Learning Disabilities Research & Practice*, 18(3), 137–146. <https://doi.org/10.1111/1540-5826.00070>

Villanueva, S. A., & Huber, T. (2019). The issues in identifying twice exceptional students: A review of the literature. *International Journal of Development Research*, 9(9), 30101–30112.

<https://www.researchgate.net/publication/354537372>

Willard-Holt, C., Weber, J., Morrison, K. L., & Horgan, J. (2013). Twice-exceptional learners' perspectives on effective learning strategies. *Gifted Child Quarterly*, 57(4), 247-262. <https://doi-org.ezproxy.aub.edu.lb/10.1177/0016986213501076>