

Identification Process in SLDs

## Uncovering Gaps in Awareness and Identification of Specific Learning Disabilities: Insights from Primary Education Professionals

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### Abstract

Specific Learning Disabilities (SLDs) are the most prevalent disability among students. However, some are misidentified as having SLDs, while others with severe academic challenges may go unrecognized. This study examines the identification procedures for students with SLDs in elementary government schools in the UAE. The study has two main objectives: (a) to examine the diagnostic procedures and steps that these schools follow to identify and place students with SLDs, and (b) to assess the awareness of school professionals regarding SLDs. An explanatory sequential mixed-method design was utilized, collecting data through questionnaires followed by interviews. In the quantitative phase, 406 participants were selected using the snowball sampling technique. In the qualitative phase, 17 participants from the quantitative pool were interviewed based on their willingness. The quantitative results showed that participants followed the Ministry of Education's guidelines for referring and placing students with SLDs. However, both quantitative and qualitative findings indicated misunderstandings among school professionals regarding the definition, nature, and signs of SLDs, which could result in improper identification. The study provides some practical and future research implications.

**Keywords:** Specific learning disability, School professionals, Identification procedures, UAE elementary government school, Awareness.

### Introduction

Currently, the provision of special education services relies heavily on the identification of students with specific disabilities (SLDs), which significantly influences the educational programs tailored for each student. Globally, the total number of people with learning disabilities has reached 79.2 million and continues to grow (UNICEF, 2021). For example, in the U.S., over 15% of public school students (approximately 2.3 million) receive special education services for these disabilities, and the need is even more significant in countries with lower socioeconomic levels, where resources are scarce (National Center for Education Statistics, 2022). In Canada, more than half of children have disabilities, 59.8% (Learning Disabilities Association of Canada, 2021). In China, the prevalence of dyslexia among school-aged children ranges from 3.45% to 12.6% (Zou et al., 2022). Moreover, an estimated 21 million children with disabilities live in the Middle East and North Africa (UNICEF, 2022). For example, in the Arab region, reading difficulties are more common in the Gulf countries, where the rate is 24%, compared to 13% in non-Gulf areas (Aldakhil, 2024). Specifically, within the context of this study, over 15% of students in the United Arab Emirates (UAE) face literacy challenges, with 11% of primary school students experiencing difficulties related to dyslexia. This condition is diagnosed more frequently in boys (Aldakhil, 2024). Furthermore, in the UAE, there are 5,104 students with specific learning disabilities (SLDs) enrolled in government schools, which represents 1.8% of the total student population, including those with other disabilities (Ministry of Education, 2019).

SLDs comprise a heterogeneous group of conditions that affect language processing and academic skills (Kohli et al., 2018). Understanding and defining SLDs is foundational to

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accurate identification, effective intervention, and equitable support in educational systems (Barone & Crişan, 2024). According to the Individuals with Disabilities Education Act (IDEA, 2004), SLDs are defined as A disorder affecting basic psychological processes related to language comprehension or use, which may result in difficulties with listening, thinking, speaking, reading, writing, spelling, or math. This includes conditions like dyslexia, perceptual disabilities, and developmental aphasia, but excludes issues primarily due to visual, hearing, or motor disabilities, intellectual disability, emotional disturbance, or socioeconomic factors (IDEA, 2004).

Despite its foundational role in special education law, this definition has remained unchanged since its inception in 1968, resulting in a growing gap between research-based understanding of learning disabilities and their practical identification in schools. This schism has contributed to widespread inconsistencies in diagnosing SLDs and, at times, the over-identification or under-identification of students who may or may not meet the criteria (Kavale et al., 2009). An increasing body of research calls for reconceptualizing of SLDs to better captures its multifaceted nature, encompassing deficits in neuropsychological processes, language development, and executive functioning (Flanagan et al., 2013). Such a shift would replace rigid and arbitrary criteria with a more valid and equitable framework for identifying students who truly require specialized support (Kavale et al., 2009).

SLDs can manifest as primary impairments in acquiring specific academic skills or as secondary conditions comorbid with other developmental disorders (Grigorenko et al., 2020). They are estimated to affect between 5-15% of school-aged children and, if unaddressed, can lead to long-term negative impacts on social, academic, and vocational outcomes (Grigorenko et al., 2020). Recent research highlights the urgent need to redefine SLDs to address longstanding issues in identification and intervention (Barone & Crişan, 2024), urging the adoption of a bio-cultural perspective that considers the intersections of biology and culture in SLDs research (Artiles et al., 2020).

Given their prevalence and potential impact, it is important to establish robust identification, monitoring, and support systems involving interdisciplinary professionals to minimize risks and maximize protective factors for individuals with SLDs (Grigorenko et al., 2020). Ultimately, learning disabilities impair core cognitive skills such as reading, writing, and math, posing significant barriers to academic success and increasing the demand for targeted special education resources (Panjwani-Charania & Zhai, 2023). Given the considerable effect that SLDs identification has on many students, the process itself is fraught with challenges (Maki & Adams, 2020; Maki et al., 2017; Schroeder et al., 2017) and has sparked considerable debate in the special education field (Maki & Adams, 2020). The high percentage of students receiving special education under the SLDs category, combined with the psychometric issues relating to SLDs identification, highlights the critical need for consistent identification practices to ensure students receive the appropriate academic support they need in school (Maki & Adams, 2020; Wagner et al., 2020), especially within the Arabic context (Al-Hendawi et al., 2023).

## The Identification Process of SLDs

Understanding the prevalence of Specific Learning Disabilities (SLDs) is essential for policymakers and practitioners. By comparing current identification rates in different regions with established prevalence rates, they can identify potential issues of under- or over-identification. Knowledge of how common or rare a condition aids in interpreting test results and informs diagnostic models, establishing a base-rate probability that can be adjusted with additional data (Wagner et al., 2020). Students with SLDs can be identified using three methods. Prior to the 2004 reauthorization of the Individuals with Disabilities Education Act

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(IDEA), local education agencies relied on the Ability-Achievement Discrepancy approach. The 2004 reauthorization enabled Response to Intervention (RtI) and introduced research-based methods, such as the Pattern of Strengths and Weaknesses (PSW), for identifying students with SLDs (Maki & Adams, 2020).

Identifying SLDs involves assessing discrepancies between cognitive ability and academic performance, particularly through the ability-achievement discrepancy approach that highlights significant gaps (Lopez, 2023). This is often integrated with the Response to Intervention (RtI) framework, which targets students who show slight improvement despite specific interventions (Jaeger, 2024). The Pattern of Strengths and Weaknesses (PSW) models combine achievement gaps with cognitive processing deficits for a more focused identification method (Keiser, 2024). While test score criteria can aid in SLDs identification, psychometric issues may limit their effectiveness, prompting professionals to emphasize the importance of skilled data interpretation for informed educational decisions (Maki & Adams, 2020).

IDEA requires that students suspected of having SLDs be observed in challenging academic areas within their classrooms. This method helps reduce the impact of environmental factors and behavioral patterns on academic performance. Educators need to recognize the significance of classroom observations for effectively identifying and supporting students with SLDs, as observation data can reveal insights into their underachievement (Lindström & McFadden, 2024; Maki & Adams, 2020; Wright, 2023). While legal mandates exist for these observations, there is a lack of research on how educators' awareness and the data from these observations influence the identification of SLDs. Evaluation data should inform decision-making to improve instruction or intervention, highlighting the need for research on the effectiveness of observation in SLDs evaluations (Maki & Adams, 2020; Scaria et al., 2023).

Within the study context, the UAE Ministry of Education's (MoE) Special Education Department aims to provide equal educational opportunities for students with disabilities and talents in both public and private schools, in line with legal (Law No. 29/2006) and international standards. It offers tailored services, assessment tools, and inclusive learning environments based on Individual Educational Plans (IEPs) and Advanced Learning Plans (ALPs). The department focuses on professional development for educators, collaboration with specialists and parents, and partnerships with other ministries. It also promotes community awareness about the rights and needs of individuals with special needs, fostering inclusive education and understanding among all students (MoE, 2024). The MoE promotes a collaborative approach to identifying students with SLDs. A typical assessment team includes a general education teacher who tracks student progress, a special education teacher who conducts informal assessments and adapts instruction, and a school psychologist who performs formal diagnostic evaluations. A school administrator oversees the coordination of the Student Support Team and ensures adherence to ministry guidelines. Together, these professionals form a Multidisciplinary Evaluation Team (MET) that meets regularly to discuss student needs, interpret assessment data, and develop an Individualized Education Plan (IEP) if needed, ensuring evidence-based and holistic decisions aligned with the UAE's inclusive education policy (MoE, 2024).

Accordingly, the MoE outlines a six-step process for identifying students with disabilities and determining their eligibility for special education services. It begins with a pre-referral phase, during which a Student Support Team (SST), comprising educators and parents, reviews the student's issues and proposes interventions for a four-week period. If unsuccessful, the case is referred to the Multidisciplinary Evaluation Team (MET) for an assessment of the student's

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strengths and needs. If found eligible, an Individualized Education Plan (IEP) or Advanced Learning Plan (ALP) is created, outlining goals and necessary accommodations. The plan is then implemented in the least restrictive environment. The process includes ongoing progress monitoring, regular reviews, and annual evaluations. The final step involves issuing certificates of grade completion for special education students, highlighting their achievements and any assistive technologies they have utilized. This approach emphasizes early intervention and continuous support for students with disabilities (MoE, 2024).

Based on this, the processes for identifying students with disabilities in the government school system of the United Arab Emirates are not addressed clearly due to a lack of sufficient research and related studies. Previously, Alnuaimi and Opoku (2024) noted a significant disconnect between theory and practice regarding the identification methods for individuals with SLDs in the UAE. Elhoweris et al. (2015) and Al-Badawi (2024) highlighted a deficiency in empirical evidence regarding the methods teachers use to refer students with special needs in the UAE. Furthermore, there is a lack of information on how professionals implement identification procedures and whether these methods are used correctly and effectively for diagnosing and referring students with Specific Learning Disabilities in the UAE (Alnuaimi & Opoku, 2024; Elhoweris et al., 2015).

## School Professionals' Awareness of SLD

SLDs are not well understood in children (Prior, 2022). Early recognition of these disabilities is crucial, as it can significantly influence a student's future. School professionals play a dynamic role in recognizing these issues and providing appropriate support (AlAhmadi & El Keshky, 2019). Unfortunately, many signs of learning disabilities are often overlooked or misinterpreted as personality traits, leading to misconceptions that label the child as lazy, having an attitude problem, or being aggressive (Snowling et al., 2021). The diagnostic process for SLDs has evolved from outdated intelligence quotient (IQ) based methods to more evidence-driven approaches. These modern methods directly assess skills such as reading and listening comprehension, acknowledging the challenges of applying universal criteria across different sociocultural contexts. This shift aims to enhance the accuracy and inclusivity of diagnosing and supporting individuals with learning disabilities (Mekonnen, 2023).

Mekonnen (2023) highlighted a concerning lack of awareness about SLDs among Ethiopian educators, primarily due to insufficient training within formal education programs, indicating a significant gap in teacher preparedness. Additionally, AlAhmadi and El Keshky (2019) found that Saudi primary school professionals had only a moderate understanding of learning disabilities, and socio-demographic factors influenced knowledge but showed no gender disparities. These findings emphasize the urgent need for structured training programs to better equip educators in identifying and addressing learning disabilities. Within the same framework, Snowling et al. (2021) emphasized that school professionals often lack awareness of SLDs, which limits their ability to identify and support students affected by these conditions, thereby hindering the implementation of evidence-based interventions. Furthermore, Yadav and Kaur (2015) evaluated primary school teachers' awareness and understanding of SLDs, identifying the knowledge and training necessary for effectively supporting students with these conditions. The study found that most primary school professionals have limited awareness of SLDs, significantly hindering their ability to identify and effectively support students with SLDs. Therefore, there is a critical need for large-scale, context-specific research to comprehensively assess professional awareness of SLDs. Furthermore, existing studies often focus on general awareness but fail to explore how this knowledge translates into practical classroom strategies (Tom et al., 2025). The effectiveness of training programs designed to enhance professionals' skills in identifying and addressing SLDs remains under-researched, particularly in non-

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English-speaking and resource-constrained settings (AlAhmadi & El Keshky, 2019; Mekonnen, 2023).

In the context of the study, Unni (2020) found that teachers often struggle to identify Specific Learning Disabilities (SLDs), particularly in students with dyslexia. This challenge stems from insufficient training in recognizing such conditions, which could enhance awareness when working with learners affected by SLDs. Furthermore, some school identifications rely heavily on academic achievement and skills, rather than considering behavioral factors. This approach suggests a lack of awareness and misunderstandings, leading to both underdiagnosis and overdiagnosis of students by administrators and teachers. More investigation in this area is needed, as suggested by Walker (2024).

## Purpose and Research Questions

The primary objective of this mixed-method study is twofold. First, to examine the diagnostic procedures and steps that UAE government schools follow to identify and place students with SLDs, and whether best practices are followed in identifying those students. Second, to investigate school professionals' awareness of the definition, diagnostic signs, and the nature of students with Specific Learning Disability. More specifically, the research questions are as follows:

1. What identification procedures do school professionals (e.g., teachers, special Education teachers, psychologists, social workers, and administrators) follow when diagnosing students with SLDs?
2. Are school professionals aware of SLD's definition and nature (e.g., characteristics and causes)?
3. Are school professionals aware of the diagnostic signs of SLDs?
4. How do school professionals view the identification procedures for diagnosing students with SLDs?

## Methods

This study employed an explanatory sequential mixed-methods design (QUAN = QUAL) across two phases (Creswell & Clark, 2011), involving a questionnaire and semi-structured interviews. This combination of methods provided a thorough understanding of the research purpose. The quantitative results identified participant characteristics for the qualitative phase (Creswell & Clark, 2011). Data collection for each approach was conducted separately during participant recruitment, data collection, and analysis (Creswell & Clark, 2011). The questionnaire, structured based on the literature, was distributed and analyzed first, followed by conducting and transcribing the interviews. Quantitative and qualitative findings were merged during the interpretation of results to confirm or contrast outcomes (Creswell & Clark, 2011).

To validate the questionnaire, the researcher drew on ideas from previous literature and consulted with five experts in special education. In the qualitative phase, interview questions were developed based on the quantitative findings (Creswell & Clark, 2011), covering all categories included to explore the experiences of school professionals. Establishing the objectivity of the interviews involved continuously checking the responses by summarizing the interviewee's opinions and ideas before proceeding to the next point. The "interviewee became the relevant partner for the conversation about the correct interpretation" (Kvale, 2007, p. 125). Therefore, the "Communicative validity" was used as a verification process to validate the interview data (Kvale, 2007, p. 125)

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The study focused on public primary schools in the UAE. It involved professional staff in the referral and diagnosis of specific learning disabilities (SLDs), which served as the primary criteria for identifying the target population. A total of 484 participants were recruited through snowball sampling, resulting in 406 valid responses. Participants were encouraged to refer others who met the study's criteria, creating a referral network via WhatsApp groups. Due to the COVID-19 lockdown, access to the population was limited, making a non-probability sampling method, such as snowball sampling, appropriate (Ahmed, 2024). The analysis of the responses revealed 351 females and 55 males, representing a diverse range of educational backgrounds and experiences, including teachers, psychologists, social workers, and administrators from all seven emirates, as shown in Table 1.

Table 1: The Sample - Demographic Distribution

<b>Gender</b>	<b>Counts</b>	<b>Percent (%)</b>
Male	55	13.55
Female	351	86.45
<b>Emirate</b>		
Abu Dhabi	267	65.76
Dubai	18	4.43
Sharjah	83	20.44
Ajman	12	2.96
Ras Al Khaimah	14	3.45
Fujairah	9	2.22
Umm Al Quwain	3	0.74
<b>Level of Education</b>		
Diploma	18	4.43
Bachelor	318	78.33
Master	64	15.76
Doctor	6	1.48
<b>Years of Experience</b>		
Less than 3 years	35	8.62
4 - 6 years	53	13.05
7 - 9 years	34	8.37
More than 10 years	284	69.95
<b>Position</b>		
Regular class teacher	189	46.55
Special education teacher	101	24.88
Psychologist	29	7.14
Social worker	29	7.14
Administrator	58	14.29

In the qualitative phase of the study, 17 participants were selected from the initial pool based on their willingness and availability to participate. The sample consisted of 16 females and one male, representing a range of work experiences and educational backgrounds. While this gender imbalance might appear pronounced, it is important to note that it broadly reflects the gender composition of the elementary education workforce in the studied context, where female professionals significantly outnumber their male counterparts. Nevertheless, this limitation should be considered when interpreting the qualitative findings, as male perspectives remain underrepresented. See Table 2.

Table 2: The Interviewee Sample - Demographic Distribution

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<b>Gender</b>	Counts	Percent (%)
Male	1	5.88
Female	16	94.1
<b>Emirate</b>		
Abu Dhabi	16	94.1
Dubai	0	0.0
Sharjah	1	5.88
Ajman	0	0.0
Ras Al Khaimah	0	0.0
Fujairah	0	0.0
Umm Al Quwain	0	0.0
<b>Level of Education</b>		
Diploma	1	5.88
Bachelor	16	94.1
Master	0	0.0
Doctor	0	0.0
<b>Years of Experience</b>		
Less than 3 years	0	0.0
4 - 6 years	4	23.53
7 - 9 years	2	11.8
More than 10 years	11	64.7
<b>Position</b>		
Regular class teacher	4	23.53
Special education teacher	4	23.53
Psychologist	3	17.65
Social worker	3	17.65
Administrator	3	17.65

After receiving approval from the UAE University Ethics Committee (application # ERS\_2020\_6110) to conduct this study, quantitative data were collected through a questionnaire distributed using social media (WhatsApp). The link was resent multiple times, resulting in 406 valid responses collected over three months from June to August 2020. Due to the pandemic, interviews were conducted by phone in August and September 2020. They lasted 30-40 minutes each and were recorded using a smartphone application. The researcher followed Kvale's (2007) recommendations to encourage open dialogue and ensure the validity of responses. Participant involvement was voluntary, and confidentiality was maintained by assigning code numbers.

For data analysis, the quantitative data were examined using descriptive statistics using SPSS to compare participants' responses regarding identification and awareness. For qualitative analysis, thematic analysis was conducted as suggested by Kvale (2007). The thematic analysis process involved extracting interpretive meanings from participants' responses using two main modes: "meaning coding" and "meaning condensation." "Meaning coding" entails decoding, coding, and categorizing key expressions and frequent words from participants (Kvale, 2007, p. 105). Following this, "meaning condensation" involves re-coding and condensing these expressions into meaningful themes, a process known as data reduction (Kvale, 2007, p. 106). After identifying the main themes, verification ensures the extracted knowledge is valid and reliable by clarifying embedded meanings during interviews, thereby enhancing the validity of the study (Kvale, 2007).

## Results

Descriptive statistics were calculated to address the first research question. Table 4 presents various identification procedures for students with SLDs, addressing the first research question.

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The overall mean score of  $M=3.87$  and standard deviation of  $SD=0.90$  indicate a high implementation of diverse assessment tools in special education. The highest mean scores reported by school administrators for identifying and placing students with SLDs are monitoring diagnostic procedures ( $M = 3.99$ ), using formal assessment scales ( $M = 3.95$ ), and applying scientific criteria ( $M = 3.90$ ). The mean score for using IQ tests as an identification tool is  $M = 3.77$ . Schools that set aside specific assessment time also scored high, with a mean of  $M = 3.79$ , which is above the standard mean of  $M = 3.40$ . Generally, all responses indicate strong agreement on the following diagnostic procedures for referrals and placements. In conclusion, participants believe their schools adhere to the best practices recommended by the UAE MoE department.

Table 4: Procedures and Tools Used for Identification

Item No	Descriptive Statistics	N	Mean	Std. Dev
Item 1-1	In my school, achievement tests are used as one of the indicators to identify or diagnose Specific Learning Disabilities	406	3.88	0.84
Item 1-2	My school's IQ tests are used as one of the indicators to identify or diagnose learning disabilities	406	3.77	0.98
Item 1-3	Formal assessment scales are used to diagnose and assess Specific Learning Disabilities in my school, such as the Learning Disabilities Diagnostic scale package, IQ tests, and behavioral lists.	406	3.95	0.87
Item 1-4	Informal assessment tools such as worksheets and observation are used to diagnose and assess learning disabilities identified in my school.	406	3.84	0.92
Item 1-5	In my school, they use specific and scientific criteria through which evaluation procedures and methods are used for people with Specific Learning Disabilities	406	3.90	0.84
Item 1-6	My school allocates a specific time to assess and diagnose Specific Learning Disabilities during the school year.	406	3.79	0.95
Item 1-7	My school has a specialized team to diagnose and address specific learning disabilities.	406	3.84	0.97
Item 1-8	In my school, the school administration follows up on and monitors the diagnostic and evaluation procedures for students with Specific Learning Disabilities.	406	3.99	0.84
	Total		3.87	0.90

Regarding the second research question, descriptive statistics indicated a total mean score of ( $M=3.47$ ,  $SD=1.05$ ) for government schools' professional awareness of Specific Learning Disabilities, reflecting low to moderate awareness. Participants strongly agreed with statements like “Students with SLDs face academic problems in reading, writing, and arithmetic” ( $M=4.10$ ) and “SLDs can be overcome by using multiple teaching strategies” ( $M=4.10$ ). However, there was less agreement on items such as “SLDs are permanent” ( $M = 3.00$ ) and “Environmental or cultural factors are excluded as causes” ( $M = 3.15$ ). This suggests a misunderstanding of the definition and nature of SLDs among professionals. Overall, the results indicate that many professionals have a limited understanding of SLDs. Misconceptions included statements like “SLDs is not related to intelligence” and “Students with hyper and/or Auditory Processing Disorder have SLDs.” These misunderstandings could lead to incorrect diagnostic results and misplacement of students due to confusion with other learning issues, like learning delays.

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Table 5: Definition and Nature

Item No	Descriptive Statistics	N	Mean	Std. Dev
Item 2-1	Specific Learning Disabilities are not considered homogeneous in terms of the problems and disabilities they encompass.	406	3.99	1.18
Item 2-2	Intellectual disability is considered a severe level of Specific Learning Disabilities	406	3.20	1.42
Item 2-3	Students with Specific Learning Disabilities show a wide discrepancy between intellectual ability and expected performance	406	4.07	0.85
Item 2-4	Specific Learning Disabilities can be overcome by using multiple teaching strategies	406	4.10	0.81
Item 2-5	Specific Learning Disabilities are discovered when students attend school	406	3.65	1.04
Item 2-6	The concept of Specific Learning Disabilities is not related to intelligence.	406	3.58	1.11
Item 2-7	Students with hyper and/or Auditory processing disorders are considered to have Specific Learning Disabilities	406	3.38	1.14
Item 2-8	Specific Learning Disabilities are expected to stay with a student as he or she grows (i.e., it is a permanent condition or difficulty)	406	3.00	1.10
Item 2-9	Students with Specific Learning Disabilities struggle with one or two subjects or specific skills.	406	3.83	0.97
Item 2-10	Students with Specific Learning Disabilities face academic problems in reading, writing, and arithmetic.	406	4.10	0.90
Item 2-11	Slow learning is excluded as one of the characteristics of students with Specific Learning Disabilities	406	3.29	1.12
Item 2-12	Academic delay is excluded as one of the characteristics of students with Specific Learning Disabilities.	406	3.33	1.13
Item 2-13	Slow learning, Academic delay, and Specific Learning Disabilities are concepts that differ from one another	406	3.87	0.98
Item 2-14	The causes of Specific Learning Disabilities include intellectual disabilities, sensory disabilities, or severe emotional disturbances	406	3.27	1.21
Item 2-15	Specific Learning Disabilities are due to defects or brain disorders in the basic psychological processes	406	3.61	0.91
Item 2-16	Environmental or cultural factors are excluded as one of the specific causes of learning disabilities	406	3.15	1.16
Item 2-17	Economic or social problems are excluded as one of the causes of Specific Learning Disabilities	406	3.22	1.12
Item 2-18	Malnutrition is one of the causes of Specific Learning Disabilities.	406	3.22	0.99
Item 2-19	Lead poisoning or pregnancy poisoning leads to Specific Learning Disabilities.	406	3.37	0.76
Item 2-20	Genetic factors play a role in the presence of Specific Learning Disabilities.	406	3.63	0.93
Item 2-21	Audio and visual disabilities are excluded as one of the specific causes of learning disabilities	406	3.18	1.20
Item 2-22	Ineffective teaching environments are excluded as one of the causes of Specific Learning Disabilities	406	3.19	1.11
	Total	406	3.47	1.05

To answer the third question, descriptive statistics were calculated, as shown in Table 6. The overall mean score for all items was (M=3.46) with a standard deviation (SD=0.97), indicating

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a low to moderate level of awareness about the signs of SLD. Participants largely agreed on items such as “Students with SLDs exhibit problems with attention, cognition, memory, and thinking” (M=3.94) and “Students with SLDs show difficulty in starting or completing assignments on time” (M=3.93), reflecting higher awareness. In contrast, lower mean scores were recorded for items like “Students with SLDs have problems with balancing” (M=3.00) and “Students with SLDs exhibit poor motor coordination” (M=3.08). Overall, the findings suggest that school professionals lack awareness of diagnostic signs of SLDs.

Table 6: the Diagnostic Signs

Item No	Descriptive Statistics	N	Mean	Std. Dev
Item 3-1	Students with Specific Learning Disabilities struggle to control their behavior (For example, impulsivity and recklessness.	406	3.36	1.07
Item 3-2	A student with Specific Learning Disabilities shows poor motor coordination	406	3.08	1.07
Item 3-3	Students with Specific Learning Disabilities show oversight and neglect in their behavior	406	3.50	0.97
Item 3-4	Students with specific learning disabilities often struggle with starting or completing assignments on time.	406	3.93	0.86
Item 3-5	Students with Specific Learning Disabilities often struggle with balance, which can cause them to collide with objects.	406	3.00	1.05
Item 3-6	Students with Specific Learning Disabilities show problems in expressive language (not expressing their ideas properly)	406	3.59	0.99
Item 3-7	Students with Specific Learning Disabilities exhibit difficulty in forming relationships with others.	406	3.12	1.12
Item 3-8	Students with Specific Learning Disabilities often find it challenging to adapt to their surrounding environment.	406	3.12	1.10
Item 3-9	Students with specific learning disabilities often exhibit anxious and worried feelings.	406	3.52	0.94
Item 3-10	Students with Specific Learning Disabilities show feelings of failure and incapability	406	3.43	0.98
Item 3-11	Students with Specific Learning Disabilities show low levels of motivation and adaptive behavior	406	3.65	0.92
Item 3-12	Students with specific disabilities show low self-esteem and low confidence in their abilities	406	3.67	0.94
Item 3-13	Students with Specific Learning Disabilities display a normal or higher IQ level in IQ tests	406	3.60	0.93
Item 3-14	Students with Specific Learning Disabilities display a normal or a high IQ level in IQ tests	406	3.54	1.03
Item 3-15	Students with Specific Learning Disabilities exhibit problems with attention, cognition, memory, and thinking	406	3.94	0.77
Item 3-16	Students with Specific Learning Disabilities exhibit difficulties in visual motor integration	406	3.53	0.94
Item 3-17	Students with specific learning disabilities often exhibit visual, auditory, and sensory disorders.	406	3.50	0.93
Item 3-18	Students with Specific Learning Disabilities demonstrate trouble with sensory integration and information processing.	406	3.75	0.79
Item 3-19	A student with Specific Learning Disabilities presents problems with gross motor skills.	406	3.15	1.06
Item 3-20	A student with Specific Learning Disabilities presents problems with fine motor skills.	406	3.43	0.99
Item 3-21	Students with Specific Learning Disabilities show problems with directions (distinguishing right from left)	406	3.37	0.98

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Item 3-22	Students with Specific Learning Disabilities display problems with receptive language (unable to understand what they are told)	406	3.40	1.00
	Total	406	3.46	0.97

To address the fourth research question, a semi-structured interview was conducted, revealing six main themes: 1) Exclusionary Factors Missing from SLDs Definition, 2) Distinct Characteristics of Students with SLDs, 3) Mixing SLDs with Other Disorders, 4) Unfair Identification of SLDs, 5) Inadequate Implementation of Identification Procedures, and 6) Validity Concerns in SLDs Testing. Participants acknowledged cognitive issues in students with SLDs but showed a blurred understanding of the definition and nature of SLDs.

Theme #1 identifies environmental factors, such as family issues and a lack of foundational education, as contributing causes of SLDs. Several teachers noted that inconsistent parental involvement and weak early literacy exposure negatively affected students' ability to cope with classroom expectations. Based on a general education teacher, "Some children come to school already behind. Their parents do not read with them, and they have not had proper early learning support." Theme #2 notes that students with SLDs typically have normal IQs but struggle with key literacy skills and may experience cognitive issues such as forgetfulness and distraction. Participants frequently mentioned difficulties with attention, short-term memory, and processing speed. This notion was confirmed by a psychologist who said, "They are not less intelligent. They just forget things quickly or get distracted easily when there is too much text." Theme #3 highlights confusion between SLDs and other disabilities/disorders. Some professionals mistakenly categorized SLDs as learning delays, behavioral problems, or autism, leading to inappropriate interventions. This concern was expressed by one of the administrators that "One student was diagnosed with dyslexia, but the school treated him as if he had autism. That completely changed how the teachers approached him, wrongly." Theme #4 highlights unfair school practices in diagnosing SLDs. These included, for example, over-reliance on informal teacher observations, delayed referrals, and one-size-fits-all teaching methods that ignored individual learning needs, resulting in inappropriate teaching strategies that hinder students' learning experiences. "Some students struggle for years because of the delayed referral. Some students are delayed until Grade 3," A general teacher stated. Theme #5 highlights poor practices in identifying students with SLDs, including infrequent meetings for student placement, unclear role assignments, inadequate access to experts, and teachers' lack of familiarity and knowledge regarding SLDs. As confirmed by a general teacher, "Sometimes I am not sure if what I see is a learning difficulty or just a language issue. We need more training and more guidance from specialists." Theme #6 addresses concerns about the validity of SLDs' tests. Participants noted issues, such as overly long tests targeting grades three and above, which are inappropriate for kindergarten and grades 1-2. When a special teacher reflected, "We are using tests meant for Grade 3 on students in Grade 1. Of course, the results are unreliable." Additionally, tests adapted from other contexts may not be suitable for the UAE. The variety of tests can be confusing for less experienced teachers. The lack of specific standards for aligning IQ tests with student achievement further impacts validity.

The findings highlight a clear need for enhanced capacity-building, increased interprofessional collaboration, and the development of standardized, context-appropriate frameworks for identifying and supporting students with SLDs, in line with the UAE's inclusive education policy objectives.

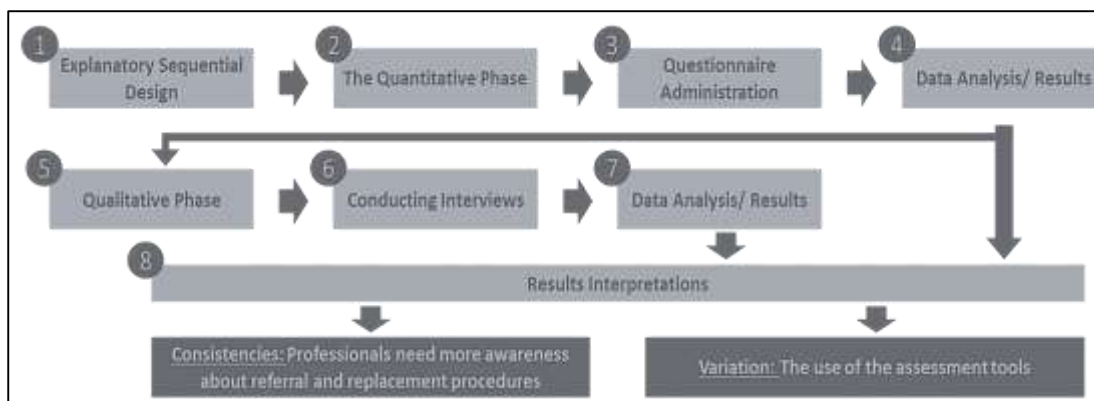
## Discussion

## Identification Process in SLDs

The study utilized a mixed-method design to clarify the consistencies and variations between quantitative and qualitative results, as illustrated in Figure 1. The quantitative findings revealed significant inaccuracies in professional awareness regarding the definition and nature of identification procedures, as well as a lack of understanding of the signs of SLDs. These issues were reflected in the mean scores from the descriptive statistics of the questionnaire results. Furthermore, the qualitative data aligned with the quantitative results, highlighting confusion between SLDs and other types of disorders, which revealed a lack of awareness and, consequently, poor identification practices and the incorrect selection of teaching strategies and interventions. These results highlight a significant and concerning issue: the persistent lack of knowledge among school professionals regarding the causes and characteristics of SLDs. This gap, documented in studies across various contexts (e.g., Al-Hendawi et al., 2023; Alhifthy et al., 2017; Kamran et al., 2023; Maki & Adams, 2020; Wagner et al., 2020), underscores a systemic failure to equip educators with the foundational understanding necessary to support students with SLDs effectively. Without this knowledge, educators may struggle to differentiate between learning difficulties caused by SLDs and those arising from other factors, such as environmental or instructional deficiencies. This not only delays timely intervention but also risks misidentifying students, thereby exacerbating educational inequities. Addressing inclusive education challenges in the UAE, particularly for SLDs, is essential. Professional development for educators should focus on early identification, intervention, and practical strategies rather than just workshops. Improving awareness requires a shift in attitudes and a commitment to inclusion. Schools need to evaluate their training programs to empower teachers and other school professionals in managing the complexities of SLDs. Continued support, such as coaching and access to resources (e.g., RtI and PSW), is vital for effective professional development. Ultimately, enhancing educators' capabilities and integrating SLDs expertise into school policies is crucial to avoid leaving students underserved and educators unprepared (Jaeger, 2024; Lopez, 2023).

Regarding the variation between the quantitative and qualitative results, the questionnaire respondents agreed that many practical assessment tools are available to identify students with SLDs. However, this indicates a significant discrepancy between the quantitative and qualitative findings. Interviewees reported that numerous tests could confuse teachers when used due to their inappropriateness, validity concerns, and inadaptability. They noted that many lengthy assessments cannot be completed in a single session. Furthermore, most of these tests are inappropriate for the UAE's cultural context. This highlights the need to broaden communication among all parties, including schools, universities, centers, and parents, within the community to effectively share knowledge and skills essential for the accurate referral and diagnosis of students with SLDs (Li et al., 2024; Mutuku, 2023).

Figure 1: The Consistency and Variation between the Quantitative and Qualitative Phases



## Identification Process in SLDs

### Implications for Future Research

This research highlights the pressing need for improved diagnostic procedures and targeted interventions for students with SLDs. Future studies should critically evaluate the accuracy and cultural responsiveness of current diagnostic methods, as well as assess the effectiveness of individual and combined components of intervention programs. It is essential to consider both student characteristics and environmental factors, ensuring that diagnostic frameworks are adaptable and grounded in context. The persistent confusion among school professionals in distinguishing SLDs from other disabilities underscores a substantial knowledge gap, one that must be addressed through sustained, evidence-based professional development initiatives tailored to educators' needs. Moreover, this study opens a pathway for future research to investigate SLDs manifestations across various educational stages and private sectors, suggesting that longitudinal and comparative studies could reveal developmental differences and inform stage-appropriate strategies. Creative future research could also explore how emerging technologies, such as AI-powered diagnostic tools or immersive learning environments, might enhance early identification and personalized intervention planning.

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