



## **Obstacles of Implementing Cooperative Learning with Students with Learning Disabilities from Elementary School Teachers' Perspectives**

**Dr. Hawazen Ahmed Alasiri**

Associate Professor, Orcid 0000-0002-9822-3004  
Umm Al-Qura University, Special education department  
Haasiri@uqu.edu.sa

**Dr. Nouf Rashdan Almutairi**

Associate professor, Orcid 0000-0003-3057-9896  
Majmaah university, Special Education Department  
N.alyabssy@mu.edu.sa



## **Obstacles of Implementing Cooperative Learning with Students with Learning Disabilities from Elementary School Teachers' Perspectives**

**Dr.Hawazen Ahmad Alasiri & Dr. Nouf Rashdan Almutairi**

---

### **Abstract:**

The study aimed to examine the obstacles to implementing cooperative learning (CL) among students with learning disabilities (SWLD) from the perspective of elementary school teachers. A descriptive survey approach was employed as a means of fulfilling the study goals using a questionnaire constructed by the researchers. The study sample consisted of 96 male and female primary school teachers. The major obstacles to the implementation of CL among SWLD as perceived by elementary school teachers were as follows: (1) student-related, (2) teacher-related, (3) curriculum-related and (4) classroom environment-related obstacles. The results indicated statistically significant differences in the responses of study participants based on gender, with higher rates for males, while no differences were observed due to academic specialization, or years of teaching experience. Consequently, the study concluded with several educational recommendations and suggestions for individuals working with students who have learning disabilities.

**Keywords:** Obstacles, cooperative learning, students with learning disabilities, general education teachers.

## 1 Introduction

A primary goal of Saudi education is to integrate children with disabilities into general education schools. It is noteworthy that SWLD are currently receiving their education in regular classrooms alongside their peers without disabilities. This ensures equal access to education in both public and private schools, unlike the case of their peers with other disabilities. In practice, however, instruction in general education classrooms that include SWLD and their peers without disabilities often fails to address individual differences. Consequently, SWLD may find it difficult to do their academic assignments. The current study aims to examine the challenges faced by general education teachers in implementing CL strategies at the elementary level.

CL is one of the most effective strategies that fosters active student engagement. When students work together in small groups, they do not just share answers; they also learn how to work together, build confidence, and do better in class (Listiadi et al., 2019; Schul, 2011). In addition, research indicates that CL can improve emotional intelligence and even help with problems like stress, anxiety, and bullying (Ryzin & Roseth, 2018). These benefits are not exclusive to students with disabilities; all individuals in the classroom gain advantages. But for children who have trouble learning, the effect can be even bigger. They can share their ideas freely when they work in groups, and feedback from teachers and classmates helps them grow without feeling stuck. This type of interaction strengthens their academic skills, such as asking questions and having discussions. It also helps teachers see where students might need extra help (Emerson, 2013).

In line with this, the present study sought to highlight the obstacles teachers face in using small-group work in classrooms as a strategy to address individual differences among students – particularly between SWLD and their peers, as well as among typically developing students themselves.

### 1.1 Problem of the Study

Teaching SWLD is one of the problems that still attracts the attention of researchers and academics. Abu Nayan (2019) reported that about 25,000 male and female students had been referred to learning disabilities programs to receive special education services. Moreover, the study added that there was a significant gap between students' abilities and their academic performance. The Special Education Regulatory

Guide (2015) stated that eligibility for learning disabilities services depended on the discrepancy between students' abilities and performance. The learning disability must not be a consequence of another accompanying disability. Another condition requires that educational services in general education classrooms be insufficient or inefficient for such students. Accordingly, the Ministry of Education (MOE) applies the screening and referral approach to refer students to the program and classify their needs (Alabd Alateef, 2005). This implies that students must undergo a period of failure to demonstrate a significant gap before the program deems them eligible. As a result, researchers adopted the Response to Intervention (RTI) approach, which aims to identify and diagnose individuals with learning disabilities to reduce the number of false referrals. Furthermore, they aim to provide varying levels of support in accordance with the students' needs through small groups and help general education teachers use evidence-based teaching methods (Panicali, 2024) to ensure the success of those with learning disabilities.

SWLD face numerous challenges in the general education classroom. Those with reading difficulties, for example, struggle with either the inability to read or slower reading rates compared to their peers. Such behavior causes them to fall behind their classmates and deepens their frustration in their classroom. Furthermore, failure to adjust or modify the teaching methods used according to their individual needs makes the classroom unfit for them. Another pressing challenge is the teachers' limited awareness of the extent of the difficulties students face in general education classrooms, which strains their relationship with their teachers. As a result, teachers should develop effective methods of teaching SWLD and adjust and modify the educational environment to meet their needs.

A review of the special education literature on general education teachers' use of CL strategies with SWLD highlighted the scarcity of studies addressing the focus of the current study. Drawing on their academic and field experience, the researchers identified a pressing need to examine the barriers to the use of CL in general education classrooms with SWLD who are marginalised and overlooked by general education teachers, placing the entire burden of achieving the intended goals on special education teachers in the resource room to ensure the success of those students. Accordingly, the researchers articulated the problem of the study in the following questions:

- What are the most significant obstacles to implementing CL with SWLD as perceived by the elementary school teachers?
- Are there statistically significant differences in the elementary school teachers' perceptions of the obstacles to implementing CL with SWLD according to gender?
- Are there statistically significant differences in the elementary school teachers' perceptions of the obstacles to implementing CL with SWLD according to academic specialisation?
- Are there statistically significant differences in the elementary school teachers' perceptions of the obstacles to implementing CL with SWLD according to years of teaching experience?

### **1.2 Objectives of the Study**

The current study aims to:

- Identify the most significant obstacles to implementing CL with SWLD as perceived by elementary teachers.
- Examine the statistically significant differences in elementary teachers' perceptions of these obstacles due to gender, academic specialization, and years of teaching experience.

### **1.3 The Significance of the Study**

The current study gains its significance from the worldwide interest in SWLD and integrating them into general education classrooms, with the KSA being one of the pioneers in this respect. The study focuses on SWLD – a category of special education that requires more support and assistance in its educational journey. Furthermore, it aims to encourage elementary teachers to implement CL strategies that positively affect the development of SWLD and improve their academic performance. In addition, the study sheds light on CL as an evidence-based effective strategy that helps SWLD improve their academic performance in their classroom and enhance their integration with their peers through small group work.

To the best knowledge of the researchers, there has been a lack of studies that have addressed the obstacles to implementing CL with SWLD from the perspective of elementary school teachers in the Riyadh region. Therefore, this study aims to fill this gap by highlighting the importance of using CL to teach all subjects due to its benefits for all SWLD and their peers. By designing a new tool, the study enriches the Arabic literature and provides researchers with useful resources. Finally, it provides the decision-makers in the Ministry of Education with valuable insights underscoring the need to remove any obstacles to implementing

CL and to help teachers in general education schools cope with the difficulties they face.

#### **1.4 Study Delimitations**

**Topical Delimitations:** The study focuses on the obstacles to implementing CL with SWLD in general education classrooms.

**Human Delimitations:** General education teachers at the elementary level who teach mathematics, science, and the MyLanguage Arabic course in public schools with learning disabilities programs and resource rooms for these students.

**Spatial Delimitations:** Public elementary schools with learning disabilities programs in the city of Al-Majma'ah.

**Temporal Delimitations:** The study instrument was administered during the second semester of the academic year 1445 AH.

#### **1.5 Study Terminology**

**Obstacles.** Teachers may encounter problems related to the availability or absence of certain tools or skills, which can lead to the use of traditional instructional approaches that restrict effective planning, implementation, and development of practices, ultimately hindering the achievement of desired goals (Abu Al-Hajj, 2022). According to the operational definition of the researchers, obstacles are the difficulties or challenges that hinder the elementary school teachers' efficient and effective implementation of CL with their SWLD in the general education classroom.

**Cooperative Learning.** Al-Sisi (2010) defined CL as an instructional approach based on classroom organization. Students are divided into small groups of at least four individuals working and interacting with each other. They discuss ideas and listen to solve problems with the aim of fulfilling the assigned tasks. Each individual in the group is responsible for their peers' learning and the group's success in completing the assigned tasks. The teacher's role is to provide guidance and direction. They encourage students, answer their questions, and assign the roles to each student in the group. The researchers operationally define CL as an instructional approach based on the use of small heterogeneous groups to teach students the academic skills or complete curricular activities in the classroom.

**Students with Learning Disabilities (SWLD).** According to the Special Education Organizational Guide (2015), SWLD are those who experience disorders in one or more of the basic psychological processes that involve understanding and using spoken or written language, which

are manifested in disorders of listening, thinking, speaking, reading, writing (spelling, expression, handwriting), and mathematics. These disorders are not attributable to intellectual, auditory, or visual impairments or any other disabilities, learning conditions, or family environment (p. 10). The researchers operationally defined the term as students who have been diagnosed with learning disabilities and referred to learning disabilities programs operating in the general education schools due to academic and developmental disabilities.

**General Education Teachers.** According to the Special Education Organizational Guide (2015), general education teachers are those who specialize in a specific field and teach a specific subject, such as mathematics, or a set of related subjects, such as the Arabic language and religious studies (p. 7). The researchers operationally defined the term as general education teachers who hold a bachelor's degree in mathematics, science, or the Arabic language, have the professional competencies required to work with elementary public school students, and teach SWLD in their classrooms.

## **2 Theoretical Framework**

The theoretical framework of the study consists of two main components: CL and learning disabilities (LD). They are discussed in detail in the following sections.

### **2.1 Cooperative Learning (CL)**

The use of small groups in teaching typical students and students with disabilities is one of the most significant evidence-based strategies (EBSs), and research has demonstrated its effectiveness in teaching students and enhancing their academic performance. Using small groups in reading is an effective component in teaching SWLD and integrating them with their peers in general education classrooms, whether through whole-class grouping, small groups, or paired activities (Vaughn et al., 2001)

There are four types of small groups used in CL: heterogeneous groups, random groups, homogeneous groups, and finally, groups selected by students themselves. Heterogeneous groups consist of different students in terms of gender and academic abilities and require more time from the teacher. Moreover, leadership opportunities within these groups tend to be limited (Emerson, 2013). Small groups vary in size, ranging from two to four students per group. The fewer the students in the group (i.e., two members), the more interaction there is among its members. By contrast,

managing discussion in a group of three can be challenging, as one member is left out of the conversation at any given time (Emerson, 2013; Kagan & Kagan, 2009).

In 1996, Panitz identified the benefits of CL and its positive impact on students in their classrooms. He argued that CL allows students to socially interact with each other and, thereby, benefit in multiple ways. For example, they may explain to each other the causes of a certain phenomenon or summarize an event. In that way, students can provide an optimal model of appropriate behavior while interacting with each other. In addition, CL provides students with the opportunity to develop and improve basic skills in the classroom – skills they need to be effective in their communities and workplaces. These skills include acquiring the role of a leader, making decisions, building trust, communicating effectively, and overcoming crises (Panitz, 1996). Furthermore, CL helps students make friends with their classmates, teachers, staff, and parents, which ensures successful interaction and the attainment of CL objectives (Kessler and McCleod, 1985).

Willis (2021) referred to the essential role of teachers in planning for CL. He stressed that teachers should carefully and purposefully choose who will be in each group. Selection must be conducted thoughtfully, and each member should possess strengths that contribute to the overall success of the group. Teachers should look at the group's past experiences, strengths and weaknesses, talents, and cultural backgrounds. Students should help each other finish their work, show off their strengths, and learn from each other in areas where they aren't as good or experienced.

### **2.1.1 Benefits of Cooperative Learning**

CL is not a new way to teach, but it is more important now than it has ever been. Due to the fact that students weren't able to talk to each other or work together during remote learning enforced by the COVID-19 pandemic, they spent most of their time learning in the digital world. The return to schools and in-person learning has certainly brought back CL. The practice has helped students change the way they think, improve their communication skills, and become more aware of their emotions, all of which help them enhance their social skills (Willis, 2021).

There are many benefits to CL, one of which is that it helps students do better in school. It also helps students get along with each other, which makes the classroom a place that values diversity, inclusion, and individual differences. Furthermore, CL helps build valuable

experiences, such as learning and social skills, that enhance their social relationships. Studies have demonstrated that CL has elevated student performance and, crucially, augmented their capacity to retain acquired skills and attain specified objectives through collaborative efforts. In the same context, CL enables students to build positive relationships and friendships. It also boosts self-esteem and gives students intrinsic motivation, which helps them get more help from their peers and teachers. Lastly, it makes people feel better about teachers and school (IT Learning and Development, 2017).

### **2.1.2 Challenges to Implementing Cooperative Learning**

Some challenges in the adoption of CL are attributed to students themselves. For instance, some students are afraid of making mistakes or of feeling embarrassed in front of their peers while working in their groups. Other challenges include being called on by teachers to answer questions they do not know, fearing that they may look too smart or not smart enough, or worrying about being rejected by peers for any reason, such as giving a wrong answer and exposing the group to failure (Willis, 2021). To understand these difficulties better, the researchers identified three main challenges, namely, the dynamics of personal relationships, technical constraints and institutional resistance.

Challenges related to the dynamics of interpersonal relationships emerge in the conflict within the group due to their unclear roles and responsibilities in particular. Students sometimes attempt to avoid problems that may arise among them while doing their activities. However, the frequent avoidance of such problems may aggravate intrinsic tensions among the group members over time. This conclusion was confirmed by Do & Hascher (2023), who studied the challenges facing teachers in terms of peer cooperation during CL. The study used a sample of 30 teachers and semi-structured interviews to collect the data and the results revealed that students were inflexible and incompatible with one another (Do & Hascher, 2023).

Umaroh (2022) investigated the use and implementation of CL for teaching English speaking in virtual classrooms with a focus on the challenges associated with technical limitations. A qualitative descriptive approach was employed, and data were collected through the analysis of relevant articles and studies. The data were then classified and analyzed to draw conclusions. Additionally, remote CL was applied with a group of students; however, the results demonstrated that learners had to work independently, which limited the effectiveness of CL. The study,

therefore, highlighted the limited active participation among students (Umaroh, 2022)

Chakyarkandiyil and Prakasha (2023) examined the challenges teachers face in implementing CL, especially in relation to institutional resistance. A mixed-methods approach was used, and 300 teachers participated in a questionnaire. Semi-structured interviews were also conducted with eight participants. The results showed that 63% of the challenges were attributed to teachers themselves, which is reflected in teachers' resistance to change and preference for traditional methods due to implementation constraints. Furthermore, the study identified student-related challenges, administrative constraints, and curriculum constraints which hinder the implementation of CL in educational contexts (Chakyarkandiyil & Prakasha, 2023)

## **2.2 Learning Disabilities**

Al-Dahri (2016) referred to learning disabilities using the definition proposed by Kirk, which describes them as a deficiency in one or more of the basic psychological processes involved in reading, writing, and language in general. The National Joint Committee on Learning Disabilities added that such deficiencies may also affect mathematical skills and reasoning due to brain dysfunction which may accompany other disabilities, provided that the disorder is not the result of another disability (NJCLD, 1990).

Along the same lines, various terms have been used to refer to learning disabilities. American regulations use the term "learning disability", which describes several academic challenges SWLD encounter, such as dyslexia and dyscalculia, among others. In contrast, British educators used the term "learning difficulty" to classify the severity of the condition as mild, moderate, or severe ([nadp-uk.org](http://nadp-uk.org), 2024). Some researchers also use the same term to refer to students experiencing a single, specific difficulty, such as dyslexia. In general, SWLD show lower academic achievement compared to their peers in reading, writing, and mathematics assessments, as well as in spoken and written languages. Moreover, they experience developmental issues related to attention, memory, and perception. Minor learning disabilities may be difficult to diagnose since students are often able to manage most daily tasks and may only need support in a few life tasks, such as filling out forms. On the other hand, those with moderate-to-severe disabilities often need assistance in mobility, communication, and academic skills (Fletcher, Lyon, Fuchs, & Barnes, 2019).

### 2.2.1 Teaching SWLD in Classrooms

Students with different disabilities learn in various settings that meet their needs. However, the most common category is those with learning disabilities who spend 80% or more of the school day in general education classrooms. While experts have stressed the importance of providing students with disabilities the opportunity to receive their education in a general education setting, the study has shown that most general education teachers lack the competence and preparedness to teach SWLD. However, there has been limited attention to the quality of instruction delivered in these settings and to whether students with disabilities are able to adequately access the curriculum. Therefore, results indicated that students with disabilities did not have access to high-quality instruction compared to their typical peers (Jones, 2020). Similarly, according to Mitchell (2021), general education teachers are not ready or equipped to teach students with disabilities in general education settings. Only one out of every five of those teachers reported that they had the readiness to teach SWLD, including ADHD.

Mitchell (2023) examined the impact of using CL to teach the basics of algebra to typically developing students who struggled with this subject alongside peers with learning disabilities and autism spectrum disorder (ASD). An action research design was used with secondary-level students. Data were collected and processed over eight weeks, including students' attendance records, academic performance, and individual responses to a questionnaire. The findings indicated that participants developed positive attitudes toward the classroom environment, their interactions, and their final grades. However, no improvement was recorded in cognitive participation, yet the researcher reported an increase in the rate of questions asked to gain a deeper understanding. Additionally, students' problem-solving skills underwent some improvement.

Agwu and Nmadu (2023) investigated the efficacy of the CL strategy in augmenting academic performance and fostering academic self-concept among second-year secondary school chemistry students. A quasi-experimental design was applied to a study sample of 244 students divided into a control group and an experimental group. The results revealed that using CL strategies had a positive effect on improving students' academic achievement and self-concept in the experimental group compared to the control group, which was taught using traditional methods. Furthermore, a positive linear relationship was detected

between academic achievement and academic self-concept among students of chemistry. The study recommended creating learner-centered environments and interactive activities on CL platforms to help improve academic achievement and foster students' academic self-concept.

Abu Al-Hajj (2022) attempted to identify the main obstacles to the use of active learning strategies (one form of CL) from the perspective of Islamic studies teachers. A descriptive-analytical approach was employed with a questionnaire as the primary tool to examine the study problem. The study sample consisted of 94 teachers. The results revealed that all obstacles related to teachers, students, curriculum, and the learning environment scored highly in the questionnaire. Therefore, the researcher recommended paying more attention to teachers' professional development and providing the resources that help them use active learning strategies and training courses to enhance their familiarity with the implementation mechanism. She also highlighted the importance of introducing incentives to motivate teachers to develop their teaching methods.

Al-Ghamdi & Al-Jamai (2021) aimed to identify the main obstacles to implementing CL among general education students and those who are deaf or hard of hearing from the perspective of their teachers in inclusion schools in Yanbu. A descriptive approach was employed, and a questionnaire was used as the primary tool for data collection. The results showed that teachers' agreement on the obstacles was at a moderate level. Student-related obstacles ranked first, followed by teacher-related and curriculum-related, and finally technical and administrative. According to the results, no statistically significant differences were found in the responses of the study sample based on years of teaching experience or educational level, while gender-based differences were found with higher rates for male teachers.

Similarly, Al-Awfi & Balbaid (2023) identified the obstacles faced by teachers of students with intellectual disabilities in implementing EBPs in Al-Madinah Al-Munawwarah. The study employed a descriptive approach and a 29-item questionnaire covering three dimensions (teacher-related, organizational environment-related, and research-related obstacles). The study sample consisted of 172 teachers selected using simple random sampling. According to the results, the obstacles were rated as high, with the organizational environment-related obstacles ranked first, followed by research-related and then teacher-related ones. There were no statistically significant differences in participants'

responses to the questionnaire due to gender or years of teaching experience.

In a related context, Azzazi (2021) examined the current implementation of EBPs and the obstacles to their application. A descriptive approach was employed with a questionnaire for data collection. A total of 256 teachers of ASD students were selected for the study sample. The results revealed a moderate level for teachers' implementation of EBPs. The main obstacles were limited time, insufficient knowledge of EBPs, lack of regulations mandating teachers to use EBPs and insufficient training programs. Furthermore, no statistically significant differences were found in the participants' responses due to gender, years of teaching experience, or academic qualification.

Al-Husseini & Al-Zarea (2020) examined the obstacles to implementing CL with SWLD in Grade 4 as perceived by their teachers, and whether there were differences in teachers' responses based on their academic specializations, teaching experience, or academic qualifications. A descriptive approach was used with a study sample of 95 general education teachers working in schools with resource rooms for SWLD. A questionnaire was the primary tool of data collection. Based on the results, the most common obstacles to implementing CL were student-related, followed by teacher-related, then classroom environment-related, and finally content-related. No statistically significant differences were found due to teachers' academic specializations or years of teaching experience. However, statistically significant differences were detected based on their academic degrees, with higher rates for bachelor's degree holders.

Greish (2018) conducted a study to examine CL effectiveness in improving phonological awareness and oral reading among SWLD who experience reading difficulties. A quasi-experimental design was applied to a study sample of 12 students in two groups (control and experimental). The results indicated that implementing CL strategies was effective in enhancing phonological awareness and oral reading in the experimental group. The researcher recommended using CL to address reading difficulties among SWLD and providing material appropriate to children's levels and abilities to facilitate their understanding and comprehension of the content.

Qadouri & Ibrahimi (2017) conducted an experimental study to examine the effectiveness of a therapeutic CL-based program for high-achieving third-grade SWLD in mathematics. A one-group experimental design

was used with a study sample of 24 students. The results indicated that the therapeutic program was successful, as it enhanced students' academic achievement in mathematics and improved their overall mathematical problem-solving skills.

The researchers conducted a study to examine the effect of CL on the academic achievement of SWLD. Previous studies published between 2000 and 2014 were reviewed, and six studies that aligned with the aims and criteria of the current study were selected. Based on the results, implementing CL using with, age-heterogeneous groups and peer instruction in the classroom, as well as structured and unstructured instruction, significantly improved the academic achievement of struggling students, low achievers, and SWLD (Sencibaugh & Sencibaugh, 2016).

Another experimental study was conducted by Tran (2014) to examine the effect of implementing CL on academic achievement and knowledge retention. A total of 110 psychology students in two equivalent groups of 55 each, taught by the same teacher, participated in the study. Cooperative instruction was implemented with the experimental group, while the control group was exposed to the lecture method. After eight weeks of instruction, the results indicated that students in the experimental group scored higher on post-tests measuring academic achievement and knowledge retention compared to the other group.

Similarly, Ajaja & Eravwoke (2010) investigated the CL effect on students' academic achievement as a teaching strategy in science classes. They also aimed to examine their attitudes toward the course. The study sample consisted of 120 elementary students, randomly selected and assigned to a control group and an experimental group. The study results indicated that students in the experimental group who received their instruction through CL scored higher on the achievement test compared to their peers who were taught using a traditional method. In addition, the results revealed significant differences with higher rates for the CL group. No differences were found based on gender and academic abilities.

A review of previous studies on CL revealed that either survey or quasi-experimental designs were used. According to the results, CL was effective in improving students' academic achievement across ability levels. The distinctiveness of the current study stems from its attempt to investigate the obstacles to implementing CL in general education classrooms, which include SWLD as perceived by general education

teachers. The researchers sought to address a research gap by focusing on SWLD and general education teachers. They stressed the importance of this student group since they spend approximately 80% or more of the school day in general education classrooms. Therefore, teachers should deliver high-quality instruction using EBPs to enhance instructional effectiveness in general education classrooms and to meet the individual needs of this group of students and their peers within inclusive education programs.

### 3 Methods and Procedures

#### 3.1 Study Methodology

The researchers employed a descriptive survey design, as it aligns with the nature and objectives of the study.

#### 3.2 Study Population

The study population consisted of all elementary school teachers teaching mathematics, science, and the "MyLanguage" Arabic language course in schools that include programs for SWLD in the city of Al-Majma'ah.

#### 3.3 Study Sample

The psychometric properties sample consisted of 45 elementary school teachers whose ages ranged from 27 to 52 years ( $M = 38.73$ ,  $SD = 6.319$ ). The main study sample consisted of 96 elementary school teachers who teach mathematics, science, and Arabic in schools that include programs for SWLD in the city of Riyadh. Their ages ranged from 25 to 55 years ( $M = 37.50$ ,  $SD = 7.617$ ). Table 1 presents the study sample according to its variables.

**Table 1. Description of the Study Sample According to Its Variables**

| No | Demographic Variable         | Category         | n  | %    | Total |
|----|------------------------------|------------------|----|------|-------|
| 1  | Gender                       | Male             | 33 | 34.3 | 96    |
|    |                              | Female           | 63 | 65.6 |       |
| 2  | Academic specialization      | Mathematics      | 25 | 26.0 | 96    |
|    |                              | Science          | 42 | 43.0 |       |
|    |                              | Arabic           | 29 | 30.2 |       |
| 3  | Years of teaching experience | 5 years or less  | 29 | 30.2 | 96    |
|    |                              | 6 - 10 years     | 40 | 41.7 |       |
|    |                              | 11 years or more | 27 | 28.1 |       |

### 3.4 Study Variables

*Independent Variable:* Obstacles to implementing CL with SWLD.

*Dependent Variables:* Gender (male/female), academic specialization (mathematics, science, and Arabic), and years of teaching experience (5 years or less, 6 - 10 years, and 11 years or more).

### 3.5 Study Tool

The study employed a questionnaire as the primary tool for collecting data which was developed in light of the literature and previous studies relevant to the current topic, such as Al-Usaimi & Al-Abdulmoneim (2023), Tuweij, Al-Zahrani & Al-Thaqafi (2020), and Al-Ghamdi (2018). The questionnaire, in its initial form, consisted of two main sections:

1. *Demographic data* of the study sample members, including gender, specialization, and years of teaching experience.
2. *The questionnaire items*, which consisted of 31 items distributed across four dimensions: teacher-related obstacles (9 items), student-related obstacles (9 items), content-related obstacles (6 items), and classroom environment-related obstacles (7 items)

#### 3.5.1 Psychometric features of the study tool

##### 3.5.1.1 Face Validity

The researchers used the expert review method to check the questionnaire's validity and reliability. The first version of the questionnaire was reviewed by nine faculty members who were experts in the field of study. They were given all the information and instructions they needed regarding the goals and the characteristics of the target sample. Experts were asked to give their opinions on how clear the instructions and terms in the questionnaire were, as well as how well they fit with the goals and the cognitive level of the sample. There were three options for the assessment: necessary, useful but not necessary, and not necessary. The experts looked at each item based on these standards. Table 2 presents the experts' agreement rates on the suitability of various elements of the questionnaire, such as the wording of questions in relation to the sample level, the question alignment to the intended goals,

and the accuracy of the answer key.

**Table 2. Experts' Agreement Rates on the Questionnaire Review Elements**

| No. | Review element                                               | Agreement rate |
|-----|--------------------------------------------------------------|----------------|
| 1   | Appropriateness of question wording for the sample level     | 88.8%          |
| 2   | Appropriateness of the questions for the intended objectives | 88.8%          |
| 3   | Accuracy of the answers in the answer key for each item      | 100%           |

The percentages presented in Table 2 indicate substantial agreement among the experts on the quality of the questionnaire in terms of its wording and alignment with the objectives and target sample. This supports the content validity and appropriateness for the purposes of the study. Table 3 presents the percentages of experts' agreement on each item of the questionnaire together with the Lawshe value for each item to determine its significance.

**Table 3 Percentages of Experts' Agreement regarding the Questionnaire Items**

| Item No. | Agreement Percentage | Lawshe Value (CVR) | Item No. | Agreement Percentage | Lawshe Value (CVR) |
|----------|----------------------|--------------------|----------|----------------------|--------------------|
| 1        | 100%                 | 0.99               | 17       | 88.8%                | 0.77               |
| 2        | 88.8%                | 0.77               | 18       | 100%                 | 0.99               |
| 3        | 88.8%                | 0.77               | 19       | 88.8%                | 0.77               |
| 4        | 100%                 | 0.99               | 20       | 100%                 | 0.99               |
| 5        | 100%                 | 0.99               | 21       | 100%                 | 0.99               |
| 6        | 88.8%                | 0.77               | 22       | 88.8%                | 0.77               |
| 7        | 100%                 | 0.99               | 23       | 88.8%                | 0.77               |
| 8        | 88.8%                | 0.77               | 24       | 88.8%                | 0.77               |
| 9        | 100%                 | 0.99               | 25       | 100%                 | 0.99               |
| 10       | 100%                 | 0.99               | 26       | 100%                 | 0.99               |
| 11       | 88.8%                | 0.77               | 27       | 88.8%                | 0.77               |

|    |       |      |    |       |      |
|----|-------|------|----|-------|------|
| 12 | 100%  | 0.99 | 28 | 88.8% | 0.77 |
| 13 | 100%  | 0.99 | 29 | 100%  | 0.99 |
| 14 | 88.8% | 0.77 | 30 | 100%  | 0.99 |
| 15 | 88.8% | 0.77 | 31 | 100%  | 0.99 |
| 16 | 100%  | 0.99 |    |       |      |

Based on the analysis of Table (3), which presents the percentages of experts' agreement on the questionnaire items and the Content Validity Ratio (CVR) for each item, the agreement percentages ranged from 88.8% to 100%, while the CVR values varied from 0.77 to 0.99 – high values that indicate the importance of all items from the experts' perspective, thereby supporting the content validity of the questionnaire. Furthermore, the minimum number of experts required to reach consensus among them is 8 out of 9. The critical value reaches 0.77 (Ayre & Scally, 2014). This result also confirms that all questionnaire items were considered essential by the experts.

To test the discriminant validity of the questionnaire, the extreme-groups comparison method with the pilot sample was employed. The scores of the pilot sample participants ( $n = 45$ ) were ranked from top to bottom according to their performance on the questionnaire. The top 31% and the bottom 31% were then selected to represent the two extreme groups. An independent-samples t-test was conducted to compare the mean scores of the two groups on the various questionnaire dimensions and the total score. This method aims to verify the questionnaire's ability to discriminate between the varying levels of the measured characteristics. Table (4) presents the results of the t-test comparing the top and bottom groups on the pilot sample across the questionnaire dimensions and the total score.

**Table 4. Criterion-related (Discriminant) Validity of the Questionnaire on Obstacles to Implementing Cooperative Learning with Students with Learning Disabilities (n = 45)**

| Dimension                               | Group | n  | M      | SD   | t      | df | p    |
|-----------------------------------------|-------|----|--------|------|--------|----|------|
| Teacher-related obstacles               | high  | 14 | 34.86  | 3.06 | 7.227  | 26 | 0.01 |
|                                         | low   | 14 | 23.43  | 5.06 |        |    |      |
| Student-related obstacles               | high  | 14 | 33.36  | 3.22 | 9.964  | 26 | 0.01 |
|                                         | low   | 14 | 21.57  | 3.03 |        |    |      |
| Curriculum content-related obstacles    | high  | 14 | 22.43  | 2.10 | 6.465  | 26 | 0.01 |
|                                         | low   | 14 | 15.71  | 3.26 |        |    |      |
| Classroom environment-related obstacles | high  | 14 | 25.43  | 3.00 | 8.493  | 26 | 0.01 |
|                                         | low   | 14 | 15.86  | 2.95 |        |    |      |
| Total score                             | high  | 14 | 116.07 | 7.20 | 14.523 | 26 | 0.01 |
|                                         | low   | 14 | 76.57  | 7.18 |        |    |      |

In comparing the extreme groups (high and low) of the pilot sample across the various questionnaire dimensions and total score, the low p-values ( $p < 0.01$ ) across all dimensions indicate statistically significant differences between the two groups. Furthermore, the high t-values (ranging from 6.465 to 14.523) demonstrate significant differences between the mean scores of the two groups. These results support the discriminant validity of the questionnaire and its ability to clearly distinguish between the different levels of the traits measured, thereby increasing the researchers' confidence in its use as a reliable measurement tool in the current study.

### 3.6 Questionnaire Stability

#### 3.6.1 Retest Method

The researchers administered the questionnaire to 45 elementary school teachers. Then, it was readministered three weeks later to 30 of the same participants. Table 5 presents the correlation coefficients between the first and second administrations for the same sample over a time interval, which is a commonly used method for assessing the stability of a questionnaire.

**Table 5. Pearson's Correlation Coefficients through the Use of Questionnaire Retest (n = 30)**

| No. | Dimensions                              | Correlation Coefficients |
|-----|-----------------------------------------|--------------------------|
| 1   | Teacher-related obstacles               | **0.621                  |
| 2   | Student-related obstacles               | **0.752                  |
| 3   | Curriculum content-related obstacles    | *0.663                   |
| 4   | Classroom environment-related obstacles | **0.619                  |
|     | Total score                             | **0.964                  |

\*\* significant at 0.01

According to Table 5, the high values of stability coefficients ranged from 0.619 to 0.964, indicating the questionnaire's high stability and the consistency of results across time. This, in turn, increases the reliability of the assessment. To evaluate the stability of the questionnaire, Cronbach's Alpha was used to examine the internal consistency of the responses.

**Table 6. Cronbach's Alpha Reliability Values of the Questionnaire on Obstacles to Implementing Cooperative Learning with Students with Learning Disabilities**

| No. | Dimension                 | No. of items | Cronbach's Alpha Stability |
|-----|---------------------------|--------------|----------------------------|
| 1   | Teacher-related obstacles | 9            | 0.748                      |

|   |                                         |    |       |
|---|-----------------------------------------|----|-------|
| 2 | Student-related obstacles               | 9  | 0.758 |
| 3 | Curriculum content-related obstacles    | 6  | 0.626 |
| 4 | Classroom environment-related obstacles | 7  | 0.756 |
| 5 | Total score                             | 31 | 0.891 |

Table 6 presents the Cronbach's alpha reliability coefficients for each dimension of the questionnaire "Obstacles to Implementing CL with SWLD", as well as the total score. The Cronbach's Alpha coefficients for the sub-dimensions ranged from 0.626 to 0.758, and the total score was 0.891, indicating satisfactory internal consistency and strong measurement reliability. Therefore, the questionnaire can be used as a reliable assessment tool in the current study.

### 3.7 Internal Consistency

To assess the internal consistency of the various dimensions of the questionnaire, an analysis was conducted using Pearson's correlation coefficients. This analysis examined the interrelationships among these dimensions and the correlation between each dimension and the total score of the questionnaire. Table 7 presents these results.

**Table 7 Correlation Coefficients among the Dimensions and with the Total Score of the Questionnaire (n = 45)**

| No. | Dimension                               | 1       | 2       | 3       | 4       | 5   |
|-----|-----------------------------------------|---------|---------|---------|---------|-----|
| 1   | Teacher-related obstacles               | 1       | ...     | ...     | ...     | ... |
| 2   | Student-related obstacles               | **0.509 | 1       | ...     | ...     | ... |
| 3   | Curriculum content-related obstacles    | **0.449 | **0.588 | 1       | ...     | ... |
| 4   | Classroom environment-related obstacles | **0.482 | **0.770 | **0.506 | 1       | ... |
| 5   | Total score                             | **0.785 | **0.879 | **0.744 | **0.841 | ... |

All values are significant at the level of 0.01.

Table 7 presents the Pearson correlation coefficients among the various

dimensions of the questionnaire, as well as between each dimension and the overall score. These values (0.449 to 0.879) are statistically significant at the 0.01 level, indicating strong internal consistency of the questionnaire and substantial interrelationships among its dimensions. In addition, Pearson correlation coefficients were calculated between each item and the total score of the respective dimension, as shown in Table 8.

**Table (8) Pearson Correlation Coefficients between each Item and the Total Score of the Respective Dimension (n = 45)**

| Item | Correlation to the dimension | Correlation to the overall score | Item | Correlation to the dimension | Correlation to the overall score |
|------|------------------------------|----------------------------------|------|------------------------------|----------------------------------|
| 1    | **0.430                      | **0.502                          | 12   | **0.576                      | **0.426                          |
| 2    | **0.643                      | **0.406                          | 13   | **0.553                      | **0.413                          |
| 3    | **0.689                      | **0.610                          | 14   | **0.581                      | **0.474                          |
| 4    | **0.460                      | **0.418                          | 15   | **0.711                      | **0.648                          |
| 5    | **0.720                      | **0.553                          | 16   | **0.648                      | **0.641                          |
| 6    | **0.452                      | *0.344                           | 17   | **0.532                      | *0.329                           |
| 7    | **0.635                      | **0.432                          | 18   | **0.627                      | **0.656                          |
| 8    | **0.733                      | **0.458                          | 19   | **0.617                      | *0.610                           |
| 9    | **0.382                      | **0.332                          | 20   | **0.568                      | **0.416                          |
| 10   | **0.568                      | **0.534                          | 21   | **0.466                      | **0.385                          |
| 11   | **0.440                      | **0.473                          | 22   | **0.620                      | **0.463                          |

**Note.**  $p < 0.05$  (\*);  $p < 0.01$  (\*\*)

Table (8) presents the Pearson correlation coefficients between each item and its corresponding dimension, as well as between each item and the overall questionnaire score. The correlation coefficients (0.329 - 0.774) are statistically significant at the 0.01 or 0.05 levels. They indicate robust internal consistency and show that the items fit with their corresponding dimensions. The statistical results derived from Tables 7 and 8 strongly

support the internal consistency and construct validity of the questionnaire, enhancing confidence in its use as a reliable tool of assessment.

#### **4 Statistical Analyses**

The statistical analyses included the calculation of means, standard deviations, Pearson's correlation coefficients, Cronbach's alpha coefficients, independent samples *t*-tests, and one-way ANOVA.

#### **5 Study Procedures**

- Calculating means, standard deviations, Pearson correlation coefficients, Cronbach's alpha coefficients, *t*-tests for two independent samples and one-way ANOVA.
- Constructing the theoretical framework and study plan, including the problem statement, significance, questions, and the appropriate methodology.
- Developing the study tool and verifying its psychometric properties.
- Securing approval to apply the study tool from the Ethics Committee at the Deanship of Graduate Studies and Scientific Research Deanship, Majmaah University.
- Administering the study instrument electronically to the study population through the Education Office at Majmaah governorate.
- Collecting responses from the study sample and analyzing them statistically using the Statistical Package for Social Sciences (SPSS) to answer the study questions.
- Discussing the study results and making recommendations and suggestions

##### **5.1 Rating Criteria for Elementary School Teachers' Agreement on Obstacles**

To determine the three-level rating criteria (low-moderate-high) using the mean score on a five-point Likert scale for consistent and accurate classification and interpretation of results, the range was first calculated. The class interval was obtained by dividing the range by the number of required categories ( $4 \div 3 = 1.33$ ). Finally, the categories were identified by adding the class interval successively. The following table presents the rating criteria for the mean scores of the obstacles:

**Table 9. Rating Criteria of the Mean Scores of Obstacles**

| No | Level    | Interval    |
|----|----------|-------------|
| 1  | low      | 1 - 2.33    |
| 2  | moderate | 2.34 - 3.67 |
| 3  | high     | 3.68 - 5.00 |

## 6 Results and Discussion

*Question 1: What are the main obstacles to implementing CL with SWLD from the perspective of elementary school teachers?* To answer this question, the means and the standard deviations were calculated for each dimension and ranked according to the participants' responses. Table (10) presents the main results obtained.

**Table 10. The Means and the Standard Deviations for each Dimension of the Questionnaire**

| No . | Dimension                               | Number | Dimension M | Dimension SD | Items M | Rank |
|------|-----------------------------------------|--------|-------------|--------------|---------|------|
| 1    | Teacher-related obstacles               | 29.00  | 5.24        | 3.22         | 3.22    | 2    |
| 2    | Student-related obstacles               | 30.50  | 4.74        | 3.28         | 3.28    | 1    |
| 3    | Curriculum content-related obstacles    | 18.96  | 3.51        | 3.16         | 3.16    | 3    |
| 4    | Classroom environment-related obstacles | 21.94  | 4.42        | 3.13         | 3.13    | 4    |
|      | Total score                             | 100.40 | 9.69        | 3.23         | 3.23    |      |

Table (10) presents the results of Question 1 regarding the main obstacles to implementing CL with SWLD from the perspective of elementary school teachers. The means and standard deviations for each dimension were calculated in addition to the means of items and the

dimension rankings.

According to the results, the student-related obstacles dimension had the highest mean (3.28), followed by teacher-related obstacles with 3.22. This indicates that teachers believe that student- and teacher-related obstacles represent the main challenges to implementing CL among SWLD.

Meanwhile, the curriculum content-related obstacles recorded 3.16, followed by the classroom environment-related obstacles with 3.13. Although these means are lower than those for student- and teacher-related obstacles, they still indicate that the curriculum content and the classroom environment-related obstacles remain a challenge to the implementation of CL among SWLD.

In general, the total mean score of the questionnaire was 3.23, which falls within the moderate class on the five-point Likert scale used in the study. This finding confirms the existence of such obstacles during the implementation of CL with SWLD as perceived by teachers.

In general, the total mean score of the questionnaire was 3.23, which falls within the moderate class on the five-point Likert scale used in the study. This finding confirms the existence of such obstacles during the implementation of CL with SWLD as perceived by teachers.

The study results presented in Table (10) show that elementary school teachers had a moderate overall agreement on the obstacles to implementing CL with SWLD. Student-related obstacles ranked first, followed by teacher-related ones, then curriculum content and finally classroom environment-related obstacles. The researchers attribute this ranking to the clear disparity between the level of latent intellectual abilities of this group of students and their academic performance. Although their IQ scores often fall within the normal range and may even be comparable to their peers', they still have some characteristics that may cause several behavioural and academic difficulties, hindering their adjustment and their ability to benefit from the educational techniques used in classrooms. Such traits include, for example, a) linguistic traits manifested in difficulties with understanding language (receptive skills) and self-expression; b) social traits manifested in social

withdrawal and difficulty in forming and maintaining relationships; c) psychological traits including depression, anxiety, and poor self-concept; and d) finally, behavioural traits such as irresponsibility, introversion, shyness, and constant boredom due to poor psychological, social, and educational harmony with curriculum content, the educational styles used, and peers in classrooms.

In addition, attention deficit hyperactivity disorder (ADHD) is among the main behavioural characteristics that distinguish SWLD, as it is one of the most observable and measurable behavioural problems. Furthermore, it negatively influences the learning process of this group of students, especially given the increased numbers of students in regular classrooms (Sarid & Lipka, 2023). SWLD often struggle to focus on important stimuli and sustain attention for sufficient periods of time, which reduces their ability to learn, engage and benefit from curriculum activities. In this context, the results of Mizrara's (2020) study reveal a significant correlation between the behavioral problems of those students' adjustment and their ability to make use of the curriculum content and classroom activities. Furthermore, Dweikat and Nada (2019) argue that behavioral problems experienced by this category of students have a significant impact on their engagement and adjustment in their classrooms. Their behaviour is mainly due to their inability to achieve psychological, social, and educational adjustment to their curriculum, instructional techniques, peers, and teachers in regular classrooms. This leads to psychological disturbances that, in turn, give rise to behavioral problems that can undermine their social relationships and their ability to benefit from the curriculum and teaching methods used.

This finding may also be attributed to the correlation between developmental and academic learning disabilities as confirmed by several studies, such as Al-Sayed and Markazah (2020), Zhang et al. (2021), Fayez (2022), and Ouda and Al-Natoor (2022). Academic learning disabilities are often associated with a deficit in developmental processes, including poor attention, thinking problems, and difficulties in perception and memory. Any impairment in these cognitive functions may lead to one or more academic disabilities, such as reading, writing, spelling, or arithmetic problems hindering students' learning and benefiting from new stimuli (Al-Sayed and Markazah, 2020). Developmental skills are closely related to academic skills and are

regarded as the cornerstone needed by students to achieve social and academic success. Therefore, the limited benefit that SWLD get from general curricula and teaching methods, along with their low academic achievement, are key indicators of developmental learning disabilities. For example, SWLD often fail to complete their assigned tasks or actively engage in classroom activities due to their struggle with selective attention. This situation requires using reinforcement and verbal recall strategies to support such students (Fayez, 2022). Moreover, students with poor memory often suffer from academic difficulties related to recalling concepts, facts, and instructional strategies previously learnt. The researchers attribute teacher-related obstacles in elementary schools to two main causes:

*(1) teachers' limited competence and insufficient academic and professional training before and during service and their lack of awareness of the characteristics and educational needs of SWLD.* SWLD are a heterogeneous group with diverse characteristics, and learning disabilities represent a unique educational problem encompassing various educational, psychological, and social dimensions experienced by an increasing number of students in classrooms (Mammar, 2022). Therefore, general education teachers must assume several roles and responsibilities to meet the special needs of each student in the classroom, which represents a major challenge for those teachers working with SWLD. For example, a good method for one student may not work for another in the same class. Moreover, to meet the special learning needs of this group, general education teachers must have the required personal and professional competences, given the fact that many teachers struggle with instructing these students due to their limited academic and professional preparation in this area (Al-Salameen & Awni, 2022; Al-Ghamdi & Al-Jamai, 2021). In this context, Dweikat and Nada (2019) stressed the need to provide general education teachers with effective interaction skills when working with SWLD. Furthermore, the study recommended adopting an effective educational support policy for this group of students, in addition to equitable access to services and an appropriate educational environment in regular schools.

*(2) Teachers' limited professional competence in implementing CL with students in general and with SWLD in particular.* Despite the importance of using CL in delivering remedial educational programs for this group

of students, teachers are still struggling with its implementation in schools. In this regard, Maimoun and Ibrahimi (2019) stated,

“It is unfortunate that *the* CL strategy is not implemented *in* our school. This is due, on the one hand, to teachers’ lack of awareness of the strategy and its effective impact on the learning process, and their insufficient training and preparation to implement it. On the other hand, they often justify their failure by claiming that it is difficult to apply in practice” (p. 204).

Teachers need training to help them learn how to set up and run different types of CL that work for their classroom, their students' needs, and the resources they have without wasting time or effort.

Abramczyk and Jurkowski (2020) argued that teachers need to receive the appropriate professional support and training both before and during service so that they can use CL effectively. Furthermore, teachers' lack of skills in managing a classroom and setting up CL groups makes it harder to use CL strategies and hurts the whole educational process. CL is based on putting students into groups, with each group working on its own to finish a task and come up with solutions to the problems being studied. This process encourages students to talk to each other and ask each other for help, which makes them work together, finish tasks faster, and sometimes hold each other accountable for their limited progress. Teachers might have to deal with some new behaviours, like too much noise or movement. As a result, teachers should use a range of behavioural techniques to keep order in the classroom and give students a lot of practice in how to work together in different ways (Maimoun and Ibrahimi, 2019). This finding aligned with the results presented by Al-Ghamdi and Al-Jamai (2021) and Al-Husseini and Al-Zarea (2020), which demonstrated that obstacles related to students in the implementation of the CL strategy were prioritised, followed by those associated with teachers.

The researchers attribute the curriculum-related obstacles, which ranked third according to elementary school teachers, to the fact that the activities included in the general education curricula do not meet the needs of SWLD. These curricula often need to be adapted and modified by teachers to meet such needs (Al Salameen and Awni, 2022).

Moreover, general education curricula lack focus on modern and diverse CL strategies as well as on tasks and educational activities that enhance research skills and promote the use of active learning strategies to solve instructional problems under study. This finding was confirmed by Abu Al-Hajj (2022), who stated that curricula lacked activities that promote interaction among students in the learning environment and showed little focus on assessment questions suitable for use with active learning strategies. In this regard, Al-Ghamdi and Al-Jamai (2021) emphasized the necessity of incorporating instructional strategies that promote active learning in school curricula and the significance of linking the knowledge acquired by students to their real-life contexts. The finding was consistent with the results of Al-Ghamdi and Al-Jamai (2021) and Abu Al-Hajj (2022).

Although the classroom-related obstacles ranked last according to the present study, they remain among the main factors that should not be overlooked by elementary school teachers when implementing CL in classrooms that include SWLD. The inclusion of this group of students in general education classrooms makes it necessary to organize the classroom environment to meet their special needs and capacities. This group of students faces diverse and heterogeneous academic challenges, not because they suffer from intellectual disabilities, but due to minor dysfunctions in one or more of the basic psychological processes. This requires diverse educational and behavioural interventions, foremost among them the organization of classroom environment to help them overcome their difficulties, facilitate learning, and create a setting that meets their needs and provides opportunities to demonstrate their abilities and promote their academic performance (Fayez, 2022). The impact of classroom organization extends to all the knowledge and skills students acquire through their engagement with the educational process elements, such as motivation to learn and attitudes toward the content, the teacher and teaching methods (Al-Nasiri, 2019).

The implementation of CL requires creating a positive environment that fosters interaction and collaboration among students (Manani, 2024). Conversely, an unsuitable classroom environment, such as limited space, inappropriate furniture and lighting arrangements, large class sizes, insufficient resources and excessive noise, may limit the likelihood of successfully implementing CL with SWLD. Students, especially this

group, need a classroom that is quiet, organised, and free of distractions to get the most out of the educational interventions (Al-Huwaiti, 2019). Furthermore, managing the classroom environment plays a crucial role in helping teachers recognize their duties and responsibilities within their classrooms, promote positive interaction patterns, and effectively control and utilize classroom components to achieve the intended educational objectives (Al-Nasiri, 2019).

It can be argued that although general education teachers agreed on the challenges facing the implementation of CL with SWLD, as indicated by the results of the present study, this does not underestimate the positive impact of using strategies that promote active learning for this group of students. Therefore, it is essential for elementary school teachers working with this group of students to address and overcome the challenges that hinder the implementation of CL and consistently apply evidence-based strategies and practices to achieve the special education objectives. SWLD are among the special education groups most in need of modern strategies, given their positive effects on improving academic performance (Al-Nafie, 2019)

*Question 2: Are there statistically significant differences in the elementary school teachers' perceptions of the obstacles to implementing CL with SWLD according to gender?* To answer the question, an independent-samples t-test was conducted. Table 11 presents the results obtained.

**Table 11. Differences in the Mean Ratings of Elementary School Teachers on the Obstacles to Implementing Cooperative Learning with Students with Learning Disabilities by Gender (males vs. females)**

| Dimension                 | Gender  | n  | M     | SD    | t     | df | p    |
|---------------------------|---------|----|-------|-------|-------|----|------|
| Teacher-related obstacles | males   | 33 | 31.12 | 5.424 | 2.986 | 94 | 0.01 |
|                           | females | 63 | 27.89 | 4.826 |       |    |      |
| Student-related           | males   | 33 | 32.67 | 4.668 | 3.418 |    |      |

|                                         |         |    |        |       |       |    |      |
|-----------------------------------------|---------|----|--------|-------|-------|----|------|
| obstacles                               | females | 63 | 29.37  | 4.404 |       | 94 | 0.01 |
| Curriculum-related obstacles            | males   | 33 | 20.67  | 3.139 | 3.668 | 94 | 0.01 |
|                                         | females | 63 | 18.06  | 3.383 |       |    |      |
| Classroom environment-related obstacles | males   | 33 | 24.52  | 4.331 | 4.531 | 94 | 0.01 |
|                                         | females | 63 | 20.59  | 3.871 |       |    |      |
| Total score                             | males   | 33 | 108.97 | 7.736 | 8.151 | 94 | 0.01 |
|                                         | females | 63 | 95.90  | 7.313 |       |    |      |

Table 11 shows that there are statistically significant differences at the 0.01 significance level in elementary school teachers' ratings of the obstacles to implementing CL with SWLD based on gender (male vs. female). The calculated t-values in all dimensions and the total score indicate these statistically significant differences with higher rates for male teachers.

Specifically, the calculated t-values ranged from 2.986 for the "teacher-related obstacles" dimension to 4.531 for classroom environment-related obstacles and reached 8.151 for the total score. These values are higher than the critical t-value ( $df = 96$ ,  $p = 0.01$ ), indicating significant differences.

The mean scores show that male teachers rated the obstacles higher than their female peers across all dimensions and the total score. Their means ranged from 20.67 for the "curriculum-related obstacles" dimension to 32.67 for student-related obstacles, whereas the corresponding female teachers' means were 18.06 and 29.37 for the same dimension, respectively.

These results indicate that male teachers perceive the obstacles to implementing CL with SWLD more strongly than female teachers. This

difference may be attributed to variations in perspectives and experiences between genders or to other factors related to the nature of work, responsibilities and challenges facing male and female teachers in school environments, such as organisational structure, contextual considerations, and financial and cognitive factors. This finding is consistent with the results of Al-Ghamdi and Al-Jamai (2021) but contradicts those of Azzazi (2021) and Al-Awfi and Balbaid (2023), who found no significant effect of gender on the teachers' ratings of the obstacles to implementing evidence-based strategies.

*Question 3: Are there statistically significant differences in the elementary school teachers' perceptions of the obstacles to implementing CL with SWLD according to academic specializations (science, mathematics or the MyLanguage Arabic language course)?* To answer this question, a one-way analysis of variance (ANOVA) was conducted. Table 12 presents the results.

**Table 12. Differences in elementary school teachers' mean ratings of the obstacles to implementing cooperative learning with students with learning disabilities across academic majors (Mathematics, Science, and Arabic Language "MyLanguage")**

| Dimension                 | Source of Variance | Sum of Squares | df | Mean Square | F-value | Significance Level |
|---------------------------|--------------------|----------------|----|-------------|---------|--------------------|
| Teacher-related obstacles | Between groups     | 69.361         | 2  | 34.068      | 1.268   | Not significant    |
|                           | Within groups      | 2542.639       | 93 | 27.340      |         |                    |
|                           | Total              | 2612.000       | 95 |             |         |                    |
| Student-related obstacles | Between groups     | 0.647          | 2  | 0.323       | 0.014   | Not significant    |
|                           | Within groups      | 2135.353       | 93 | 22.961      |         |                    |

|                                                |                |          |    |        |       |                 |
|------------------------------------------------|----------------|----------|----|--------|-------|-----------------|
|                                                | Total          | 2136.000 | 95 |        |       |                 |
| <b>Curriculum content-related obstacles</b>    | Between groups | 3.575    | 2  | 1.788  | 0.142 | Not significant |
|                                                | Within groups  | 1168.258 | 93 | 12.562 |       |                 |
|                                                | Total          | 1171.833 | 95 |        |       |                 |
| <b>Classroom environment-related obstacles</b> | Between groups | 21.956   | 2  | 10.978 | 0.554 | Not significant |
|                                                | Within groups  | 1841.669 | 93 | 19.803 |       |                 |
|                                                | Total          | 1863.625 | 95 |        |       |                 |
| <b>Total score</b>                             | Between groups | 107.707  | 2  | 53.854 | 0.568 | Not significant |
|                                                | Within groups  | 8819.251 | 93 | 94.831 |       |                 |
|                                                | Total          | 8926.958 | 95 |        |       |                 |

Specifically, the calculated F values ranged from 0.014 for the student-related obstacles dimension to 1.268 for teacher-related obstacles and reached 0.568 for the total score. These values are lower than the critical F ( $df = 2, 93$ ;  $p = 0.05$ ), indicating the absence of any statistically significant differences among the groups.

This finding suggests that teachers' ratings do not vary according to their academic specialization (mathematics, sciences, or Arabic). This could be attributed to the similar educational conditions and environments in which all teachers work regardless of their specialization which lead to similar perceptions of the obstacles they encounter in implementing CL with SWLD. The finding is consistent with the results of Al-Husseini and Al-Zarea (2020).

**Question 4:** Are there statistically significant differences in elementary school teachers' ratings of the obstacles to implementing CL among SWLD according to teaching experience (5 years or less, 6-10 years, and 11 years or more)? To answer this question, a one-way analysis of variance (ANOVA) was conducted. Table 13 presents the results.

**Table 13 Differences in the mean scores of elementary school teachers' ratings of the obstacles to implementing CL with SWLD according to years of teaching experience**

| Dimension                            | Source of Variance | Sum of Squares | df | Mean Square | F-value | Significance Level |
|--------------------------------------|--------------------|----------------|----|-------------|---------|--------------------|
| Teacher-related obstacles            | Between groups     | 50.964         | 2  | 25.482      | 0.925   | Not significant    |
|                                      | Within groups      | 2561.036       | 93 | 27.538      |         |                    |
|                                      | Total              | 2612.000       | 95 |             |         |                    |
| Student-related obstacles            | Between groups     | 11.968         | 2  | 5.984       | 0.262   | Not significant    |
|                                      | Within groups      | 2124.032       | 93 | 22.839      |         |                    |
|                                      | Total              | 2136.000       | 95 |             |         |                    |
| Curriculum content-related obstacles | Between groups     | 14.834         | 2  | 7.417       | 0.596   | Not significant    |
|                                      | Within groups      | 1156.999       | 93 | 12.441      |         |                    |
|                                      | Total              | 1171.833       | 95 |             |         |                    |

|                                         |                |          |    |        |       |                 |
|-----------------------------------------|----------------|----------|----|--------|-------|-----------------|
| Classroom environment-related obstacles | Between groups | 22.427   | 2  | 11.214 | 0.566 | Not significant |
|                                         | Within groups  | 1841.198 | 93 | 19.798 |       |                 |
|                                         | Total          | 1863.625 | 95 |        |       |                 |
| Overall score                           | Between groups | 23.536   | 2  | 11.768 | 0.123 | Not significant |
|                                         | Within groups  | 8903.422 | 93 | 95.736 |       |                 |
|                                         | Total          | 8926.958 | 95 |        |       |                 |

Table 13 shows that there are no statistically significant differences in elementary school teachers' ratings of the obstacles to implementing CL with SWLD according to years of teaching experience. The calculated F-values in all dimensions and the total score indicate no significant differences between groups. Specifically, the calculated F-values ranged from 0.123 for the total score to 0.925 for teacher-related obstacles. These values are lower than the critical F ( $df = 2, 93$ ;  $p = 0.05$ ), indicating the absence of statistically significant differences among the groups.

Consequently, it can be concluded that elementary school teachers' perceptions of the obstacles to implementing CL with SWLD do not vary regardless of their years of teaching experience (5 years or less, 6–10 years and 11 years or more). A possible explanation for this finding could be the limited professional development programs provided to teachers in the field of CL, as well as their limited cognitive and practical background in that aspect. Therefore, all participants in the study sample, regardless of their teaching experience, have been familiar with these obstacles, which led to such similar perceptions regarding the challenges they encounter when applying CL with SWLD. This finding is consistent with the results of Azzazi (2021), Al-Husseini and Al-Zarea (2020) and Al-Ghamedi and Al-Salmi (2021).

**Recommendations and suggestions:**

1. It is essential to provide SWLD with sufficient cognitive and practical preparation in the skills required for implementing the various forms of CL, such as critical thinking, leadership, communication, and teamwork.
2. Continuous collaboration should be maintained between general education teachers and resource room teachers due to its positive impact on SWLD.
3. Training courses tailored for general education teachers should be conducted to introduce them to the characteristics of SWLD and to equip them with strategies for addressing academic and behavioral problems such as curriculum adaptation, classroom management, and using EBPs to meet students' needs with the help of experts in the field of learning disabilities.
4. Proper organization of the classroom environment should allow all students, including those with learning disabilities, to move freely and communicate effectively to learn from each other.
5. Classrooms have to be equipped and arranged in a manner that meets the needs and characteristics of those with learning disabilities. This includes removing distractors, arranging furniture and seating in the classroom and preparing instructional material and teaching aids.
6. Elementary school teachers should employ various assessment methods to evaluate the effectiveness of CL strategies used and take appropriate actions when these methods are not effective.
7. Primary school teachers should place more emphasis on instructional technologies to implement CL strategies given their positive impact on getting the attention of those SWLD and improving their academic, psychological and social skills.
8. Greater attention should be given to designing and delivering specialized courses in CL strategies and their applications and encouraging teachers to join them.
9. Moral incentives should be given to elementary school teachers to motivate them to implement CL with SWLD across various subjects.
10. Future research should be conducted to examine the extent of elementary school teachers' knowledge of the skills required for the implementation of CL with SWLD.
11. A study should be conducted to identify mechanisms for overcoming the obstacles to implementing CL with SWLD, as perceived

by elementary school teachers in Al-Majma'ah Governorate.

12. A study should be conducted to explore elementary school teachers' attitudes toward using CL with SWLD.

13. A study should be conducted to examine the impact of implementing CL on improving the academic achievement of SWLD.

## References:

- Abramczyk, A., & Jurkowski, S. (2020). *Cooperative learning as an evidence-based teaching strategy: What teachers know, believe, and how they use it. Journal of Education for Teaching: International Research and Pedagogy*, 46(3), 296–308.
- Abdul Nasser, Al-Husseini, & Ahmed, Al-Zarea. (2020). *Obstacles to the use of cooperative learning for students with learning difficulties in the fourth grade of elementary school in Al-Qurayyat city from the point of view of general education teachers. Educational Journal*, 71(1), 128–161.
- Abu Al-Hajj, A. R. (2022). *The actuality and obstacles to the use of cooperative learning by Islamic studies teachers in secondary schools in the Kingdom of Saudi Arabia. Journal of Educational Sciences and Humanities*, 26(1), 436–461.
- Abu Nayan, I. S. (2019). *Learning disabilities services in the Kingdom: Current status, needs and future*. Working paper for the International Conference on Disability and Rehabilitation. Riyadh, Kingdom of Saudi Arabia.
- Abu Nayan, I. S. (2019). *Learning disabilities teaching methods and tourism strategy*. Riyadh: International Publisher for Publishing and Distribution.
- Abu Nayan, I. S. (2020). *Learning disabilities for the purpose of general education in providing services*. Riyadh: King Salman Center for Research.
- Agwu, U. D., & Nmadu, J. (2023, January 20). *Students' interactive engagement, academic achievement and self-concept in chemistry: An evaluation of cooperative learning pedagogy. Chemistry Education Research and Practice*.  
<https://pubs.rsc.org/en/content/articlelanding/2023/rp/d2rp00148a>
- Ajaja, O. P., & Eravwoke, O. (2010, May 24). *Effects of cooperative learning strategy on junior secondary school students' achievement in integrated science. Electronic Journal of Science Education*.  
<https://ejrsme.icrsme.com/article/view/7323>
- Al-Awda, A., & Al-Tabi'a, M. (2022). *Level of visual perception skills among*

- students with special needs and learning difficulties in Jordan. Scientific Journal for Research and Publication Administration*, 38(2), 250–273.
- Al-Awfi, S., & Balbaid, R. (2023). *Obstacles to the use of scientific strategies by students in the College of Human Sciences in Medina. Arab Journal of Physics and Talent Sciences*, 8(29), 133–172.
- Al-Dahri, S. (2016). *Psychological difficulties in learning: Foundations and theories*. Dar Al-Assar Scientific.
- Al-Ghamdi, A., & Al-Jamai, A. A. (2021). *Obstacles to implementing a cooperative learning strategy for deaf students as perceived by teachers in Yanbu Governorate. Journal of Special Education and Rehabilitation*, 13(44), 1–40.
- Al-Ghamdi, U. (2018). *Obstacles to the use of cooperative learning by teachers of students with learning difficulties and ways to address them. Journal of Scientific Research in Education*, 19(1), 445–493.
- Al-Huwaiti, M. (2019). *Evaluation of educational services for students with learning disabilities in the Kingdom of Saudi Arabia from teachers' perspectives. Journal of Scientific Research in Education*, 20(11), 527–544.
- Al-Nafie, S. (2019). *Challenges facing the learning disabilities program in Tabuk Region, Kingdom of Saudi Arabia. Educational Sciences Studies*, 46(1), 619–633.
- Al-Nasiri, A. (2019). *Knowledge of learning disabilities program teachers of classroom environment elements in Al-Jouf and Northern Borders Region. Educational Sciences Studies*, 46(1), 1–16.
- Al-Salameen, G. S., & Awni, A. (2022). *The level of knowledge of elementary school teachers about students with learning difficulties. Journal of Human and Sciences*, 11(2), 611–629.
- Al-Sayed, S., & Markazah, S. (2020). *Assessment of visual memory in children with learning difficulties in mathematics. Journal of Educational and Psychological Sciences*, 4(6), 81–95.
- Azzazi, A. (2021). *Evidence-based practices and obstacles to their application among teachers of children with autism spectrum disorder. Journal of Special Needs*, 5(3), 13–37.
- Chakyarkandiyil, N., & Prakasha, G. S. (2023). *Cooperative learning strategies: Implementation challenges in teacher education. Problems of Education in the 21st Century*, 81(3), 340–360. <https://doi.org/10.33225/pec/23.81.340>
- Definitions of learning disability and learning difficulties. (n.d.). <https://nadp-uk.org/wp-content/uploads/2015/02/QCF-intro-to-LD-sample.pdf>
- Do, M.-L., & Hascher, T. (2023). *Peer cooperation during teaching in paired field placements: Forms and challenges. Frontline Learning Research*,

- 11(1), 94–122. <https://doi.org/10.14786/flr.v11i1.1305>
- Dweikat, F., & Nada, Y. (2019). *Behavioral disorders among students with specific learning disabilities in basic government schools in the northern West Bank. Palestine Technical University Journal of Research*, 7(2), 24–58.
- Emerson, L. M. (2013). *Cooperative learning*. William & Mary School of Education.  
<https://education.wm.edu/centers/ttac/resources/articles/inclusion/cooperativelearning/>
- Fayez, R. (2022). *Profile of developmental learning difficulties among students with and without academic learning disabilities. Journal of Qualitative Education Studies and Research*, 4(18), 425–468.
- Fletcher, J., Lyon, G. R., Fuchs, L., & Barnes, M. A. (2019). *Learning disabilities: From identification to intervention*. The Guilford Press.  
<https://books.google.com.sa/books?id=RhpKDwAAQBAJ>
- Greish, M. (2018). *The effectiveness of cooperative learning to improve phonological awareness and reading aloud in children with dyslexia. Arab Journal of Physics and Talent Sciences*, 2(2), 9–49.  
<https://doi.org/10.12816/0045282>
- Ismail, F., Bungsu, J., & Shahrill, M. (2022). *Improving students' participation and performance in building quantities through think-pair-share cooperative learning. Indonesian Journal of Educational Research and Technology*, 3(3), 203–216.  
<https://doi.org/10.17509/ijert.v3i3.50348>
- IT Learning and Development. (2017). *Benefits of cooperative learning*.  
[https://pennstatelearning.psu.edu/istudy\\_tutorials/cooperativelearning/cooperativelearning6.html](https://pennstatelearning.psu.edu/istudy_tutorials/cooperativelearning/cooperativelearning6.html)
- Kagan, S., & Kagan, M. (2009). *Kagan cooperative learning*. San Clemente, CA: Kagan Publishing.
- King Salman Research Center. (n.d.). <https://kscdr.org.sa/ar/node/3067>
- Listiadi, A., Sulistyowati, R., & Canda Sakti, N. (2019). *Improving learning quality through NHT cooperation model in Indonesian vocational schools. KnE Social Sciences*, 3(11), 884–902.
- Maimoun, B., & Ibrahimi, S. (2019). *Cooperative learning strategy: Between theory and impediments to application. Psychological and Educational Studies*, 12(2), 193–207.
- Mammar, S. (2022). *Post-learning difficulties education practices from supervisors' viewpoints in Medina. Scientific Journal for Research and Publication Administration*, 38(7), 87–145.
- Manani, K. (2024). *Cooperative learning method and its role in classroom interaction. Al-Siraj Journal of Education and Community Issues*, 8(1), 196–215.

- Mazara, N. (2020). *Behavioral problems among students with specific learning difficulties and their relationship to school adaptation: A field study in Algeria*. *Scientific Journal of Special Education*, 2(2), 66–90.
- Ministry of Education. (2015). *Organizational guide for special education*. <https://www.moe.gov.sa/en/aboutus/aboutministry/RPRLibrary>
- Mitchell, C. (2021, September 24). *Most classroom teachers feel unprepared to support students with disabilities*. *Education Week*. <https://www.edweek.org/teaching-learning/most-classroom-teachers-feel-unprepared-to-support-students-with-disabilities/2019/05>
- Mitchell, J. L. (2023). *Cooperative learning's influence on students that have a specific learning disability or have experienced challenges learning basic algebra skills* (Doctoral dissertation, Western Illinois University).
- National Joint Committee on Learning Disabilities. (1990). *LD definition* [Updated 2016]. [www.ldonline.org/njcd](http://www.ldonline.org/njcd)
- Panicali, J. (2024). *What is response to intervention (RTI)?* RTI Action Network. <http://www.rtinetwork.org/learn/what/whatisrti>
- Qadouri, R., & Ibrahim, S. (2017). *A therapeutic program based on the cooperative learning strategy for gifted students with arithmetic learning difficulties*. *Journal of Studies and Research*, 28(1), 77–92. <https://doi.org/10.35157/0578-000-028-005>
- Ryzin, M. J., & Roseth, C. J. (2018). *Cooperative learning in middle school: A means to improve peer relations and reduce victimization, bullying, and related outcomes*. *Journal of Educational Psychology*, 110(8), 1192–1201.
- Saham, & Al-Abdul-Moneim, M. (2023). *Actual use of learning strategies by teachers of students with learning difficulties in intermediate schools in Riyadh*. *Journal of Educational Sciences and Humanities*, 30(1), 545–576.
- Sarid, M., & Lipka, O. (2023). *Students with learning disabilities/attention-deficit/hyperactivity disorder in higher education dealing with remote learning: Lessons learned from the COVID-19 era*. *Frontiers in Psychology*, 14(1), 1–12. <https://doi.org/10.3389/fpsyg.2023.1172771>
- Schul, J. (2011). *Revisiting an old friend: The practice and promise of cooperative learning for the twenty-first century*. *The Social Studies*, 102(2), 88–93.
- Sencibaugh, J. M., & Sencibaugh, A. M. (2016). *An analysis of cooperative learning approaches for students with learning disabilities*. *Education*, 136(3), 356–364.
- Spence, T. (2022, October 4). *Challenges and solutions for students with disabilities*. Covey. <https://covey.org/challenges-and-solutions-for-students-with-disabilities/>
- Tran, V. D. (2014). *The effects of cooperative learning on academic*

- achievement and knowledge retention. *International Journal of Higher Education*, 3(2), 131–140.
- Tuwaij, S., Al-Zahrani, A., & Al-Thaqafi, S. (2020). *Obstacles to the use of cooperative learning in schools in Makkah Al-Mukarramah in light of educational elements. Arab Studies in Educational Psychology*, 119(1), 155–180.
- Umaroh, L. (2022). *Cooperative language learning in speaking class. Jurnal Inovasi Penelitian*, 2(9), 3149–3154.  
<https://doi.org/10.47492/jip.v2i9.1302>
- Vaughn, S., Hughes, M. T., Moody, S. W., & Elbaum, B. (2001). *Instructional grouping for reading for students with learning disabilities. Intervention in School and Clinic*, 36(3), 131–137.  
<https://doi.org/10.1177/105345120103600301>
- Willis, J. (2021). *How cooperative learning can benefit students this year. Edutopia*. <https://www.edutopia.org/article/how-cooperative-learning-can-benefit-students-year/>
- Zhang, S., Xia, X., Li, F., Chen, C., & Zhao, L. (2021). *Study on visual and auditory perception characteristics of children with different types of mathematics learning disabilities. International Journal of Disability, Development and Education*, 68(1), 78–94.