

## The teaching procedures for the problem-solving skill for students with learning difficulties

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### Abstract

The primary educational objectives sought by problem-solving skills can be summarized as follows: Upon engaging in diverse activities related to problem-solving skills, a student with learning difficulties should be capable of identifying the problem, formulating a definition for it, uncovering various strategies to address or confront it, dealing with diverse ideas, applying the steps of problem-solving skills, and assessing the effectiveness of this skill in light of its multiple applications.

**Keywords:** Teaching; Problem-solving; Students; Learning difficulties.

### Introduction

Teaching is a complex process, with its elements intricately interwoven in sequential steps. Each step is influenced by what precedes it and, in turn, affects what follows. Consequently, there has been an increased focus in recent decades on analyzing the actions and tools employed by teachers in the classroom. Numerous teaching strategies have been identified. Following the completion of the diagnostic process for students with learning difficulties, and gaining an understanding of the challenges faced by the student, including their magnitude and causes, there arises the necessity to develop an appropriate educational strategy tailored to the specific learning needs of the student. When instructing such students, it is imperative not only to impart instructional strategies but also for the teacher to assist them in internalizing and applying these strategies in similar educational contexts.

Teachers of students with learning difficulties rely on various therapeutic strategies, and among the strategies that we will focus on in this discussion is the problem-solving approach. This approach serves as an organized mental activity for the student, representing a scientific method that begins by stimulating their thinking with the presence of a problem worthy of consideration. It involves searching for a solution following scientific steps, facilitated through a variety of educational activities. Problem-solving skills can be defined as the ability used to analyze and develop strategies aimed at solving a challenging question, a complex situation, or a problem hindering progress in a specific aspect of life. In the context of students, it involves finding a solution to a particular problem, issue, dilemma, or posed question.

The significance of problem-solving extends beyond being a recognized cognitive skill; its importance grows exponentially when applied in the educational process as a well-established teaching method. Research, studies, and empirical evidence have consistently demonstrated its benefits for both learners and educators simultaneously. The importance of teaching this skill lies in providing students with learning difficulties with organized frameworks to analyze their thinking in non-traditional situations for problem-solving. It aims to acclimate them to confront challenges and complex situations with determination, responsibility, and efficiency. The key educational

objectives sought by this skill can be summarized as follows: After engaging in diverse activities related to problem-solving skills, a student with learning difficulties should be capable of identifying the problem, formulating a definition for it, uncovering various strategies to address or confront it, dealing with diverse ideas, applying the steps of problem-solving skills, and assessing the effectiveness of this skill in light of its multiple applications.

Problem-solving serves as the practical application of the educational philosophy of John Dewey's reflective thinking. According to Dewey, in order for an individual to engage in the process of thinking, one must first experience perplexity, confusion, or uncertainty. The act of thinking through difficulty or perplexity involves identifying the problem to be solved. Subsequently, testing hypotheses one after another by gathering information or data is done to dispel the perplexity or uncertainty. The development of an idea leading to a solution follows as the fourth step. Finally, accepting the result that has been validated by relevant information and evidence while rejecting alternative explanations unsupported by pertinent information concludes the process (Saada, 1989).

Problem-solving has been predominantly associated with the five aforementioned steps introduced by Dewey and later analyzed by Thorndike. However, there is no evidence suggesting that students can consistently solve the problems they encounter or are presented with, following the organizational framework proposed by Dewey and analyzed by Thorndike. Some educators argue that the problem-solving method is one of the most effective teaching approaches, successfully employed both as an individual activity and a group activity on numerous occasions. Several studies have focused on the quality of the method employed by the individual solving the problem. The first function involves the generative function, where hypotheses or temporary trial solutions are proposed. The second function is the analytic function, which involves examining or testing these hypotheses. The third function is the critical function, where these hypotheses are scrutinized or tested.

Teaching various subjects through a problem-solving approach represents an educational goal at different stages of the educational process. However, one of the significant obstacles hindering this lies in the teachers' weak background in this method, their limited training on it, or their lack of awareness that problem-solving behavior constitutes a complex ability with identifiable elements. Some of these elements are considered simple skills that are easy to perform, while others are regarded as higher-order or challenging mental processes (Saada, 2006). Teaching problem-solving is not akin to instructing students in certain concepts, information, or skills because it involves a complex interplay of interconnected factors. These factors include motivation, attitudes, training, forming hypotheses, language, the transfer of instructional effects, and the absence of specific content for teaching or a general method based on programmed steps (Ghanaim, 2016).

The ensuing question arises: How do we teach in the problem-solving style, especially when the student under consideration is not ordinary and falls within the category of individuals with special educational needs, specifically those with learning difficulties?

This article seeks to address this query by delineating the concept of problem-solving and its cognitive orientations. It provides an overview of some definitions of learning difficulties and the explanatory perspectives surrounding them. Additionally, the article outlines the steps of the problem-solving skill within the instructional process for students with learning difficulties.

## **First: Definition of Problem-Solving and its Cognitive Orientations:**

### **1. Definition of Problem-Solving:**

Understanding the meaning of the problem is crucial. A problem is considered a perplexing question or a non-patterned, non-routine situation that an individual encounters. The individual lacks information, skills, or a specific method to solve and confront the problem.

In an academic context, a problem can be viewed as a set of steps, procedures, stages, and mental processes that an individual goes through when solving a particular problem.

As for problem-solving as a behavior, it occurs in many fields, both in various academic and non-academic activities. It serves as a specific behavior or a thinking method aimed at resolving an individual's difficulties, obstacles, or a specific problem among many.

- It is a method of recalling information, skills, and prior experiences, connecting them with each other, and linking them to the elements of the new situation (the problem) in a specific way with the goal of overcoming the difficulties contained in the problem.

- The problem-solving method is one of the therapeutic teaching methods in which the teacher plays a positive role in overcoming a specific difficulty hindering the achievement of a goal. For a situation to be considered a problem, three elements must be considered.

1. A goal that one seeks to achieve.
2. Difficulty that impedes the achievement of the goal.
3. A desire to overcome the difficulty through a specific activity undertaken by the student.

Another definition for the problem-solving method is a behavior that organizes concepts and rules previously learned in a way that facilitates their application in problematic situations faced by the student. In this way, the student learns something new, which is the behavior of problem-solving, representing a higher level than the level of learning principles, rules, and facts (Ghanaim, 2016).

### **2. Approaches to Problem-Solving:**

Researchers in education and psychology, particularly those interested in thinking skills and, specifically, problem-solving, have developed cognitive orientations related to this skill, including:

#### **2-1. Behavioral Orientation (Associative):**

Adherents of this orientation view thinking as fundamentally based on association. They consider behavior to encompass trial-and-error processes. When a student faces a problem, they attempt to solve it using responses or habits they already possess (those learned previously), which are associated with specific educational situations. These habits vary in the strength of their association with these situations and in their position within the hierarchical organization of learned habits (Nashawati, 1997). According to Thorndike, humans learn most of their experiences and acquire knowledge through trial and error, relying on observation and discovering matters to obtain feedback, especially regarding errors, to avoid them (Al-Waqfi, 2014). The individual attempts to reach a solution using the simplest and weakest habits initially, gradually progressing to the utilization of stronger and more complex habits until reaching the appropriate solution.

The behavioral orientation also views problem-solving as a situation that can undergo learning. This occurs through breaking down its parts and elements into steps. The learner progresses through these steps step by step, with each step having a defined success criterion. Once this criterion is met, the learner moves on to the next step. Behaviorists assume that it is possible to design a model as a guide for problem-solving, where the steps to solve the problem are clearly defined. Behaviorists consider the existence of an associative relationship between stimuli (inputs) and responses (outputs) without significant consideration of the mediating process (Ash-Shafi'i, 1998). It is noted from the above that this definition confines the student and makes them move in a repetitive loop, unable to arrive at or discover anything new. This is because the student will always use only the experience and information they already possess to solve any problem they encounter. This definition does not encompass solving complex problems that require deep thinking to discover their solutions.

### **2-2. Cognitive Approach:**

Cognitivists have defined problem-solving as a cognitive mental activity in which the cognitive representation of past experiences and components of problem situations is organized together to achieve a goal. This system is implemented according to the insight strategy, where an attempt is made to formulate a principle or discover a system of relationships leading to problem-solving. The mental activity involves processing forms, images, or symbols. It also includes formulating abstract hypotheses rather than processing tangible sensory things. The cognitive levels at which individuals process problem-solving vary. Problem-solving is described as being at a simple level when a child uses observable data that is available and meaningful to them, enabling them to perceive relationships between its components and the concepts it includes. Problem-solving is described as a complex method when it requires mental operations that necessitate a level of prior experience to activate mental activities for an extended period.

Cognitivists also believe that the problem-solving situation is one in which the individual is confronted, interacts with, and invokes their experiences to enhance their mental processing of the situation revolving around the problem. This process enables them to attain the desired solution.

### **2-3. Gestalt Approach:**

Gestalt psychologists view thinking as a type of perceptual organization of the surrounding world, and it can be understood through understanding the learner's approach to perceiving the stimuli within their perceptual field. Therefore, thinking and problem-solving are internal cognitive processes, which are the processes that proponents of the Gestalt approach primarily focus on to explain problem-solving processes. Studies by Kohler and his colleagues clearly illustrate this approach. Those adhering to this approach believe that individuals capable of problem-solving are those who possess the ability to perceive the main aspects of the task requiring a kind of insightful solution. The rapid, sudden, and complete appearance of the solution suggests the behavior of an individual with insightful problem-solving, involving the reorganization of stimuli in the problem-setting (Saadeh, 2006).

Furthermore, learning occurs as a result of the holistic perception of the situation, not as a result of perceiving isolated parts of the situation. According to Saadeh (2007), learning comes as a result of insight. In the view of Scrier, the problem is not solved unless it is felt. Demonsky also suggests that the Gestalt approach to problem-solving focuses on the symptoms of the problem, addressing

problems to which the essential roles apply. It emphasizes stability in thinking and foresight, which lead to problem resolution (Saadeh, 2006).

#### **2-4. Information Processing Approach:**

This approach emphasizes the assumed similarity between cognitive processes, intellectual activities, and human activities and those of electronic computers. Advocates of this approach attempt to explain thinking processes and problem-solving by using designs followed in computer programs. They identify the steps in any cognitive activity and then simulate these steps in a computer model to assess its success in replicating human thought processes (Nashawati, 1997).

The information processing approach provides a good model for linking input and output (data and goals), focusing on the problem-solving strategy, and emphasizing the importance of cognitive processes performed by the learner. It also recognizes the significance of socio-cognitive experiences as a crucial element in problem-solving (Saadeh, 2006).

#### **Second: The Concept of Learning Disabilities and Interpretive Orientations:**

##### **1. The Concept of Learning Disabilities:**

The diversity within the field of learning disabilities is reflected in the adoption of varied definitions and theoretical perspectives by governmental and non-governmental organizations, psychologists, and educators. Each of them emphasizes specific characteristics, dimensions, or aspects. Consequently, there exist multiple definitions for learning disabilities, some of which are outlined below:

Kirk's definition (Kirk, 1962) refers to the presence of children who have learning difficulties resulting from a disturbance in one or more aspects of psychological processes related to understanding, oral or written language, and exhibit symptoms such as attention, thinking, reading, writing, spelling, and mathematical operations. These difficulties do not encompass children with other disabilities such as intellectual, auditory, visual, or motor impairments, although these disabilities may coexist with learning difficulties (Abeid, 2015: 20-21).

The Individuals with Disabilities Education Act (IDEA) of 1975, known as Public Law 94-142, defines individuals with learning disabilities based on the federal government's definition from 1968:

"Children with specific learning disabilities are those who have a disorder in one or more of the basic psychological processes involved in understanding or using spoken or written language, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations. Such disorders include conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. This term does not include children who have learning problems that are primarily the result of visual, hearing, or motor disabilities, intellectual disability, emotional disturbance, or environmental, cultural, or economic disadvantage" (Kuder, 2003: 73).

Lerner (1976) defines learning disabilities as "a disturbance resulting from physiological and functional causes in an individual, possibly arising from a functional impairment in the nerves and brain. This disorder affects the individual's cognitive abilities, impacting academic achievement in areas such as reading, writing, spelling, and numerical skills. The cause is not attributed to

intellectual or sensory impairment, with an observed variation between cognitive ability and academic performance" (Al-Azza, 2007: 44).

Lerner (1976) defined learning disabilities through the following two main dimensions:

1. **Medical Dimension:** Focuses on physiological and functional causes, specifically addressing neural dysfunction or brain damage.
2. **Educational Dimension:** Refers to the irregular growth of cognitive abilities, accompanied by academic deficiency, particularly in reading, writing, spelling, and numerical skills. The academic deficiency is not attributed to either intellectual or sensory causes. The educational definition indicates the presence of a discrepancy between academic achievement and individual cognitive ability (Al-Qasim, 2013: 14).

After this review of the most important definitions of the term "learning disabilities," we find that these definitions have gathered characteristics and elements agreed upon by most specialists in the field. These include:

- The child should have a form of deviation in abilities within the framework of their self-growth.
- The difficulty should not be a result of a disability.
- The difficulty should be psychological or educational.
- The difficulty should have a behavioral nature, such as pronunciation, thinking, and concept formation.

## **2. Interpretations of Learning Disabilities:**

Many scientific disciplines have contributed to the study of learning disabilities. The role of specialists in psychology involves developing methods to measure and diagnose children with learning disabilities, clarifying the learning theories, and designing educational and therapeutic programs to modify behavior. Neurologists interpret difficulties from a medical perspective, while specialists in linguistics, auditory, and visual fields explain the accompanying language problems in learning disabilities. They also explain visual and auditory perception methods. Finally, special education specialists, benefiting from the aforementioned information, develop appropriate educational programs for children with learning disabilities, relying on what is known as therapeutic training.

### **2-1. Medical Perspective and its Practical Contents:**

This perspective emphasizes health and medical problems as causes of learning disabilities. Organic and physiological disorders, especially those affecting the nervous system and the brain, resulting from biological factors such as meningitis, poisoning, brain cell inflammation, German measles, oxygen deficiency, or environmental factors like drug use, smoking, accidents, and poor maternal nutrition, are considered major causes of learning disabilities from a favorable medical viewpoint. Additionally, genetic and hereditary factors have a significant impact on the occurrence of learning disabilities.

As for the neurobiological aspects of individuals with learning disabilities, they manifest in the following forms:

- **Subtle Neurological Signals:** This is evident in the impairment of fine motor skills, indicating the presence of a condition associated with learning disabilities.
- **Chronic Neurological Disorders:** These disorders are attributed to brain injury occurring before, during, or after birth.
- **Absence of Family Intellectual Impairment:** This implies that children with learning disabilities are typically from ordinary families, and their family history does not indicate the occurrence of intellectual impairment among them or in their families.

## **2-2. Psychological Perspective and Its Practical Contents:**

This perspective focuses on the educational difficulties resulting from psychological aspects and mental processes. Psychologists are particularly concerned with understanding the cognitive abilities, methods, and processes individuals use in learning. The psychologist Henry Heide, for instance, showed keen interest in learning difficulties with a psychological origin. Based on his clinical observations, he concluded that damage to specific brain areas is responsible for language impairments, and damage to other areas leads to various psychological and neurological disorders.

Indeed, many psychologists have contributed significantly to the development of various psychological tests, confirming the relationship between psychological aspects and learning difficulties. Among these influential figures are:

- **Alfred Binet:** He developed the first IQ test
- **Lewis Terman:** He emphasized that intelligence is not a general ability but consists of specific capacities such as memory, verbal fluency, spatial visualization, verbal understanding, numerical ability, and precise auditory and visual perception.
- **Kirk and Others:** They contributed to the development of the Illinois Test of Psycholinguistic Abilities, designed to assess psycholinguistic abilities essential for understanding and using spoken language.
- **Marion Monroe:** She developed a diagnostic reading test.
- **Durrell:** He designed a test specifically to analyze reading difficulties.

With the growing interest in neuropsychology, studies have focused on understanding the relationship between functional impairment, manifested in cognitive deficits, and learning difficulties. Studies, such as those conducted by Kroshank, have confirmed this correlation. Additionally, Jads, in his book on learning difficulties, highlighted the close connection between the brain, its functions, cognitive processes, and learning difficulties. He emphasized that 'neuropsychology is a science that encompasses a significant amount of fundamental empirical knowledge, dealing with children suffering from brain damage and those experiencing learning difficulties with deficits in cognitive, intellectual, or motor aspects.

## **2-3. Behavioral Approach and its Practical Implications:**

This approach is grounded in the principle of the difficulty in researching the invisible relationships between learning difficulties and functional impairment in cognitive processes. It acknowledges the challenges of conducting experiments on human brains. Instead, this approach focuses on investigating the behavioral characteristics of children with learning difficulties. These characteristics include a lack of self-confidence, dependence on others, frustration due to repeated

experiences of failure, excessive reliance on external validation, aggressiveness, social isolation, mind wandering, excessive physical activity, neglect, apathy, diminished ability to concentrate and focus, as well as memory and cognitive processing disorders, and social interaction difficulties.

The aforementioned behavioral aspects serve as an entry point for behavioral therapeutic programs. Instead of focusing on the invisible cause of difficulty, which is conceptualized as a disturbance in concepts, this approach directs attention to the difficulty itself – its form, dimensions, and its impact on the child's learning. Specialists in this field design direct behavioral therapeutic programs for the specific difficulty without delving into its underlying causes. This is because psychology, from the behaviorist perspective, is not concerned with the functions of the organs.

Behaviorists also believe that children facing learning difficulties and exhibiting cognitive, intellectual, or motor impairments affecting their academic achievement do not necessarily have physiological malfunctions in their nervous systems. According to behaviorists, such difficulties can be addressed through behavioral interventions and reinforcement programs tailored to the specific nature of the difficulty, whether it is neurological, psychological, or developmental.

#### **2-4. The Environmental Approach and Its Practical Contents:**

Proponents of this approach focus on external environmental factors that lead to learning difficulties. For instance, deprivation of appropriate environmental stimuli, malnutrition, economic and cultural deprivation are all examples of environmental factors that, when present, are expected to give rise to a number of children experiencing learning difficulties.

Scientists have paid attention to these factors. Halahan and Crookshank point out a range of environmental causes, including insufficient educational experiences, malnutrition, limited educational training, or forcing a child to write with a specific hand. Bush, on the other hand, emphasized that the lack of environmental experiences and deprivation of environmental stimuli are major causes of learning difficulties.

Additionally, many studies have indicated that children from socioeconomically disadvantaged families experience deficiencies in basic language skills, especially upon entering school. This deficiency affects reading, writing, and arithmetic across various educational stages.

#### **Integration of Perspectives:**

After this presentation attempting to explain learning difficulties, it's worth noting that there is integration among these perspectives. All of them help us understand the influencing factors in learning difficulties. The medical perspective sheds light on the physiological causes leading to learning difficulties. Similarly, the psychological, behavioral, and environmental perspectives each shed light on specific aspects. In a comprehensive and integrated view, those interested and working in the field of learning difficulties can pinpoint all the causes leading to learning difficulties, regardless of their origin.

Each perspective serves the others and is interconnected in a mutual relationship. They all aim to build and design therapeutic programs. They also establish the criteria and rules for tests and diagnostic measures for children facing learning difficulties.

#### **Third: Problem-Solving Skill Steps:**

The essential steps of problem-solving skill are as follows:

- Analyzing information collected to identify a specific problem.
- Inquiring about the given information and subjecting it to scrutiny to ascertain its accuracy or bias.
- Determining whether additional information is necessary or not.
- Identifying new and useful parameters to solve the problem and eliminating what is considered non-essential.
- Proposing various strategies to solve the problem.
- Selecting the appropriate strategy for the discussed problem.
- Working on solving the problem in light of the chosen strategy.
- Evaluating the results achieved in solving the problems.
- Attempting to return to the first step if necessary for the same problem or a new one.
- Precisely applying the steps of problem-solving.
- Assessing the accomplished work and considering new approaches for future instances that haven't been accomplished (Saada, 2006).

#### **Fourth: Teaching Procedures for Problem-Solving Skill for Students with Learning Difficulties:**

The most important teaching procedures for the problem-solving skill can be summarized as follows:

1. The teacher clarifies the steps of the problem-solving skill to students, emphasizing potential strategies to deal with these problems and find appropriate solutions.
2. Selecting an open-ended problem, applying one or more of the following strategies:
  - Drawing a shape from the given shapes or drawing from the drawings or creating a painting from the paintings.
  - Formulating a mathematical, algebraic, chemical, or physical equation from the equations.
  - Choosing the appropriate method to deal with these shapes, drawings, tables, or different equations.
  - Referring to the law, rule, or theory related to the aforementioned matters.
  - Working on solving that problem or the previous problems.
  - Breaking down the problem into smaller problems.
  - Presenting a specific model for the solution.
  - Creating a specific organizational list.
  - Reviewing what has been done before.
  - Checking and evaluating the accomplished work.
  - Conducting a laboratory experiment if necessary.
- 3- The teacher elucidates all the aforementioned strategies to the students using an assessment model.
- 4- The teacher reviews with the students the steps of the problem-solving skill.
- 5- Working on evaluating what has been accomplished in light of emphasizing the application of the skill and assessing its effectiveness.

6- Encouraging students to exercise patience in dealing with problems that may not have an immediate solution, requiring a search for the necessary precise evidence (Saada, 2006).

### **Fifth: Guidelines for Teachers when Using the Problem-Solving Method with Students with Learning Difficulties:**

Teachers utilizing the problem-solving method with students facing learning difficulties should adhere to the following guidelines:

1. Ensure that the problem is suitable for the student's cognitive and age level, avoiding excessive simplicity that hinders learning or extreme difficulty that impedes understanding.
2. Present problems that are close to the student's environment and culture to facilitate conceptualization.
3. Introduce the problem to the student in an engaging and appealing manner, triggering enthusiasm, motivation, and encouraging the recall of their experiences, knowledge, and previous information to solve the problem.
4. Allow sufficient time for the student to comprehend the problem and grasp its elements for thoughtful consideration in finding a solution.
5. Provide the student with guidance and assistance to help them solve the problem.
6. Avoid reviewing information in front of the students; instead, take the lead in explaining or clarifying.
7. Teachers should continually enhance their problem-solving skills before employing such a method (Ghanaim, 2016).

### **Conclusion**

Training students in the problem-solving approach requires introducing them to problems related to various subjects they study or issues in their school and non-school life within their environments. The significance of using the problem-solving approach lies in cultivating critical and reflective thinking among students. It equips them with scientific research skills and problem-solving abilities, fostering collaboration and teamwork. Additionally, it considers individual differences among students, their preferences, and attitudes, aligning with modern educational trends. The method injects positivity and activity into the educational process, driven by the study's goal: problem-solving and alleviating tension among students. Developing students' cognitive abilities contributes to addressing many challenges they may encounter in the future, both within and outside the academic context.

Training students with learning difficulties in problem-solving skills is crucial, as individuals encounter problematic situations in their daily lives. Engaging in problem-solving enhances sound thinking methods, fostering the development of reflective thinking abilities. It encourages the diverse utilization of thinking approaches and promotes a love for intellectual exploration. Furthermore, training them in problem-solving boosts their practical thinking abilities and logical interpretation of data. It aids them in formulating plans to overcome challenges, instills confidence in themselves, and cultivates a scientific orientation to confront unfamiliar situations they may encounter.

## REFERENCES

1. Saada, Joudat Ahmed. (2006). *Teaching Thinking Skills (With Hundreds of Applied Examples)*. Amman, Jordan: Dar Al-Shorouq.
2. Saada, Joudat Ahmed. (1989). Teaching Geography through Problem-Solving with an Applied Model on the World Food Problem. *Mutah Research and Studies Journal*, 4(1), 213-297.
3. Al-Shafei, Fidaa Salem. (1998). *The Relationship of the Control Center to Problem-Solving Ability Among Students of An-Najah National University in Nablus*. Master's Thesis, Nablus, Palestine: An-Najah University.
4. Al-Zaghloul, Emad Abdul Rahim. (2006). *Theories of Learning*. Amman, Jordan: Dar Al-Shorouq for Publishing and Distribution.
5. Obeid, Majda Al-Sayyid. (2015). *Learning Difficulties and How to Deal with Them*. Amman, Jordan: Dar Safaa for Publishing and Distribution.
6. Al-Azza, Saeed Hassani. (2007). *Learning Difficulties: Concept, Diagnosis, Causes, Teaching Methods, and Treatment Strategies*. Amman, Jordan: Dar Al-Thaqafah for Publishing and Distribution.
7. Ghnaim, Adel Salah. (2016). *Therapeutic Programs for Learning Difficulties*. Amman, Jordan: Dar Al-Maseera for Publishing, Distribution, and Printing.
8. Al-Qasim, Jamal Muthqal. (2013). *Fundamentals of Learning Difficulties*. 2nd edition, Amman, Jordan: Dar Safaa for Publishing and Distribution.
9. Nashawati, AbdulMajid. (1997). *Educational Psychology*. Beirut, Lebanon: Al-Risalah Foundation.
10. Al-Waqfi, Radi. (2014). *Introduction to Psychology*. 4th edition, Amman, Jordan: Dar Al-Shorouq for Publishing and Distribution.
11. Kuder, S. (2003). *Teaching Students with Language and Communication Disabilities*. Boston: Allyn and Bacon.