

Teacher's Differentiated Instruction Practices and Implementation Challenges for Learning Disabilities in Jordan

Karam Siam¹ & Mayada Al-Natour¹

¹ College of Educational Science, Jordan University, Amman, Jordan

Correspondence: Mayada Al-Natour, Associate professor of Special education-Learning Disabilities, Jordan University, Amman, Jordan. Tel: 962-777-499-054. E-mail: mnatour@ju.edu.jo

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Abstract

This study aimed to identify the differentiated instruction practices used by Jordanian teachers and the challenges they faced when teaching students with learning disabilities in Amman. The sample of the study consisted of 194 teachers. It followed a mixed method design and consisted of two parts. First, a quantitative analysis of a questionnaire of 75 items was developed on six domains (differentiation in content, process, resources, product, assessment, and differentiation in learning environment). Second, a qualitative analysis of interviews with teachers was conducted. Validity and reliability were established. Results of the study showed that the mean of the scores for the six domains and the entire items are low. ANOVA analysis showed that there were no statistically significant differences related to the variable of teacher's experience. On the other hand, there were statistically significant differences, as to the type of school, in favor of private schools. The main challenges, as the study found out, were weak administrative support, low parental support, lack of time, and shortages in learning resources.

Keywords: challenges, differentiated instruction, implementation, students with disabilities

1. Introduction

There are many problems faced by teachers, including disparities in learners' levels in which the educational environment, levels of readiness, interests, and learning profiles play a huge role. These problems have been studied by educational researchers to come up with ideal teaching methodology to achieve useful results. This has made it possible to adapt teaching methods to learner's levels and needs.

Irrespective of the different abilities, backgrounds and interests of students, they are expected to learn the same set of standards. However, according to research and educators' experiences, a good number of students are unable to learn the prescribed knowledge and skills unless focused attention is paid to their individual instructional needs. This has made it necessary for teachers to adopt new measures, such as differentiated teaching and learning strategies. This type of diversity inside the classroom has given rise to a new approach in education known as the "Differentiated Instruction" (James & Nancy, 2011).

The differentiated instruction entails as the procedures for the reorganization of classroom instruction and learning strategies to afford learners different options of accessing information. Different methods of accessing content, processing ideas, formulating meaningful comprehension and developing outcomes are afforded the learner so effective learning can take place. Another way of defining it sees it as teaching through various methods that are student-centered, as well as in tune with the diversities of learners. Therefore, differentiated instruction is a new approach to designing and delivering instruction to best reach each student. (Collision & Keith, 2012)

Tomlinson (2005) defines differentiated instruction as a philosophy of teaching that is premised on the idea that learning best takes place when the teachers accommodate differences and diversity in the levels of readiness, learning profiles and interests among students. Differentiated instruction has as an objective taking full advantage of the learning ability of every student (Tomlinson, 2002, 2005). She adds that there are other ways of differentiating, and teachers' preparedness to use this philosophy in their classrooms results in more effective teaching that is responsive to the needs of different learners (Tomlinson, 2000, 2005). Tomlinson (2000) maintains that differentiation is more than an instructional strategy and a recipe for teaching. She sees it as an

innovative way of thinking about teaching and learning.

Students with learning difficulties are a part of the regular class that has to take their educational needs and their ability to face academic difficulties into consideration; therefore, the need for differentiated instruction that has its focus on the right of learners to learn to their highest capabilities comes with the presence of students with learning disabilities. According to Florin (2012), students with learning disabilities can be better included in regular classrooms when they are given sufficient opportunities to actively participate, positively identify and develop their capabilities with the assistance of skilled teachers who would create and implement lessons that are meaningfully designed to accommodate all students and aid their academic success.

Tomlinson (2004) sees the teacher as the professional in the classroom, a suitably trained individual who assists, mentors and leads each learner with the appropriate techniques towards his or her potential within the learning context.

1.1 Literature Review

A view that has emerged over the years is that the major problem faced by teachers in their bid to become more inclusive in their practices of teaching is how to respect and respond to individual differences in such ways that learners are included in, rather than excluded from, what is basically available in the regular classroom (Florin, 2007). However, extending what is ordinarily available to all learners is a complex pedagogical endeavor, so meeting this challenge sets a high standard for inclusive practice. It creates the burden of shifting teaching and learning from an approach that works for *most* learners and exists alongside something ‘additional’ or ‘different’ for those (*some*) who experience difficulties towards one that encompasses the creation of a rich learning community that has learning opportunities that are amply available for *everyone*, so that every learner is able to take part in classroom life (Florin & Linklater, 2009). Teachers construct such environments in several ways which are not easily visible to observers. This is because:

- It is while doing other things that teachers respond to individual differences;
- The detailed environmental contexts and actions being teachers’ decisions (e.g. planning, prior knowledge and experience, etc.) are not within the knowledge of observers; and
- Mere observation of teachers’ responses to differences between different groups of learners is insufficient to enable observers to understand when teachers are extending what is ordinarily available in classrooms.

An alternative perspective by which to consider the practice and pedagogy of inclusive education compared to more traditional approaches to teaching children, which depend on the identification of individual needs, is afforded by gaining an insight into how teachers enrich and extend the basic things on offer in a classroom lesson or activity. This is necessitated by the fact that some children require something ‘different from’ or ‘additional to’ that what is ordinarily on offer (Florin & Hawkin, 2011).

In Jordan, the “Law on the Rights for Persons with Disabilities” (2007) stated in the Article four, Section (B): “The Ministries of Education and Higher Education are: providing persons with disabilities with general, vocational, and higher education opportunities in accordance with their disability category through integration; and adopting inclusive education programs between students with disabilities and non-disabled counterparts and implementing these programs within the framework of educational institutions” (The Higher Council for the Affairs of Persons with Disabilities, 2007, p. 4). The passage of this law has not only resulted in a substantial increase in the numbers of students who are “included” in the general education classroom setting, but it has also engendered the expectation that these students are entitled to learn the general education curriculum. Concomitantly, teachers have come under considerable pressure from national education reform movements to work to achieve increasingly ambitious learning goals for all of their students. There is also pressure on general educators to ensure the provision of increasingly diverse classrooms of students with ever more inclusive curriculum and pedagogy. Providing these learning opportunities for students with learning disabilities is a worthy goal in principle, but there is evidence of low achievement among this category of students compared with the typical achievement of their peers. (Wong, 2004).

There is evidence in international studies that elementary grade students with learning Disabilities may attain good educational outcomes; 40-50% of them may attain the level of their regular classroom peers and enhance their achievements with the provision of effective teaching (Meleskey & Nancy, 2011).

There are indications in various studies that adaptations in curricula, teaching strategies and other tools used by teachers in inclusion settings have not had much impact on elementary school students, as they have continued to suffer from low academic achievement, which is resulting in their poor progress in learning basic concepts and acquiring skills (Lyon, 1996; Bryant, 2005).

To increase the effectiveness of teachers in teaching students with Learning Disabilities, more changes are required to meet the needs of this category of students to provide them high quality education that meets their needs; the system must work to put in place deeply rooted, multi-faceted changes by using cutting-edge pedagogical approaches and redefining the roles of teachers towards achieving the desired outputs. There is thus a need for an updated organizational and institutional educational systems to help teachers better understand their roles in this regard (Mcleskey & Nancy, 2011).

The dearth of effective teaching tailored towards the needs of students with learning Disabilities in inclusion settings is revealed in the relevant educational literature. Teachers mandated with the task of ensuring the effectiveness of this type of education do not have the time or skills to correctly play their roles; they generally follow the old routines inside their classroom and stick to a single style of teaching, hence their failure to contribute towards the required educational outcomes for all their students. In addition, the existing resources for instruction and learning were not designed with students with learning Disabilities in mind. According to Abu-Hamourand and Al-Hamouz (2013) in his study, in spite of the joint efforts by the Ministries of Education and Social Welfare to raise awareness on “inclusion” and “Disability”, the realization of “inclusion” in its comprehensive sense is still far away. Effort has to be made to bring educators and decision-makers together to fashion out training programs for professional teachers on the implementation of differentiated instruction for students with special needs who are placed in regular classrooms.

A study by Lora, Nancy, and Jerita (2014) looked into teachers’ tendencies, classroom application and the effectiveness of differentiated instruction. There were nine teachers from elementary and secondary classes and three teachers per stage included in the sample of the study, which was carried out in a classroom. The study found that successfully differentiated instruction takes time to apply, and there is need for professional development of teachers so they can manage a class and apply effective strategies of differentiated instruction to cater for the needs of every learner within a comprehensive environment.

Dixon, Yssel, McConnell, and Hardin (2014) carried out a study entitled “Differentiated Instruction, Professional Teachers Training and Effectiveness of Teachers” into the role professional training plays in the implementation of differentiated instruction and the effectiveness and self-efficacy of teachers. A large area with high income and a medium-sized area with low income were selected for the study. The study sample was made up of 45 male and female teachers chosen from four schools (2 elementary schools, 1 middle school, and 1 secondary school) from each area. The study assessed self-efficacy and the effectiveness of teachers using the variables: educational locations, basic-level schools, teachers’ experiences (number of years), and the number of professional development training (hours) they had undergone. The results showed a positive and proportional relationship between teachers’ qualifications and their effectiveness in implementing differentiated instruction.

A study by Alicia (2012) assessed the impact of differentiated instruction on those failing to catch up in reading in Grade 1. In the study, teachers were meant to find ways to help students with learning disabilities read fluently using a semi-experimental differentiated instruction methodology, two experimental groups and one control group (traditional teaching). The sample had 60 students from Grade 1. The results showed that use of differentiated instruction improved students’ reading skills. The test results showed differences between pre- and post-assessments over three scholastic semesters in “fluency” and “reading”.

There was a study by Roiha (2012) entitled “Teachers views on differentiation in Content and Language Integrated Learning (CLIL) in terms of vision, practices and challenges.” The study examined the diversity of content and merging of languages in CLIL in Finland to figure out ways of supporting individual students with special needs in public classrooms. The study had a combination of qualitative cases and quantitative statistical studies of elementary school teachers’ perceptions of differentiated instruction and different practices in CLIL and the challenges encountered during implementation. To gather qualitative data, there were interviews with three teachers who apply the principles of differentiated instruction and CLIL provision to all their students. For quantitative data, questionnaires were distributed to 143 male and female teachers. Results showed that teachers look differently to differentiation and that they differentiate in instruction, content and language integration. Problems associated with differentiated instruction had to do with time, materials and class environment.

Cobb’s (2010) study on “Differentiation or non-differentiation in using technology in regular classes” was aimed at measuring the effectiveness of using technology to improve classroom management and raising the academic achievements of students with learning Disabilities. An internet-based program that differentiates instructions in response to the learning style of students was the focus of the study. A hundred and thirty-one teachers were trained on the use of technological solutions as part of the research-based educational program, relying on analysis of individual student’s data in terms of learning styles, educational goals, and student’s level, plus each

student's ability to merge technology (using computers) alongside his practical classroom work and make use of what he has learnt. Going by the results, differentiation in teaching is a valuable model for teachers.

Therefore, we can deduce that the educational problems will be minimized if the differentiated instruction is used in regular classes. Also there is a strong direction to consider the educators needs and requirements, the emphasizes that each students has certain qualities that distinguishes them from the rest of the students in the classroom, and the importance of using and implementing the differentiated instructions which has the qualities and distinguishing factors that can face up to the students with learning disabilities needs and requirements to achieve the best academic results.

1.2 Research Problems and Its Questions

I believe it is incumbent upon teachers to see that the needs of all students are met, and to prepare students to attain their full academic potential. The research problems can be highlighted in the following points:

- The increasing number of students with learning disabilities.
- The presence of challenges that hinders learning for those with learning disabilities.
- The failure to observe for some educators the dissimilarities and differences between regular students and those with learning disabilities.
- The non- positive interaction between regular educators and the special needs educators.
- The unsuitability of the municipality's curriculum for those with learning disabilities.

This study, *Teachers' Differentiated Practices When Teaching Students with Learning Disabilities: Implementation and Challenges*, aimed to answer the following questions:

- To which extent teachers practice differentiation when teaching students with learning Disabilities in each domain of the following (content, process, resources, product, assessment, and learning environment)?
- Are there any statistically significant differences in the teachers' differentiated practices when teaching students with learning disabilities that are attributable to the school type (public, private and years of experience (less than 5, 5-10, more than 10))?
- What are the challenges that face teachers during their implementation of differentiated instruction when teaching students with learning disabilities?

1.3 Research Objectives

This study aims to:

- Investigate the Teachers' Differentiated Practices When Teaching Students with Learning Disabilities in each domain of differentiation in the following: content, process, resources, product, assessment, and learning environment.
- Investigate the teachers' Differentiated Practices When Teaching Students with Learning Disabilities in the light of the variables (school type and teacher's experience years).
- Investigate the challenges that face teachers during their implementation of differentiated instruction when teaching students with learning disabilities.

1.4 Significance of the Study

Differentiated instruction practices and implementation challenges for learning disabilities is very important in effecting changes in the process of learning, and its regular application by classroom teachers can create a clear picture of the realities and challenges of teaching students with learning disabilities in inclusion settings. This also helps to identify the role of teachers in increasing the academic achievement of students with learning disabilities as well as the problems they encounter and it will examine the advantages and disadvantages of these practices so they can serve as a guide in the formulation of teacher training programs. They can help to identify requirements for teacher training programs that encompass differentiated instruction.

1.5 Limitations and Delimitations of the Study

Results of this study are limited to:

Human Limitation: The study is limited to grades 2 to 8 teachers of Arabic and English languages, mathematics and science in the public and private schools that fall under Amman 2 and the Private Education Directorates.

Instrument of the study: A questionnaire developed by the researchers was used, and psychometric properties were verified, and interviews with teachers were conducted.

Delimitations:

- 1) The study was based on the English, Math, Science, and Arabic teachers for the 2nd and up to the 8th grades for schools under for the academic year (2014-2015) for schools under the Amman educational directorate II, and the directorate of private education in Amman.
- 2) This study is also limited to the study tool used and its psychometric characteristics, and the research methodology employed.

1.6 Research Operational Definition of Terms

Differentiated instruction:

In this study, differentiated instruction is defined as an educational input that considers: (1) readiness on the part of students with learning difficulties to learn; (2) instruction that optimize students' learning; (3) teachers' responsiveness to variables through different types of instruction approach; (4) teaching curricula that encompass different educational methods; and (4) continuous adjustment of the curricula, procedures, learning material, outcomes and assessment.

Students with learning Disabilities:

Learning disabilities is a generic term for a group of various disorders which manifest as significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or quantitative reasoning abilities. These disorders, which are inherent in the individual, are thought to be due to a problem with the central nervous system and are often lifelong. Challenges bordering on social perception, self-regulatory behavior, and social interaction may exist with learning disabilities but are not of themselves a learning disability. While learning disabilities sometimes occur concurrently with such conditions as sensory impairment, mental retardation and serious emotional disturbance, or with such extrinsic influences as cultural differences and insufficient or inappropriate instruction, they are not caused by those conditions or influences (NJCLD memorandum, 1988, p. 1). In this study, students with learning difficulties are defined as those who were diagnosed by a specialist as having learning difficulties and hence have to receive their academic teaching in two environments—the resource room and regular classrooms.

2. Method

2.1 Participants

The study sample was made up of 194 teachers of the Arabic and English languages, mathematics and science who teach students with learning disabilities in grades 2 to 8, at Jordanian schools. They were randomly selected and distributed using the following variables: (1) school type, and (2) teacher's years of experience.

Teachers who were selected in this study were teachers who:

- 1) work at schools that provide services to students with learning disabilities, grades 2-8;
- 2) teach Arabic and English languages, mathematics and science to students with learning disabilities in regular classrooms;
- 3) were familiar with differentiated instruction, 34 of them having been trained in this regard;
- 4) work at schools that provide professional teacher training and use up-to-date teaching and learning strategies.
- 5) The schools were selected randomly from among those where students with learning disabilities were included as it is shown in Table 1.

Table 1. Distribution of participants

	Target group	Total	Percentage
Type of School	Private	98	50.8
	Public	96	49.2
Total		194	
Years of experience	Less than 5 years	42	21.5
	5-10 years	60	30.8

More than 10 years	92	47.7
Total	194	21.5

2.2 Instrument

We prepared a questionnaire to study the Teachers' Differentiated Practices When Teaching Students with Learning Disabilities: Implementation and Challenges. Having regard to the reviewed theoretical and empirical literature and what is contained in the scientific resources about the teachers' differentiation instruction practices, these practices were summarized into two questionnaires of 79 paragraphs in total as follows:

- Questionnaire 1: The questionnaire consisted of 65 items, distributed into six domains: Differentiation in content (15 paragraphs), Process (11 paragraphs), Teaching Resources (5 paragraphs), Outcomes (5 paragraphs), Assessment (11 paragraphs), Classroom Management (18 paragraphs). It was organized in a Likert rating scale of three categories—high, medium, low.
- Questionnaire 2: Challenges faced by teachers during implementation. The questionnaire consisted of 14 items. It was organized in a Likert rating scale of three categories—high, medium, low.
- Open-ended questions on challenges faced during the implementations of differentiated instruction were used in interviews with teachers.

We recorded and transcribed all interviews to “capture” the words of the teachers and the transcripts were returned to and checked by the interviewer.

2.2.1 Validity

Eight arbitrators from supervisors and faculty members verified questionnaire validity. The questionnaire was modified to fit their comments and suggestions as to language and expressions. Comments of the jury bordered only on linguistic and grammatical mistakes, and the number of items remaining were 75 as originally designed. There was a pilot study carried out on a sample of 30 teachers. Validity was determined by finding correlation coefficients between the grades and scores on the paragraphs of the domains that valued 0.36 and 0.76, all of which are statistically significant.

2.2.2 Reliability

To investigate reliability, we applied the questionnaire on a sample of 30 teachers out of the participants. Internal Consistency was calculated through Cronbach's Alpha Coefficient; it was found to be 0.98 for the whole questionnaire. Reliability of the sub-domains ranged between 0.71 and 0.94. Table 2 showed these results.

Table 2. Cronbach's alpha coefficient for each domain and for the whole questionnaire

Domains	Alpha co.
Differentiation in Content	0.834
Differentiation in Process	0.788
Differentiation in Teaching Resources	0.776
Differentiation in Products (Outcomes)	0.717
Differentiation in Assessment	0.832
Differentiated Classroom Management	0.856
Overall grade of Differentiated Instruction	0.946
Challenges faced by the teachers	0.829

3. Results

First question: To which extent do Teachers Practice Differentiation When Teaching Students with Learning Disabilities in each domain of the following: content, process, resources, product, assessment, and learning environment)?

We calculated means and standard deviations for each item and then for the overall score of the questionnaire. Items were ranked according to their means in a descending order as shown in Table 3. Means were categorized

into three levels: low (1.66 or lower), medium (1.67-2.33), and high (2.34 and above).

Table 3. First domain: differentiation in content

No.	Paragraph	Mean	Standard Deviation	Order	Level
11	Pressure or impact of content: I summarize some of the existing information within the content provided, I do not compromise the main idea(s) that are to be taught within this topic.	1.80	1.02	11	Med
2	I incorporate differentiated instruction processes when I am planning for teaching.	1.49	0.58	2	Low
12	The time needed time to learn the content: I present the content to the students in different speeds; I do not commit all students to the same timing.	1.49	0.63	12	Low
15	Consideration of cognitive levels among students: I present the content in different levels in line with the needs of the students (different reading levels, recorded texts, presentation and clarification of ideas using audio-visual media).	1.48	0.96	15	Low
4	I specify the suitable time interval per learning goal.	1.44	0.58	4	Low
10	I do not deviate from the standard level that every student should reach to.	1.44	0.59	10	Low
14	Presenting the content in different ways: I diversify my pedagogy and the way I present the content in consideration of the levels and capabilities of the students (discussions, audio-visual media and projects).	1.43	0.62	14	Low
6	I adjust the educational content to suit the educational needs, e.g. tying the content with concepts and skills that a student desires to learn.	1.42	0.58	6	Low
5	I consider individual differences and variations among students given the important impact this creates on the students' behavior inside the classroom.	1.41	0.64	5	Low
13	I avail the opportunity to students to immerse themselves into different activities that motivate their minds and increase their attentiveness.	1.40	0.59	13	Low
7	I provide support to students and encourage them to immerse themselves in problem-solving skills.	1.35	0.57	7	Low
9	I give consideration to scoping to be in line with the capabilities and the needs of different students.	1.34	0.60	9	Low
8	Selection of content: I give consideration to the identification of the main idea(s) of the topic or unit.	1.28	0.54	8	Low
3	I set clear and specific lesson goals.	1.26	0.49	3	Low
1	I plan the lessons well before each class.	1.18	0.40	1	Low

Table 4. Second domain: differentiation in process

No.	Paragraph	Mean	Standard Deviation	Order	Level
3	I implement special plans to students (regular classroom activities and supplementary activities for the students with learning Disabilities).	1.64	0.71	3	Low
11	I normally form small groups to explain needed ideas and skills.	1.60	0.63	11	Low
4	I prepare special assignments for the students.	1.58	0.65	4	Low
6	I provide additional support to students with learning Disabilities.	1.50	0.65	6	Low
5	I adjust the time interval that students may need to carry out certain assignments.	1.46	0.63	5	Low
10	I use technology-based learning that decreases the span of losing attention, disabilities in memorizing and low incentives that some students with learning Disabilities may have.	1.44	0.61	10	Low
1	I use activities that are compatible and suitable to the skills that students have.	1.43	1.19	1	Low

8	I use diversified learning strategies that suit different pedagogies and meet the aspired goals.	1.42	0.59	8	Low
2	I provide resources and information to motivate initiatives among students for learning	1.39	0.56	2	Low
7	I set different levels of expectations to conclude an assignment.	1.39	0.58	7	Low
9	I encourage students to interact and participate; I seek to incorporate them in the topic at hand.	1.30	0.55	9	Low

Table 5. Third domain: differentiation in teaching resources

No.	Paragraph	Mean	Standard Deviation	Order	Level
3	Audio-visual systems that allow reading texts aloud.	2.01	2.61	3	Med
2	Writing and text programs (Word processors), spelling and grammar. Media that helps in reading, like recorders.	1.79	0.78	2	Med
5	I avail different types of learning resources that serve the environment in an enjoyable way that attracts the learners (video, computers, and websites).	1.69	0.71	5	Low
4	Avail different learning resources that serve the environment in an enjoyable way that attracts the learners (books, magazines, photographs/images).	1.61	0.70	4	Low
1	Avail and employ technology resources to help increase motivations and incentives among students: reading and writing programs, word processors, spelling and grammar.	1.59	0.63	1	Low

Table 6. Fourth domain: differentiation in products (outcomes)

No.	Paragraph	Mean	Standard Deviation	Order	Level
5	I allow students to present their productions in performance style (acting).	1.78	0.72	5	Med.
4	I allow students to present their productions in a written manner.	0.66	1.70	4	Med.
3	I allow students to present their productions verbally (oral presentation, singing, poetry recitation).	1.00	1.59	3	Low
2	I allow students to present their productions verbally.	1.45	0.59	2	Low
1	I give students the opportunity to participate in activities as individuals or in groups or in a cooperative manner.	0.46	1.27	1	Low

Table 7. Fifth domain: differentiation in the assessment

No.	Paragraph	Mean	Standard Deviation	Order.	Level.
8	I give a break in the middle of the assessment interval.	2.01	1.02	8	Med.
3	I adopt assessments of teachers and peers.	1.66	0.69	3	Low
9	I add some illustrative images or drawings to help the students understand the questions.	1.52	0.68	9	Low
11	I assess students according to pivotal and referenced indicators.	1.51	0.64	11	Low
7	I give some students extra time to answer questions.	1.48	0.67	7	Low
4	I use a rating scale (rubrics) to assess the students.	1.47	0.62	4	Low
5	I print out test papers using a big / large font that is suitable to the needs of the students.	1.43	0.69	5	Low
6	I read the questions to the students.	1.42	0.64	6	Low
1	I rely on continuous and varied assessments of students: Pre- and Post-assessments	1.41	0.92	1	Low

10	I take into consideration the homework and testing paragraphs in classifying via Bloom's classic Taxonomy of educational (remembering, understanding and applying).	1.38	0.62	10	Low
2	I adopt individual and group assessments.	1.32	0.52	2	Low

Table 8. Sixth domain: differentiation in classroom management

No.	Paragraph	Mean	Standard Deviation	Order	Level
3	I distribute students in heterogeneous groups in terms of capabilities.	1.67	0.76	3	Med
14	I monitor the achievements and progress of students within the cognitive portfolio of the student.	1.64	1.77	14	Low
8	I prepare a plan for the students who need longer time than their peers to accomplish assignments.	1.59	0.65	8	Low
2	I distribute students in homogeneous groups in terms of capabilities.	1.56	0.62	2	Low
6	I train students on reorganizing the furniture of the classroom after performing activities.	1.50	0.65	6	Low
12	I identify the special skills and capabilities of each student in order to try to answer the two questions: what does each student know? What does each student need?	1.50	0.65	12	Low
7	I clarify to students the allowed mobility limits.	1.49	0.68	7	Low
11	I train students on activities, monitoring those activities and learning their outcomes.	1.49	0.64	11	Low
9	I train students on taking responsibility for their learning by doing their schoolwork and homework.	1.46	0.70	9	Low
18	I specify a time to carry out primary concepts and design suitable activities per learner.	1.46	0.61	18	Low
5	I plan how the student submits accomplished work.	1.44	0.62	5	Low
10	I specify the rules and instructions to carry out an activity.	1.44	0.62	10	Low
13	I focus on a limited number of concepts to ensure students grasped the concepts.	1.44	0.62	13	Low
15	I avail opportunities for group or binary or individual work.	1.42	0.66	15	Low
4	I put forth basic ground rules for the students based on which they will get started and finish at the beginning and at the end of the lesson, respectively.	1.38	0.60	4	Low
16	I work on building the teaching material according to the needs of the students.	1.37	0.58	16	Low
17	I observe the performance of students and direct them.	1.37	0.61	17	Low
1	I distribute the instructions in different ways to avoid chaos (pre-preparations of assignment cards, working papers).	1.30	0.46	1	Low

We calculated the means and standard deviations on every one of the six domains of the questionnaire and then the whole questionnaire according to variables. We tested Levine tests for variance homogeneity; they were not significant, and so significance tests of differences were examined as shown in Tables 3 to 8.

Second question: Are there any statistically significant differences in the Teachers' Differentiated Practices When Teaching Students with Learning Disabilities that are attributable to the school type (public, private) and years of experience (less than 5, 5-10, more than 10).

Table 9. Means and standard deviations of the responses according to school type and t-test for significance of differences between means

Scope	Type of School	Mean	Standard Deviation	T-Test	sig
Differentiation in content	Public	1.34	0.38	-2.48	0.01
	Private	1.49	0.41		
Differentiation in procedures	Public	1.39	0.37	-2.78	0.01

	Private	1.57	0.45		
Differentiation in teaching resources	Public	1.58	0.46	-3.51	0.00
	Private	1.87	0.54		
Differentiation in outcomes	Public	1.41	0.42	-4.43	0.00
	Private	1.71	0.45		
Differentiation in assessments	Public	1.42	0.37	-3.2	0.00
	Private	1.62	0.45		
Classroom Management	Public	1.36	0.38	-3.72	0.00
	Private	1.61	0.46		

In Table 9, we see statistically significant differences between the means of the responses in all domains and the whole questionnaire, according to school type, in favor of the private schools.

Table 10. Means and standard deviations of the responses according to years of experience

Scope		Mean	Standard Deviation
Differentiation in Content	Less than 5 years	1.40	0.34
	5 - 10 years	1.42	0.39
	More than 10 years	1.42	0.44
	Total	1.42	0.40
Differentiation in Process	Less than 5 years	1.44	0.40
	5 - 10 years	1.48	0.41
	More than 10 years	1.48	0.44
Differentiation in Teaching Resources	Total	1.47	0.42
	Less than 5 years	1.69	0.47
	5 - 10 years	1.72	0.56
Differentiation in Product (Outcomes)	More than 10 years	1.73	0.57
	Total	1.72	0.54
	Less than 5 years	1.45	0.38
Differentiation in Assessments	5 - 10 years	1.61	0.43
	More than 10 years	1.57	0.49
	Total	1.55	0.46
Differentiated Classroom Management	Less than 5 years	1.47	0.38
	5 - 10 years	1.52	0.44
	More than 10 years	1.53	0.43
Differentiated Classroom Management	Total	1.51	0.42
	Less than 5 years	1.44	0.41
	5 - 10 years	1.53	0.42
Differentiated Classroom Management	More than 10 years	1.47	0.46
	Total	1.48	0.44

To ensure that differences are fundamental, a one-way ANOVA was carried out; results appear in Table 10.

Table 11. Learning as an attribute to the variable of years of experiences

		Squared Totals	Degree of Freedom	Squared Means	Standard Deviation	sig
Differentiation in Content	Among groups	.015	2	.007	.046	.955
	Within groups	26.037	161	.162		
	Total	26.052	163			
Differentiation in Process	Among groups	.035	2	.018	.099	.906
	Within groups	28.619	161	.178		
	Total	28.654	163			
Differentiation in Teaching Resources	Among groups	.053	2	.026	.089	.915
	Within groups	48.099	161	.299		
	Total	48.152	163			
Differentiation in Product	Among groups	.532	2	.266	1.273	.283
	Within groups	33.654	161	.209		
	Total	34.186	163			
Differentiation in Assessments	Among groups	.110	2	.055	.311	.733
	Within groups	28.476	161	.177		
	Total	28.586	163			
Differentiated Classroom Management	Among groups	.183	2	.091	.470	.626
	Within groups	31.301	161	.194		
	Total	31.484	163			

It is noted from Table 11 that there are no statistically significant differences in the means of the responses attributable to the variable of years of experiences.

Third question: What are the challenges that face teachers during their implementation of Differentiated Instruction when teaching students with Learning Disabilities?

Means and standard deviations of the responses according to the challenges that face teachers during their implementation of Differentiated Instruction when teaching students with Learning Disabilities and t-test for the significance of differences between means as shown in Table 11.

Table 12. Challenges faced by teachers when implementing differentiated instruction

No.	Paragraph	Mean	Standard Deviations	Order	Level
10	I have enough conviction on the importance of the differentiated instruction in teaching.	2.13	0.80	10	Low
13	The administrative support is available by helping teachers in planning well for the curricula.	2.05	0.83	13	Low
14	The administrative support is available by supporting them in front of parents / caretakers.	2.05	0.79	14	Low
12	The administrative cadres have sufficient convictions on the implementation of the differentiated instruction in classrooms.	1.99	0.81	12	Low
5	I possess the needed skills that the differentiated instruction strategy needs.	1.79	0.74	5	Low
1	I need a long time to implement differentiated instruction in terms of assessing the learners' needs, readiness, identification of main concepts, organizing the questions and designing activities suitable to each learner.	1.61	0.61	1	Low
11	I face difficulties in availing teaching media, namely technology.	1.61	0.71	11	Low
9	I face difficulties in customizing the classroom in terms of size and areas to accommodate the distribution of students into working groups.	1.58	0.71	9	Low
7	I need training on how to use strategies in order to implement them in a better way.	1.53	0.68	7	Low
8	I find difficulties in adapting the numbers of students inside the classroom.	1.51	0.70	8	Low
3	I find difficulties in transforming my role from a teacher who disseminates knowledge to a facilitator.	1.42	0.61	3	Low
6	I find difficulties in planning well for lessons.	1.42	0.71	6	Low
4	I face difficulties in selecting the suitable strategy for the lesson.	1.41	0.61	4	Low
2	I find difficulties in managing the class.	1.32	0.58	2	Low

Table 12 shows that the highest and lowest values of the means were low. The highest and lowest values of the standard deviations were also low.

Due to a limited number of interviews and lime themes frequency, the analysis focused on narrative interview responses.

Analysis of results of interviews showed that the teachers faced many challenges when implementing the differentiated instruction, namely the time required attaining set goals and the ability of the teacher to divide the students according to their needs and capabilities. The daily workload of a teacher, including documentation, paperwork and administrative burdens are all challenging and do get in the way of the implementation of the differentiated instruction; this is apart from the limitations in the capacity of schools and available learning resources and media. The proper understanding of the differentiated instruction strategies is yet another challenge standing in the way of implementation that affects the education of students with learning disabilities.

4. Discussion and Conclusion

This is a descriptive study that uses means and standard deviations to answer the questions posed. It used the one-way analysis of the variance (One-Way ANOVA) to determine differences among means of the independent groups to verify the indications of statistical discrepancies in relation to the variables of the study—type of schools and number of years of experience. We used the T-Test for independent operations, in addition to qualitative research of the answers provided by teachers on the challenges they face while implementing differentiated instruction.

With regard to the purpose of the study and to answer Question 1 which was to identify the extent of teachers' practice and implementation of differentiated instruction when educating students with learning Disabilities, we extracted means and standard deviations total and sub-areas per each of the measurement paragraphs. According to the results, the practice of differentiated instruction by teachers was low, which means educational skills in all areas (Content, Process, Teaching Resources, Product, Assessment, and Classroom Management) were low for all differentiated instruction scopes.

An explanation for this result could be the fact that differentiated instruction has not been implemented for a

long time by the Ministry of Education. A few schools in Jordan currently implement this approach; hence, the low level of disseminated knowledge among teachers of the entire sample is limited. In the course of implementing differentiated instruction, many challenges arise, including lack or insufficiency of resources, limited availability of time to implement given learning goals in the curricula and the lack of specialized training programs and workshops for teachers in general that look into their practice of differentiated instruction when teaching students with learning Disabilities. The results agree with some aspects that the Lora, Nancy, and Jerita (2014) study, in terms of the amount of time needed within the scholastic semesters and availability of professionally trained teachers in managing classrooms.

Question 2 responses bring about results on the differences of statistical indicators, in the practice of teachers of differentiated instruction when educating students with learning disabilities, attributable to the type of schools variables. The means among private school teachers were instructively higher than those of public schools for differentiated instruction. This is attributable to the tendencies among the private sector towards using differentiated instruction which they see as modern to integrate students with learning disabilities in regular classrooms; furthermore, many of the private schools were founded to invest in teachers' ability to run educational processes that guarantee sufficient consideration for individual differences in regular classes and to maintain their competitive advantage in attracting students with special educational characteristics they tend to be more open to modern educational approaches. This is not to say that the private schools have accomplished a qualitative jump in this direction, but it is a fact that they have shown themselves as better at implementing differentiated instruction than the public schools.

For years of experience, the results show a lack of differences bearing statistical indication of the extent of teachers' practice of differentiated instruction when educating students with learning disabilities attributable to the experience variable. According to the result, the usage and implementation of the differentiated instruction by teachers did not attract teachers from a specific target group, rather there were teachers from all groups who showed interest in the basics, concepts and implementation of the differentiated instruction.

Question 3 results on the challenges faced by teachers in implementing differentiated instruction when educating students with learning disabilities highlighted important challenges bordering on weak administrative support, weak parental support, lack of sufficient time and lack of learning resources and media, which makes planning difficult for teachers. These results are similar to those of Roiha (2012) on the challenges in differentiated instruction attributable to time, material and classroom environment.

Examples of teachers' responses to Question 3

"We clash into the reality of huge burdens of work thrown upon our shoulders that take much of our time and effort; although we do know about strategies and how to apply them, there is no suitable time for application."

"The disabilities that I face when assessing students is the time it takes for me to identify the levels of each student and his/her learning styles."

"I need more training on the strategies to understand them and apply them correctly. I need training on lesson planning to adapt content to students' needs."

"Time is the biggest challenge facing the implementation of strategies that take so much of my time."

"A large number of students in the class needs good management by me; given that I have no teacher's assistant, I face the challenge of how to run a class with that large number of students."

"Among the largest challenges I face are insufficient time to train students by properly applying strategies, the different ways of preparation in our school, lack of administrative support, and demands to end the allocated curricula."

5. Recommendations

The study presented the following recommendations.

- 1) There should be training for teachers on implementing differentiated instruction and developing their skills to enable them to adapt content and instruction to the needs of the students with learning disabilities in regular classrooms.
- 2) There should be training for teachers on how to professionally use and employ specific strategies and procedural instructions suitable to specific students' characteristics. This adaptation requires better teacher training on ways to spot readiness in learners.
- 3) There is a need to monitor differentiated instructional lessons by having one teacher observe the other and

take notes during the implementation of differentiated instruction in the classroom. This sort of feedback coming from observing peers helps in developing teachers' efficacy and support their classrooms' differentiated instruction practices; it is deemed a practical method of meeting learners' needs, supporting the inclusion of students with learning disabilities into regular classrooms and helping teachers reach their teaching goals.

- 4) Differentiated instruction is a complex process that enables students to carry out different types of assignments on a central concept with the help of skillful teachers who plan and implement different levels of the same learning concept at the same time. Our study demonstrated that a teacher's efficacy and professional development are key in implementing differentiated instruction.

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