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## The Degree of Using Blended Learning among Teachers of Students with Learning Disabilities

**Mamoun Mohammed AL-Azzam** 

Department of Computer and Information Sciences, College of Applied Sciences, Najran University, Kingdom of Saudi Arabia

**Burhan Mahmoud Hamadneh** 

Department of Special Education, Faculty of Educational Sciences, Ajloun National University, Jordan

**Turki Mahdi Alqarni** 

Department of Special Education, Faculty of Education, Najran University, Najran, Saudi Arabia

**Abdulaziz Derwesh Almalki** 

Department of Curricula and Teaching Methods, College of Education, Najran University, Kingdom of Saudi Arabia

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### Abstract

The study aimed to reveal the degree of using blended learning among teachers of students with learning disabilities in the Kingdom of Saudi Arabia. It also showed statistical differences according to the variables of gender, academic qualification, and years of experience. To achieve the objectives of the study, the descriptive survey design was used. The sample of the study consisted of (110) male and female teachers of students with learning disabilities, of whom (53) male and (57) female teachers were chosen by the stratified random method from the educational regions in the south of the Kingdom of Saudi Arabia in the second semester of the academic year 2022/2023. A questionnaire consisting of (22) items was used, distributed in three domains: planning, implementation, and evaluation, after verifying the indications of its validity and reliability. The results showed that the degree of using blended learning among teachers of students with learning disabilities in all domains and the total score was moderate. The results also showed that there are statistically significant differences in the answers of the study sample about the degree of using blended education among teachers of students with learning disabilities due to the variables of academic qualification in favor of postgraduate studies and years of experience in favor of more than ten years. However, there was no statistically significant difference due to the gender variable. The study recommended that the Ministry of Education in the Kingdom of Saudi Arabia should provide training requirements for teachers with learning disabilities on blended education and include them in their teaching practices (planning, implementation, and evaluation).

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### Introduction

Education in the third millennium witnessed great growth in all its fields. Awareness of its social, economic, and cultural importance has also increased in light of the massive and accelerating technical and digital revolution, especially in computer, information, and communication technologies. This development led to the need for the emergence of modern teaching methods and models that provide learners with opportunities to participate in active

learning to build and use knowledge and achieve different cultures to suit their present and future needs and the needs of their society and countries (Al-Ruwaili & Abu Lum, 2019). The development in technology and communications has led to a trend towards employing them in the teaching and learning processes to keep up with them and benefit from them in achieving a quantum leap in the educational field. Different patterns emerged based on these technologies and communications, including Blended Learning. This type of education is one of the methods that employ computers, the Internet, and modern technology in the education process and combines face-to-face education with e-learning. It mixes traditional forms of education with e-learning, inside or outside the classroom (Abass et al., 2021; Al-Dhalei, 2020; Dankers & Stoltenkamp, 2022; Hafeez et al., 2023; Nguyen et al., 2023; Silvero et al., 2020). In response to this, the various educational systems have recently begun to direct their attention toward integrating technology into the teaching and learning process as a prelude to what is known as blended education. They considered it an important strategic choice to apply in schools to ensure quality in competition and excellence in the learning process outcomes in a safe, exciting, and stimulating educational environment (Shaheen, 2020).

The combination of traditional (usual) and electronic education came to achieve multiple benefits that go beyond what is achieved by the regular education process, which makes learners more involved, active, and interactive during the learning process. This is done by using research and investigation skills through advanced electronic means of communication (Al-Sawalha, Al-Harout, & Al-Khatib, 2016). Blended education is “a process that combines e-learning in all its forms and forms based on the computer or the Internet and traditional education so that it is not limited to one of them only, but both” (Wahidi, Jalloul, & Thamer, 2020, p. 290). Blended education is an important component of the modern school, which provides learners with flexibility and convenience by integrating regular education with e-learning using computers and the Internet and is accomplished in the classroom or on the Internet. This kind of education is characterized by delivering knowledge to learners as quickly as possible in a way that enables the education process to be managed and well-controlled, and learners' performance can be quickly and effectively measured and evaluated. Therefore, its main advantage seems to be that it shortens time, effort, and cost and that it provides an attractive learning environment (Ayyad & Essani, 2018; Kaban, 2023).

Blended education has become one of the most prominent applications of integrating technology in education. It depends on activating the role of technology in improving the teaching and learning processes by providing learners with twenty-first-century skills, keeping pace with them, and increasing the ability of learners to use and benefit from them in accessing knowledge, developing skills and experiences, and developing capabilities, ideas, and trends (Al-Sharif, 2012). Blended education can be classified in light of its nature, quality, and degree of integration between its components, into four levels of varying complexity. These levels range from the simple (the least degree of integration between traditional and e-learning) to the complex (in which both traditional and electronic education are fused) forming a new type of learning that is difficult to separate and has new features (Moukali, 2012).

For the above, blended education is a method that achieves great benefit in the teaching and learning processes by presenting learning in an exciting way for learners using advanced media, including presentations, virtual

laboratories, videos, the Internet, e-mail, chat programs, scientific forums, blogs, and discussion boards. Therefore, it can have a significant impact on improving knowledge, acquiring skills, developing performance, and modifying the learners' behaviors (Al-Dhalei, 2020). Blended education has many advantages and benefits that make the teaching and learning process more beneficial and achieve the desired educational goals. Among those advantages and benefits is the provision of an interactive learning environment that transcends the restrictions of time and space and the educational material in a clear manner and more than one form for learners. It also helps to simplify the process of communication between the elements of the educational process (the teacher, the student, and the curriculum) (Al-Moaqil, 2017). In addition, it allows the modification of the educational material and providing it to the learners in more than one way, which simplifies the review process in and outside the school and helps the learners to each other. Moreover, it takes into account the individual differences among the learners and works to increase the effectiveness of learning. Furthermore, blended education helps increase the effectiveness of learning by improving educational outcomes and diversifying the means of knowledge. It employs a variety of educational and cognitive means for the learner to choose what suits his abilities and skills. It helps learners acquire more knowledge and raise the quality of the educational process, in addition to its role in achieving active learning for learners, as it depends on enriching activities. Finally, it focuses on the role of the active, interactive learner by integrating individual and collaborative activities and projects rather than the learner receiving information (Qaraquz, 2016).

Employing blended education in the learning process requires teachers with distinct technical skills that enable them to employ multimedia to improve the learning process. It also requires that they have positive attitudes towards using them in their teaching practices because teachers represent one of the important elements on which blended education is based. Therefore, teachers, including special education teachers at present are required to follow teaching practices related to blended education and modern roles to improve the teaching and learning process, especially for students with disabilities (Awamleh & Al-Raqqad, 2017).

In light of the global interest in people with disabilities, including those with learning disabilities, great challenges have emerged in the process of their education and training. Great challenges have been imposed on special education teachers concerning preparing and training them to possess the methods and tools that enable them to keep pace with the rapid changes in the field of information and communication technology and e-learning. These methods meet the needs of students with disabilities, regardless of their characteristics and individual differences, and contribute to improving their level of learning (Al-Qahtani, 2017). They require special education teachers to deal with a group of students based on a full understanding of their psychological characteristics, behaviors, needs, tendencies, and interests. They should also seek to provide what suits them in ways, strategies, methods, and activities that are compatible with them and commensurate with their different levels and circumstances (ALbawaliz, Arbeyat, & Hamadneh, 2015). Therefore, it has become necessary for special education teachers - among them (teachers of learning disabilities) - to have the ability to innovate in the methods of their teaching and to use the new in the educational field for students with disabilities. In addition, they must possess technical and educational skills and previous experiences that allow them to deal with the education system based on the use of computer and Internet technologies and mix them with traditional methods easily (Shaheen, 2020).

Special education teachers, including teachers of students with learning disabilities, are required to familiarize themselves with the latest techniques of learning processes to invest them in the education of their students with learning disabilities. They must also provide them with the appropriate opportunity in light of their characteristics, abilities, individual differences, and learning styles. Perhaps, blended education may be one of the effective educational alternatives in helping teachers educate their students with learning disabilities and meet their individual needs, especially since this category of people with disabilities is a result of the nature of their characteristics and mental abilities that they enjoy. Their intelligence is within the normal range (85 IQ or more), and they can teach and learn using blended education (Shaheen, 2020). This category of students (with learning disabilities) have characteristics that differ from their peers of ordinary students, which necessitates the use of different forms and types of teaching methods and methods to be appropriate to their characteristics and differences. This leads to the fact that the role of the learning disabilities teacher is to know the most important characteristics and aspects associated with students with learning disabilities and to understand the basic facts and ideas associated with them. This would represent an indicator that makes it easier for the teacher to identify this group, identify them, and then choose the best means, and methods of teaching (Nam, Bahn & Lee, 2013).

It can be concluded that there is a clear reference to the role and tasks of teachers of students with learning disabilities. In that, they are entrusted with the use of various types of explanation and presentation methods to clarify the basic concepts of the learning material and the different skills, link them to the previous knowledge of students with learning disabilities, and urge them to think and explore their depths to reach solutions to problems. In addition, teachers with learning disabilities are required to make minor or major modifications to lessons based on realistic judgments drawn from the interests of students with learning disabilities, their understanding and learning levels, and their levels of participation. They should also encourage them to invest in opportunities to learn from emergencies and contemporary events. Moreover, they should prepare the resource room or any other educational place according to the needs of students with learning disabilities and use electronic and non-electronic learning resources and multiple educational technologies, modify and evaluate them to support the teaching and learning of students with learning disabilities (Mehmood & Lee, 2017).

### **Statement of the Problem**

Teachers of students with learning disabilities are an important axis in the educational process for students with learning disabilities. They are responsible for the implementation of individual educational and educational plans directed at the process of teaching and learning these students and those in charge of following up their achievement and supervising the improvement, and development of their knowledge and academic levels. Hence, they are responsible for providing all means and methods that make the education process for this group of people with special needs effective and keep pace with the tremendous scientific and technical development with the least effort and costs. Therefore, these teachers faced great challenges that forced them to combine traditional education with e-learning. Despite this, the researchers noticed from their educational field experience in the Kingdom of Saudi Arabia a disparity in the use of blended education in its broad form in the teaching and learning process of the majority of male and female teachers of students with learning disabilities. This disparity in blended education deprives these students of the services and benefits that they derive from the blended education method.

Therefore, this study attempted to answer the following questions:

1. What is the degree of using blended learning among teachers of students with learning disabilities in the Kingdom of Saudi Arabia?
2. Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the responses of the study sample about the degree of using blended education among teachers of students with learning disabilities due to the gender variable?
3. Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the responses of the study sample about the degree of using blended education among teachers of students with learning disabilities due to the academic qualification variable?
4. Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the responses of the study sample about the degree of using blended education among teachers of students with learning disabilities due to the variable years of experience?

### **Objectives of the Study**

This study aimed to identify the degree of using blended learning among teachers of students with learning disabilities. It also revealed statistically significant differences in the degree of using blended education among teachers of students with learning disabilities in the Kingdom of Saudi Arabia, according to the variables of gender, academic qualification, and years of experience.

### **Significance of the Study**

The current study may contribute to enriching human knowledge with the theoretical framework related to the reality of the use of teachers of students with learning disabilities for the blended education method and in the training process in special education. It is hoped that the results of the current study will contribute to drawing the attention of decision-makers, educators, principals of schools, and centers that provide services for students with learning disabilities to the importance of this method. This entails developing appropriate improvement plans, strategies, and recommendations for developing the practices of teachers of students with learning disabilities and employing this method in the teaching and learning process of their students to improve their skills and abilities. Researchers can also benefit from the applications of this study and open horizons for them in scientific research more broadly in the field of employing blended education in teaching people with disabilities, including those with learning disabilities.

### **Delimitations of the Study**

The generalization of the results of the study is limited to investigating the issue of the degree of using blended education among teachers of students with learning disabilities in light of the variables of gender, academic qualification, and years of experience. The study is also limited to a sample of teachers of students with learning disabilities in the southern regions of the Kingdom of Saudi Arabia in the second semester of the academic year 2022/2023.

## Methods

This study used the descriptive approach. It is the most suitable approach for the nature of this study and enables it to answer its questions by using a questionnaire on the use of blended education among teachers of students with learning disabilities.

### Population and Sample of the Study

The study sample was distributed according to its variables, as shown in Table 1. The study population consisted of all male and female teachers (150). They teach students with learning disabilities in the southern regions of the Kingdom of Saudi Arabia in the academic year 2022/2023, according to the statistics of the Saudi Ministry of Education.

Table 1. Distribution of the Study Sample based on Variables

Variable	Group	No.	%
Gender	Male	53	48.2
	Female	57	51.8
Academic qualification	Bachelor	66	60.0
	Post-graduates studies	44	40.0
Years of experience	1-10 years	52	47.3
	More than 10 years	58	52.7
Total		110	100

The study sample consisted of 110 male and female teachers of students with learning disabilities in the southern regions of the Kingdom of Saudi Arabia in the academic year 2022/2023. Of them, 53 male and 57 female teachers were selected using the stratified random method and after giving consent to apply the study tool and respond to its items.

### Instrument of the Study: Questionnaire on the Use of Blended Learning

The study tool was prepared by referring to the scales used in previous studies that dealt with blended education, such as Al-Sharif (2013), Al-Anzi (2019), and Shaheen (2020). They have been used in the formulation of items to measure the degree of use of blended education among teachers of students with learning disabilities. The tool consisted of (22) items distributed in three domains: planning (8), implementation (7), and evaluation (7).

To interpret the respondents' ratings, a five-point Likert scale was used (strongly agree, agree, neutral, disagree, strongly disagree). To correct the tool, the criterion in the study (Hamadneh & Almogbel, 2023) was used by giving the values, respectively (5, 4, 3, 2, 1) for the scores (strongly agree, agree, neutral, disagree, strongly disagree). The following grades were approved for the achievement of the study tool items and the overall score: 1.00-1.80 = very low level, more than 1.80-2.60 = low, more than 2.60 - 3.40 = medium, more than 3.40 - 4.20 =

high, more than 4.20 -5.00 = very high.

### **Validity**

To verify the validity of the content of the tool, it was presented in its initial version to ten experts with expertise and specialization in curricula, teaching, and special education at Najran University in the Kingdom of Saudi Arabia. The researchers asked the experts to submit their suggestions for modification, deletion, or addition to the items of the tool and to verify their suitability to achieve the purposes of the study. In the light of the experts' opinions and suggestions, which were unanimously agreed upon (80%) or more, the required modifications of the tool were made, and the tool was produced in its final version.

### **Reliability**

To ensure the reliability of the study tool, it was verified using the test-retest method. The tool was applied and re-applied after two weeks on an exploratory sample, consisting of 30 male and female teachers of students with learning disabilities who were selected from the study community and outside its sample. Then, the Pearson correlation coefficient was calculated between their responses for the two times. The reliability coefficient of internal consistency was also calculated using Cronbach's Alpha equation from the first application. Table 2 shows the reliability coefficients of the two methods for the tool as a whole and their domains.

Table 2. Reliability Coefficients of the Study Tool

No.	Domain	Test-retest	Cronbach's Alpha
1	Planning	0.88	0.78
2	Implementation	0.85	0.81
3	Evaluation	0.89	0.84
	Total	0.90	0.79

Table 2 shows that all the reliability coefficients of the study tool and its domains by following the methods of test-retest and internal consistency were high reliability coefficients, which justifies the reliability of the study tool and its results.

### **Data Analysis**

For answering the study questions, the statistical software (SPSS) version (23) was adopted in analyzing the results of the study and answering its questions. Means and standard deviations were used to answer the first question to identify the degree of using blended learning among teachers of students with learning disabilities. T-test was used for two independent samples to answer the second, third, and fourth questions to detect statistically significant differences in the responses of the study sample about the degree of using blended education among teachers of students with learning disabilities according to the variables of gender, academic qualification, and years of experience separately.



## Results

### Results of the first research question: What is the degree of using blended learning among teachers of students with learning disabilities in the Kingdom of Saudi Arabia?

To answer this question, means, standard deviations, and ranks were calculated for the responses of the study sample to the degree of using blended instruction for teachers of students with learning disabilities in the Kingdom of Saudi Arabia. Table 3 depicts the results.

Table 3. Means and Standard Deviations for the Degree of Using Blended Learning for Teachers of Students with Learning Disabilities in the Kingdom of Saudi Arabia

No.	Domain	Mean	Standard deviation	Rank	Degree
1	Planning	3.05	1.06	1	Medium
2	Implementation	3.03	.780	3	Medium
3	Evaluation	2.86	.830	2	Medium
	Total	3.02	.780		Medium

Table 3 shows that the total score for the use of blended learning among teachers of students with learning disabilities in the Kingdom of Saudi Arabia was medium, with a mean of (3.02) and a standard deviation (0.78), a medium degree. The first domain, planning, ranked first with a mean (3.05), a standard deviation (1.06), and a medium degree. In second place came the second domain of implementation with a mean of (3.03) and a standard deviation of (0.78), and a medium degree. The domain of evaluation came in third place with a mean of (2.86), a standard deviation of (0.83), and a medium degree.

### Results of the second research question: Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the responses of the study sample about the degree of using blended education among teachers of students with learning disabilities due to the gender variable?

To answer this question, the t-test was used to show the significance of the differences between the means of the study sample's responses about the study sample's responses of the degree of using blended education among teachers of students with learning disabilities due to the gender variable. Table 4 presents the results. Table 4 shows that there were no statistically significant differences at the significance level (0.05) in the responses of the study sample about the level of the degree of using blended education among teachers of students with learning disabilities in all areas of the study tool (planning, implementation, and evaluation) due to the effect of the gender variable. The t-calculated value on the domains of the study tool (planning, implementation, and evaluation) was respectively (1.649), (.435), (.678), and the statistical significance was (.102), (.664), and (.499). It was also found that there are no statistically significant differences at the significance level (0.05) in the responses of the study sample about the level of the degree of using blended education among teachers of students with learning disabilities on the total score due to the effect of the gender variable. The t-calculated value was (.663), and the statistical significance was (.509).

Table 4. T-test to Show the Significance of the Differences between the Means of the Responses of the Study Sample about the Study Sample's Responses of the Degree of Using Blended Education for Teachers of Students with Learning Disabilities according to the Gender Variable

Domain	Gender	No.	Mean	Standard deviation	t	df	Sig.
Planning	Male	53	3.22	1.18	1.649	108	.102
	Female	57	2.89	0.90			
Implementation	Male	53	3.06	0.84	.435	108	.664
	Female	57	2.99	0.73			
Evaluation	Male	53	2.80	0.92	.678	108	.499
	Female	57	2.91	0.74			
Total	Male	53	3.07	0.86	.663	108	.509
	Female	57	2.97	0.70			

**Results of the third research question: Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the responses of the study sample about the degree of using blended education among teachers of students with learning disabilities due to the academic qualification variable?**

To answer this question, the t-test was used to show the significance of the differences between the means of the study sample's responses about the study sample's responses of the degree of using blended education among teachers of students with learning disabilities due to the academic qualification variable. Table 5 presents the results.

Table 5. T-test to Show the Significance of the Differences between the Means of the Responses of the Study Sample about the Study Sample's Responses of the Degree of Using Blended Education for Teachers of Students with Learning Disabilities according the Academic Qualification Variable

Domain	Qualification	No.	Mean	Standard deviation	t	df	Sig.
Planning	Bachelor	66	2.56	0.96	7.073	108	.000
	Post-graduates studies	44	3.78	0.75			
Implementation	Bachelor	66	2.90	0.78	2.101	108	.038
	Post-graduates studies	44	3.22	0.76			
Evaluation	Bachelor	66	2.70	0.85	2.426	108	.017
	Post-graduates studies	44	3.09	0.77			
Total	Bachelor	66	2.75	0.78	4.801	108	.000
	Post-graduates studies	44	3.41	0.58			

Table 5 shows that there were statistically significant differences at the significance level (0.05) in the responses of the study sample about the level of the degree of using blended education among teachers of students with learning disabilities in all areas of the study tool (planning, implementation, evaluation) due to the effect of the academic qualification variable. The results were in favor of postgraduate studies. The t-calculated value on the domains of the study tool (planning, implementation, and evaluation) was respectively (7.073), (2.101), (.4262), and the statistical significance was (.000), (.038), and (.017). It was also found that there are statistically significant differences at the significance level of (0.05) in the responses of the study sample about the level of the degree of using blended education among teachers of students with learning disabilities on the total score due to the effect of the academic qualification variable. The results were in favor of postgraduate studies. The t-calculated value was (4.801), and the statistical significance was (.000).

**Results of the fourth research question: Are there statistically significant differences at the significance level ( $\alpha = 0.05$ ) in the responses of the study sample about the degree of using blended education among teachers of students with learning disabilities due to the years of experience variable?**

To answer this question, the t test was used to show the significance of the differences between the means of the study sample's responses about the study sample's responses of the degree of using blended education among teachers of students with learning disabilities due to the years of experience variable. Table 6 presents the results.

Table 6. T-test to Show the Significance of the Differences between the Means of the Responses of the Study Sample about the Study Sample's Responses of the Degree of Using Blended Education for Teachers of Students with Learning Disabilities according the Years of Experience Variable

Domain	Experience	No.	Mean	Standard deviation	t	df	Sig.
Planning	1-10 years	52	2.56	0.99	5.247	108	.000
	More than 10 years	58	3.52	0.91			
Implementation	1-10 years	52	2.86	0.82	2.233	108	.028
	More than 10 years	58	3.19	0.72			
Evaluation	1-10 years	52	2.68	0.93	2.120	108	.036
	More than 10 years	58	3.02	0.70			
Total	1-10 years	52	2.73	0.84	3.955	108	.000
	More than 10 years	58	3.29	0.60			

According to Table 6, there were statistically significant differences at the level of significance (0.05) in the responses of the study sample about the level of the degree of use of blended education among teachers of students with learning disabilities in all areas of the study tool (planning, implementation, evaluation) due to the effect of the variable years of experience. The results were in favor of 10 years and more. The t-calculated values of the domains of the study tool (planning, implementation, and evaluation) were respectively (5.247), (2.233), (2.120), and the statistical significance was (.000), (.028), and (.036). It was also found that there are statistically significant differences at the significance level (0.05) in the responses of the study sample about the level of the degree of

using blended education among teachers of students with learning disabilities on the total score due to the effect of the variable years of experience. The results came in favor of 10 years or more. The t-calculated value was (3.955), and the statistical significance was (.000).

## **Discussion**

### **Discussion of the First Research Question**

The results showed that the level of using blended learning among teachers with learning disabilities in the Kingdom of Saudi Arabia was at a medium level. This result indicates the modest level of using blended education among teachers of learning disabilities among the study individuals. It is below the desired level at a time when activating the use of blended education is required to raise the level of learning outcomes for the learning disabilities category. In addition, they are in dire need of investing all of the potential of e-learning along with regular learning. Moreover, this result can be attributed to some obstacles that prevent teachers with learning disabilities from using the blended education method, such as the lack of sufficient training for some teachers with learning disabilities to use the blended education method. Alternatively, there are behavioral problems among students with learning disabilities, such as distraction, poor concentration, impulsiveness, and excessive motor activity, which weakens their ability to deal with this group. They believe that traditional education is better than blended education and saves them time and effort (Shaheen, 2020). Furthermore, there is also difficulty in attending laboratories, practical lessons, and face-to-face lectures for students with disabilities due to various obstacles related to the educational environment and its equipment. The efficiency and level are deficient of skill and experience of some students with disabilities, including those with learning disabilities, in dealing with technological innovations, and Internet networks and their derivatives, which hinders teachers from using them (Al-Moaqil, 2017). In terms of the domains of the study tool, the first domain, "planning", came at an average level. Perhaps this result is due to the desire of teachers to use video devices (DVDs) in regular teaching when developing a teaching plan to help students with learning disabilities. It has a role in attracting and exciting students with learning disabilities, taking into account teachers when planning the lesson, distributing content elements between regular learning and e-learning to be used in the classroom, and choosing electronic pictures and graphics in teaching students with learning disabilities in addition to the usual teaching methods. It is more exciting for students with learning disabilities, as well as their choice most of the time of electronic educational sites and links related to the academic subject and to take advantage of the school library, in addition, to search through the database to obtain educational resources related to the educational subject. However, due to the weak skills of students with technical learning disabilities, teachers with learning disabilities are afraid to focus too much on them during the planning process. The varying levels of preparation of learning disabilities teachers in the field of blended learning may have been a reason why learning disabilities teachers did not focus on blended learning during planning. The second domain came "implementation" at an average level. This result is due to the difficulty of the implementation process, as it is considered one of the most complex teaching skills, as it requires great efforts from the teacher in providing the elements of excitement, suspense, fun, and attraction to the lessons. Therefore, it is noted that teachers with learning disabilities face some challenges in taking advantage of the presence of the Internet in the school to access published scientific research as a source of learning, printed-paper materials, and the use of blended education in distributing educational activities and exercises in a balanced

manner. Also, they face challenges in the use of the smart board in teaching classroom topics and the usual educational boards, such as fixed and mobile displays, the use of electronic storage media to save data and information in addition to printed paper materials, and work to convert educational content in its usual form into multimedia content, and providing educational exercises and training by mixing traditional education and e-learning. These results can also be attributed to the variation in the level of preparation of teachers with learning disabilities in the field of employing blended learning. The third domain, "evaluation," came at an average level. This result indicates that teachers may use evaluation for students with learning disabilities by electronic and regular methods, follow-up, and analyzing their students' work electronically and on paper. Sometimes, they use evaluation methods in terms of regular methods and electronic methods, such as computerized tests, and evaluate the objectives of the lesson by both the traditional and electronic methods and the use of blended learning in designing tests to measure academic performance in the skills required of students with learning disabilities.

### **Discussion of the Second Research Question**

The results showed that there are no statistically significant differences in the reality of the use of blended education among teachers of learning disabilities in the Kingdom of Saudi Arabia according to the gender variable in all domains and on the total score. This result may be due to the similarity of the programs for preparing male and female learning disabilities teachers in the field of employing blended learning in their teaching practices. In addition, teachers are similar in the social and cultural conditions experienced by teachers of learning disabilities of different genders (male, female) and the challenges and problems they face in the field of teaching students with learning disabilities as a result of the characteristics of these students. These conditions make teachers, including teachers with learning disabilities, face great challenges in using the means and equipment of schools that support the use of blended education.

### **Discussion of the Third Research Question**

The results showed that there are statistically significant differences in the reality of the use of blended education among teachers of learning disabilities in the Kingdom of Saudi Arabia according to the academic qualification variable in all fields and on the total score in favor of postgraduate studies. This result may be because teachers with postgraduate qualifications have been able to obtain sufficient education about blended learning. Postgraduate programs in Saudi universities focus heavily on this type of education and the skills to deal with it (Al-Enezi, 2019).

### **Discussion of the Fourth Research Question**

The results showed that there are statistically significant differences in the reality of the use of blended education among teachers of learning disabilities in the Kingdom of Saudi Arabia, according to the variable of experience in all domains and the total score, in favor of the level of long experience (more than 10 years). This result indicates that teachers of students with learning disabilities with experience use blended learning in teaching students with learning disabilities to a greater extent compared to others with less experience (ten years or less). The result may

be also attributed to the fact that teachers with longer experience have been exposed to previous training courses in blended education. This experience was reflected in their knowledge and skills and on how to use blended education and its advantages and benefits in improving the teaching and learning process. In addition, the result may be due to their desire to keep abreast of recent developments in the field of educational technologies that support their work with students with learning disabilities and help them develop their skills and experiences (Al-Anzi, 2019).

## **Recommendations**

In light of the results of the study, the researchers recommended that the Ministry of Education should work on providing training requirements for teachers with learning disabilities on blended education, and how to include them in their teaching practices (planning, implementation, and evaluation). It is also recommended that the Ministry of Education pay attention to providing specialists in the field of educational technologies to train teachers with learning disabilities to employ blended education, especially those with little experience in the category of ten years or less. In addition, it is educational supervisors of special education can benefit from the study tool to be tool for evaluating learning disabilities teachers about their employment of blended education in teaching. It can be one of the tools used in supervisory visits and practices. Finally, there is a need to conduct a qualitative study to investigate the reasons and obstacles to the application of blended education in teaching people with learning disabilities in the Kingdom of Saudi Arabia and the proposed solutions.

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### Author Information


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#### **Mamoun Mohammed AL-Azzam**

 <https://orcid.org/0009-0003-6568-0270>


Department of Computer and Information Sciences, College of Applied Sciences, Najran University, Kingdom of Saudi Arabia

#### **Burhan Mahmoud Hamadneh**

 <https://orcid.org/0000-0001-9625-1696>


Department of Special Education, Faculty of Educational Sciences, Ajloun National University, Jordan  
Contact email: [B.hamadneh@anu.edu.jo](mailto:B.hamadneh@anu.edu.jo)

#### **Turki Mahdi Alqarni**

 <https://orcid.org/0000-0003-3413-7307>

Department of Special Education, Faculty of Education, Najran university, Kingdom of Saudi Arabia

#### **Abdulaziz Derwesh Almalki**

 <https://orcid.org/0009-0008-1470-8559>

Department of Curricula and Teaching Methods, College of Education, Najran University, Kingdom of Saudi Arabia

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