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Reality of E-Learning for Saudi Students with Intellectual Disability during Covid-19 Pandemic from Teachers' Perspective

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Absract

Objectives: Saudi Arabia educational system shifted to e-learning during the Covid-19 pandemic, as in most educational systems worldwide. However, there are still some doubts regarding the success of using e-learning with students with intellectual disability, due to the challenges that intellectual disability imposes on them. The current study investigated the reality of the e-learning of Saudi students with intellectual disability during the Covid -19 pandemic from the perspective of their teachers. **Methodology:** Data was collected from 316 participants via an electronic questionnaire consisting of three components: 1- Learning process. 2- Student performance. 3- Parental participation. **Results:** The results showed that the participants' views regarding the three components were positive, with parental participation ranking first, followed by the learning process, and then students' performance. **Conclusion:** The study presented a number of recommendations in light of the current results.

Keywords: E-learning, Intellectual disability (ID), Students with intellectual disabilities (ID), Teachers of students with intellectual disabilities, Covid-19.

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Introduction

As soon as it emerged, the Covid-19 pandemic turned into a global health crisis that pandemic provoked an unprecedented health and education emergency. Reports from the Inclusive Education Initiative (IEI, 2020; Zyoud & Al-Jabi, 2020) asserting that the pandemic at its peak caused the closure of educational institutions in 180 countries. As a result, between 85% and 91% of learners would be deprived of education worldwide (IEI, 2020). In fact, this percentage rises to 99% in low-income countries (Al-Saidi & Al-Rumhi, 2023).

Decision makers, therefore, found themselves facing a challenge imposed by the new reality without prior warning. A quick response was necessary to implement a practical mechanism to provide educational institutions with comprehensive national plans. Distance learning via electronic platforms was used as a viable solution to provide learners with education and to avoid possible educational losses (Lieberman et al., 2020). The Covid-19 pandemic has represented a challenge to equality, as the responsibility to include all students at all levels in e-learning has become a real dilemma even for the highest-performing and most resourceful educational systems. Students with the required technology at their disposal would benefit more from the new mode of education (Hares & Mundy, 2020).

The main motive behind the efforts of countries, including the Kingdom of Saudi Arabia to find just solutions to this educational dilemma stemmed from their commitment to international laws pertaining to the rights of persons with disabilities. According to Article 2 of the "Disability Welfare Law", the Kingdom guarantees the rights of persons with disabilities to access prevention, care, rehabilitation, and education services based on the type and degree of their disability (King Salman Centre for Disability Research, 2000). The Kingdom's 2030 Vision affirms the right of persons with disabilities to have access to appropriate opportunities in education and work by providing them with facilities and tools that guarantee their independence and inclusion into society (Saudi Vision 2030, 2020). Furthermore, the 'Students with Special Needs Education System', issued in 2016, stipulated in Article 7 that students with disabilities must be provided with appropriate educational alternatives (Al-Watan Online, 2016).

E-Learning

E-learning is a technical system that provides students with formal education in virtual classrooms via the wireless network "the Internet" through electronic tablets (Zare et al., 2016). It was first used in 1960 when the University of Illinois in the USA developed a classroom equipped with connected computers that enabled students to listen to recorded lectures. This mode of delivering instruction did not witness much development until the beginning of the 1990s when the American University of Phoenix began to pay attention to virtual education. The first campus to deliver its lectures via the Internet appeared in 1994 (Salamat et al., 2018). At the beginning of the third millennium, an information explosion began with the fourth generation technology combining the main characteristics of the Internet that makes the retrieval of huge amounts of interactive information and treatments possible (Abdel-Raouf, 2014). This innovation enriched e-learning resources and captured more learners, especially those with ability and motivation (Elghablan & Al-Jasim, 2022). For this reason, education in the twenty-first century was called smart media network education. Statistics indicated that 18 million male and female students around the world were enrolled in e-learning programs in 2008 (Salamat et al., 2018). One of the advantages of e-learning is the provision of education and training opportunities unlimited in time and place through interactive virtual environments. It also provides individual learning proper to the learner's abilities and preferences. Furthermore, it raises teachers' competencies in employing educational technologies and developing students' skills in line with future technology requirements (Kumar et al., 2011; Marsini & Adhi, 2022; Riatun & Alvin, 2023; Zare et al., 2016; Marsini & Adhi, 2022).

E-Learning and Students with Intellectual Disabilities

Students with intellectual disabilities are students with poor academic abilities due to the limitations imposed on them by the nature of their disability and its impact on their mental abilities in the areas of thinking, cognition, attention, and retention. Thus, they are in constant need of continuous guidance, intensive training, and clear instructions (Cagiltay et al., 2019). E-learning makes possible the provision of educational content through

various media that make use of all human senses. It can be adapted to fit the individual needs of learners with intellectual disabilities in order to enhance their learning, facilitate their behavioural therapy, maintain their attention, and reduce outbursts of defeatism and anger due to repeated failures. The virtual simulation and feedback offered by e-learning can also be employed in training learners with intellectual disabilities on cognitive, social, and independence skills (Abuzaid, 2021; Pirani & Mukundan, 2014).

In order for students with intellectual disabilities to access e-learning, they should be provided with two basic types of access: technical access, i.e., accessing the e-learning platform, and educational access, i.e., accessing the educational content according to standards that guarantee acquisition (Guglielman, 2010).

E-Learning and the Covid-19 Pandemic

E-learning has gained worldwide unprecedented importance due to the forced shutdown imposed by the Covid-19 pandemic. Despite the challenges faced by countries in varying degrees in the implementation of e-learning, it has made tremendous progress in a short period of time that may take much longer time under normal circumstances. By mid-April 2020, 94% of students in the world were affected by the pandemic, which represented 58.1 billion students at all levels of education. Although international reports have indicated that poor countries have failed to successfully shift all their students to e-learning, this shift has achieved good results globally (United Nations Educational, 2020), which made many researchers and academics talk about the start of a new era of e-learning based on the results of the coercive experience.

Students with Intellectual Disabilities and the Covid-19 Pandemic

The WHO and the Centers for Disease Control and Prevention have determined that people with intellectual disabilities are at increased risk of infection with Covid-19 due to barriers to accessing prevention and hygiene information, their need for physical contact with those around them, as well as their biological and immunological features that make them highly sensitive to infection (International Labour Organization, 2019). Concerns about the

impact of the pandemic on students with intellectual disabilities were not only health concerns, but also included developmental and educational concerns. Many of these students lost access to educational and rehabilitative services, causing weakness in many acquired skills, which virtual communication was not a viable alternative to maintain and enhance (Constantino, 2020).

E-Learning of Students with Intellectual Disabilities during the Covid-19 Pandemic

E-learning was used before the pandemic as assistive technology to support the educational content and the acquisition of some self-learning skills (Al-Maliki & Shaaban, 2020). The pandemic has changed the context of employing e-learning from just an assistive technology to a fully approved mode of education, which led some educational institutions to rush to find solutions to fill the gaps expected to occur as a result of this sudden shift. For example, St. Colita School for special education in the American State of Wisconsin provided individual services to 270 students, where teachers and related services providers such as behavioural, physical, and speech therapists delivered individual sessions via the Internet and guided families to include their children in everyday activities and independent living that they previously practiced at school. This achievement was very effective, although the efforts made did not result in the participation of more than 50% of the students (Stein & Strauss, 2020). In fact, the majority of educators and professionals of intellectual disability recommend that 'the return to school' be among the top priorities of the United Nations Development Program to restore and enhance the abilities of these students while adhering to health and preventive measures in schools (Hares & Mundy, 2020).

E-Learning and Intellectual Education Teachers during the Covid-19 Pandemic

There is no doubt that the role of the teacher is the basis for the success of student learning that it outweighs its importance and effectiveness in the physical milieu of the schools. The shift from the classroom-based environment to e-learning does not diminish the role of teachers. Rather, it increases its importance to provide intensive guidance to enhance self-learning (Reimers &

Schleicher, 2020). While the educational emergency caused by the Covid-19 pandemic affected millions of learners, it also affected nearly 63 million teachers, many of whom were unsure of their roles and responsibilities, struggled to connect with learners through e-learning applications, and faced a range of training and technological obstacles. Another obstacle reported by Special Education teachers was the limited ability of families to support teacher interaction with their children with disabilities in the home environment (IEI, 2020).

The complete reliance on e-learning increased the burden on teachers, as they were required to participate in providing what the who termed as 'psychological first aid', i.e., psychosocial support of students with disabilities (Hares & Mundy, 2020). They were also concerned with understanding how to facilitate e-learning and dealing with educational loss that they were unfamiliar with (IEI, 2020). The American National Association for Special Education has therefore highlighted the need to provide Special Education teachers with virtual training to reach strategic solutions that help facilitate the e-learning process and guarantee that students with disabilities receive the highest possible effectiveness (Zirardo, 2020).

Statement of Problem

Students with intellectual disabilities are among the most affected groups during the Covid-19 pandemic, as e-learning during the pandemic widened the educational gap between them and their peers (IEI, 2020). Despite the results of studies that demonstrated the effectiveness of employing educational technology in teaching students with intellectual disabilities in the classroom (Lynch, 2017), e-learning as employed during the pandemic was not an assistive technology. Rather, it was a complete shift towards e-learning for entire semesters and years of study which, affected the academic and social skills the students were expected to acquire (Stein & Strauss, 2020).

Study Objectives

This study aims to provide an objective assessment of the reality of e-learning through the application of the 'educational platform' for students with intellectual disabilities during a school closure caused by the Covid-19 pandemic

from the perspective of intellectual education teachers who are responsible for the education and evaluation of these students and who are best able to assess the effectiveness of the e-learning experience during the pandemic.

Research Questions

- 1 - What is the reality of the learning process during the e-learning of students with intellectual disabilities during the Covid-19 pandemic from the perspective of their teachers?
- 2 - What is the reality of students' performance during the e-learning of students with intellectual disabilities during the Covid-19 pandemic from the perspective of their teachers?
- 3 - What is the reality of parental participation during the e-learning of students with intellectual disabilities during the Covid-19 pandemic from the perspective of their teachers?

Materials and Methods

The current study used the descriptive-analytical method that relies on the study of reality to accurately describe a phenomenon, its frequency, and its connection to other phenomena. This method relies on correlation to explore the nature of relationships between two or more variables and interpret them numerically (Obeidat et al., 2014). The study sample consisted 316 intellectual education teachers in Riyadh who voluntarily participated. Table 1 provides a description of the participants.

Table 1

Description of the participants

Variable		Frequency	%
Qualification	Bachelor	217	68.7
	Diploma	33	10.4
	MA	55	17.4
	PD.D	11	3.5

Cont. Table 1*Description of the participants*

Variable		Frequency	%
Gender	Males	147	46.5
	Females	169	53.5
Type of school	Public	286	90.5
	Private	30	9.5
	No	52	16.5
Training	Up to 3 courses	83	26.3
	From 4 to 6 courses	56	17.7
	More than 6 courses	125	39.6
Experience	Up to 5 years	50	15.8
	From 6 to 10 years	107	33.9
	From 11 to 15 years	67	21.2
	More than 15 years	92	29.1
Total		316	100

A questionnaire consisting of two parts was developed to collect the required data. The first part requested personal data concerning participants' gender, qualification, type of school, teaching experience, and training in the field of e-learning. The second part included 37 items distributed among three dimensions: the reality of the learning process (15 items), the reality of students' performance (10 items), and the reality of parental participation (12 items).

To establish the face validity of the questionnaire, the preliminary version that included 43 items was content validated by seven referees, and all faculty members in departments of special education in four Saudi universities. They were asked to judge the extent to which items were clear and belonged to their dimensions. Based on their feedback, some items were either deleted or modified, leaving the questionnaire with 37 items. Furthermore, the internal consistency of the questionnaire was established by computing correlations

among items and their dimensions. To achieve this, the questionnaire was administered to a pilot sample of 30 male and female teachers from outside the main sample. Also, correlations between the total scores of the dimensions and the total score of the questionnaire were computed. These data are presented in Tables 2 and 3.

Table 2

Correlations among items and dimensions (N=30)

No.	Correlation with the dimension	Correlation with the total questionnaire	No.	Correlation with the dimension	Correlation with the total questionnaire	No.	Correlation with the dimension	Correlation with the total questionnaire
The 1st dimension: the learning process			The 2nd dimension: students' performance			The 3rd dimension: parental participation		
1	0.785**	0.734**	1	0.697**	0.626**	1	0.781**	0.678**
2	0.617**	0.577**	2	0.768**	0.733**	2	0.768**	0.667**
3	0.697**	0.562**	3	0.726**	0.613**	3	0.802**	0.746**
4	0.663**	0.539**	4	0.694**	0.553**	4	0.727**	0.674**
5	0.683**	0.687**	5	0.666**	0.691**	5	0.735**	0.656**
6	0.699**	0.657**	6	0.572**	0.531**	6	0.575**	0.506**
7	0.736**	0.692**	7	0.743**	0.655**	7	0.793**	0.765**
8	0.679**	0.583**	8	0.632**	0.574**	8	0.810**	0.719**
9	0.747**	0.666**	9	0.707**	0.683**	9	0.683**	0.631**
10	0.650**	0.637**	10	0.731**	0.728**	10	0.829**	0.714**
11	0.702**	0.715**				11	0.799**	0.632**
12	0.757**	0.676**				12	0.659**	0.526**
13	0.792**	0.645**						
14	0.712**	0.618**						
15	0.631**	0.567**						

** Significant at the 0.01 level

It is clear from Table 2 that all correlations were significant at the level of 0.01, hence indicating that the questionnaire had high internal consistency.

Table 3

Correlations among dimensions and the questionnaire's total score

No.	Dimension	Correlation Coefficient
1	Dimension 1: The learning process	0.883**
2	Dimension 2: Students' performance	0.901**
3	Dimension 3: Parental participation	0.847**

**** Significant at the 0.01 level**

It is evident from Table 3 that all correlations among dimensions and the questionnaire's total score were significant at level 0.01, which indicated high internal consistency.

The reliability of the questionnaire was established by computing alpha coefficients for the scores of the respondents in the pilot sample. Results were as shown in Table 4.

Table 4

Alpha coefficients of reliability

No.		No. of items	Reliability coefficients
1	Dimension 1: The learning process	15	0.902
2	Dimension 2: Students' performance	10	0.897
3	Dimension 3: Parental participation	12	0.882
	Total	37	0.917

Data in Table 4 shows that the reliability coefficients of the three dimensions ranged between 0.88 and 0.90. The reliability coefficient of the questionnaire as a whole was 0.92. All the obtained values were high, indicating that the questionnaire was quite reliable. The responses were classified into five levels of equal range (Obeidat et al., 2014) as shown in Table 5.

Table 5*Degrees of agreement and distribution of levels*

No.	Description	Degree of agreement	Mean range
1	Strongly agree	5	From 4.21 to 5.00
2	Agree	4	From 3.41 to 4.20
3	Moderately agree	3	From 2.61 to 3.40
4	Disagree	2	From 1.81 to 2.60
5	Strongly disagree	1	From 1.00 to 1.80

Results

The reality of the e-learning of students with intellectual disabilities during the Covid-19 pandemic from the perspective of their teachers with means and standard deviations of responses to the questionnaire items were calculated. See Table 6.

Table 6*Means and standard deviations of the reality of e-learning of students with intellectual disabilities during the pandemic*

No.	Dimension	M	SD	Degree of agreement	Order
1	The learning process	3.58	0.447	Agree	2
2	Students' performance	3.36	0.434	Moderately agree	3
3	Parental participation	3.81	0.628	Agree	1
	Total mean	3.59	0.391	Agree	

It is clear from Table 6 that the participants agreed (M=3.59) to the effectiveness of the e-learning of students with intellectual disabilities during the Covid-19 pandemic. This finding is consistent with the Abuzaid's study (2021) where teachers displayed positive attitudes toward using e-learning with their students with intellectual disabilities during the pandemic. However, it is clear that parental participation came in the first place with a mean of 3.81, meaning 'agree' followed by the learning process (M=3.58), meaning

'agree', and students' performance ($M=3.36$), meaning 'moderately agree'. A possible explanation for this finding is that e-learning captured the attention of parents and the support of the concerned authorities, while students with intellectual disabilities were not adequately prepared to shift to this mode of delivering instruction.

The reality of the learning process during the e-learning of students with intellectual disabilities during the Covid-19 pandemic from the perspective of their teachers using frequencies, percentages, means, and standard deviations of the items of the reality of the learning process dimension were calculated. See Table 7.

Table 7

Responses to the reality of the learning process dimension in a descending order

No.	Statement	Frequency	Degree of agreement					Mean	Standard deviation	Deg. of agreement	order
			Strongly disagree %	Disagree	Moderately agree	Agree	Strongly agree				
10	Many of the teaching tasks used with students with intellectual disabilities need to be implemented face to face.	f	4	12	74	61	165	4.17	.998	A	1
		%	1.3	3.8	23.4	19.3	52.2				
7	I consider the individual needs of students with intellectual disabilities in e-learning	f	11		13		98	4.09	1.04	A	2
		%	3.5	4.1	17.1	31.0	44.3				
3	I quickly became familiar with using the educational platform	f	5	16	70	114	111	3.98	0.96	A	3
		%	1.6	5.1	22.2	36.1	35.1				

Cont. Table 7
Responses to the reality of the learning process dimension in a descending order

No.	Statement	Frequency	Degree of agreement				Mean	Standard deviation	Deg. of agreement	order	
			Strongly disagree %	Disagree	Moderately agree	Agree					Strongly agree
5	My performance in teaching students with intellectual disabilities via the platform improved with time	f	9	28	69	92	118	3.89	1.09	A	4
		%	2.8	8.9	21.8	29.1	37.3				
1	I'm trained well to use the platform in teaching students with intellectual disabilities	f	11	24	75	105	101	3.83	1.07	A	5
		%	3.5	7.6	23.7	33.2	32.0				
2	I have the tools required for using the platform, e.g., Internet connection, tablet, visual and audio-support devices	f	17	26	94	73	106	3.71	1.17	A	6
		%	5.4	8.2	29.7	23.1	33.5				
12	It was not easy to transform the curriculum's traditional content into an electronic content	f	14	65	81	70	86	3.47	1.21	A	7
		%	4.4	20.6	25.6	22.2	27.2				
4	At the onset I was not sure of my ability to teach students with intellectual disabilities via the platform	f	18	35	116	75	72	3.46	1.13	A	8
		%	5.7	11.1	36.7	23.7	22.8				
11	I think teaching students with intellectual disabilities via the platform is demanding	f	14	70	86	59	87	3.43	1.23	A	9
		%	4.4	22.2	27.2	18.7	27.5				

Cont. Table 7*Responses to the reality of the learning process dimension in a descending order*

No.	Statement	Frequency	Degree of agreement					Mean	Standard deviation	Deg. of agreement	order
			Strongly disagree %	Disagree	Moderately agree	Agree	Strongly agree				
9	I don't mind pursuing teaching students with intellectual disabilities via the platform	f	35	48	70	77	86	3.42	1.33	A	10
		%	11.1	15.2	22.2	24.4	27.2				
6	I develop an individualized educational program for every student	f	23	48	94	79	72	3.41	1.20	A	11
		%	7.03	15.2	29.7	25.0	22.8				
15	I have difficulty assessing students via the platform	f	25	69	77	67	78	3.33	1.28	MA	12
		%	7.09	21.8	24.4	21.2	24.7				
14	I have difficulty teaching concepts to students via e-learning	f	20	78	86	58	74	3.28	1.24	MA	13
		%	6.3	24.7	27.2	18.4	23.4				
8	I think teaching students with intellectual disabilities via the platform was effective	f	48	54	89	61	64	3.12	1.33	MA	14
		%	15.2	17.1	28.2	19.3	20.3				
13	I can't achieve all the curriculum's objectives via e-learning	f	35	83	86	49	63	3.07	1.29	MA	15
		%	11.1	26.3	27.2	15.5	19.9				
Total mean								3.58	0.447	SA	

SD = strongly disagree, D = disagree, MA = moderately agree, A = agree, SA = strongly agree

It is clear from Table 7 that the respondents agreed with the reality of the learning process dimension (M=3.58). Respondents' views varied with means ranging between 3.07 and 4.17, which indicated agreement ranging from moderate agreement to agreement. The item that obtained the highest mean (M=4.17) was item 10 'Many of the teaching tasks used with students with intellectual disabilities need to be implemented face to face. This indicates that teachers did not see e-learning as a good fit for teaching students with intellectual disabilities. This finding concurs with Alshamri's study (2021) which reported e-learning as unsuitable for meeting the needs of students with intellectual disabilities. This finding can also be explained in light of the fact that e-learning has not been adequately regulated due to the rapid shift during the pandemic. This is in line with Abuzaid's study (2021) which documented significant weakness in employing instructional technology by teachers because of poor infrastructure and poor support resources.

The reality of students' performance during the e-learning of students with intellectual disabilities during the Covid-19 pandemic from the perspective of their teachers using frequencies, percentages, means, and standard deviations of the items of the reality of students' performance dimension were calculated. See Table 8.

Table 8
Responses to the reality of the students' performance dimension in a descending order

No.	Statement	Frequency	Degree of agreement					Mean	Standard deviation	Deg. of agreement	Order
			Strongly disagree %	Disagree	Moderately agree	Agree	Strongly agree				
8	Some students with intellectual disabilities were	f	5	32	67	74	138	3.97	1.09	A	1
	unable to attend the virtual sessions without the company of a family member	%	1.6	10.1	21.2	23.4	43.7				

Cont. Table 8*Responses to the reality of the students' performance dimension in a descending order*

No.	Statement	Frequency	Degree of agreement					Mean	Standard deviation	Deg. of agreement	Order
			Strongly disagree %	Disagree	Moderately agree	Agree	Strongly agree				
10	Students with intellectual disabilities are better taught in person	f 25	37	67	51	136		3.75	1.33	A	2
		% 7.9	11.7	21.2	16.1	43.0					
5	It is difficult to get the attention of students with intellectual disabilities during e-learning	f 8	49	106	69	84		3.54	1.12	A	3
		% 2.5	15.5	33.5	21.8	26.6					
9	E-learning increases the gap between students with intellectual disabilities and their peers	f 22	74	68	68	84		3.37	1.29	MA	4
		% 7.0	23.4	21.5	21.5	26.6					
7	Some students with intellectual disabilities stop attending the virtual sessions	f 31	66	76	69	74		3.28	1.30	MA	5
		% 9.8	20.9	24.1	21.8	23.4					
1	Students with intellectual disabilities can complete the tasks required of them	f 21	55	122	66	52		3.23	1.12	MA	6
		% 6.6	17.4	38.6	20.9	16.5					
4	The majority of students with intellectual disabilities achieve most of the learning outcomes via e-learning	f 24	70	101	65	56		3.19	1.19	MA	7
		% 7.6	22.2	32.0	20.6	17.7					
6	Many students with intellectual disabilities delay academically during e-learning	f 20	94	82	70	50		3.11	1.18	MA	8
		% 6.3	29.7	25.9	22.2	15.8					

Cont. Table 8*Responses to the reality of the students' performance dimension in a descending order*

No.	Statement	Frequency	Degree of agreement					Mean	Standard deviation	Deg. of agreement	Order
			Strongly disagree %	Disagree	Moderately agree	Agree	Strongly agree				
2	All the learning outcomes expected of students with intellectual disabilities are achieved via e-learning	f	31	70	115	43	57	3.08	1.21	MA	9
		%	9.8	22.2	36.4	13.6	18.0				
3	Some students with intellectual disabilities achieve better levels of performance via e-learning	f	36	74	91	61	54	3.07	1.25	MA	10
		%	11.4	23.4	28.8	19.3	17.1				
Total mean								3.36	0.434	MA	

SD = strongly disagree, D = disagree, MA = moderately agree, A = agree, SA = strongly agree

As shown in Table 8, the participants moderately agreed (M=3.36) with the reality of the performance of students with intellectual disabilities in e-learning during the Covid-19 pandemic. The participants' views concerning this dimension item varied with means ranging between 3.07 and 3.97, indicating agreement ranging from moderate agreement to agreement. The item that achieved the highest mean (M=3.97) was 'Some students with intellectual disabilities are unable to attend the virtual sessions without the company of a family member'. This finding is consistent with the study of Gin et al. (2021), which reported that e-learning added more educational challenges for students with intellectual disabilities, and the study of Alshamri (2021), which reported a negative impact of closure during the pandemic on the performance of students with intellectual disabilities.

The reality of parental participation during the e-learning of students with intellectual disabilities during the Covid-19 pandemic from the perspective of their teachers using frequencies, percentages, means, and standard deviations of the items of the reality of the learning process dimension were calculated. See Table 9.

Table 9

Responses to the reality of the learning process dimension in a descending order

No.	Statement	Frequency	Degree of agreement					Mean	Standard deviation	Deg. of agreement	Order
			Strongly disagree	Disagree	Moderately agree	Agree	Strongly agree				
2	Parents' participation contributes to the success of the e-learning of their children	f	8	9	44	77	178	4.29	0.98	SA	1
		%	2.5	2.8	13.9	24.4	56.3				
7	Parents have good means of communication with teachers, e.g., phone, WhatsApp, Telegram	f	7	16	50	106	137	4.11	0.993	A	2
		%	2.2	5.1	15.8	33.5	43.4				
3	Parents are provided with instructions for dealing with the educational platform	f	6	23	60	90	137	4.04	1.04	A	3
		%	1.9	7.3	19.0	28.5	43.4				
4	Parents are told about the role and responsibilities expected of them to participate in the success of the e-learning of their children	f	5	23	68	96	124	3.98	1.02	A	4
		%	1.6	7.3	21.5	30.4	39.2				

Cont. Table 9*Responses to the reality of the learning process dimension in a descending order*

No.	Statement	Frequency		Degree of agreement				Mean	Standard deviation	Deg. of agreement	Order
		Strongly disagree %	Disagree	Moderately agree	Agree	Strongly agree					
8	Teachers create consultation groups to guide parents, e.g., WhatsApp groups, Telegram	f	12	32	46	101	125	3.93	1.13	A	5
		%	3.8	10.1	14.6	32.0	39.6				
5	Parents are provided with daily and weekly work plans	f	9	27	68	111	101	3.85	1.05	A	6
		%	2.8	8.5	21.5	35.1	32.0				
12	Some parents have called for their children to return to classroom-based education	f	20	41	74	58	123	3.71	1.28	A	7
		%	6.3	13.0	23.4	18.4	38.9				
1	Most parents are able to follow their children via the educational platform	f	15	34	91	80	96	3.66	1.16	A	8
		%	4.7	10.8	28.8	25.3	30.4				
10	The school administration provides parents with regular reports of their children's' progress	f	12	36	87	96	85	3.65	1.11	A	9
		%	3.8	11.4	27.5	30.4	26.9				
6	Parents cooperate to involve their children in home activities to achieve educational objectives	f	13	34	97	83	89	3.64	1.12	A	10
		%	4.1	10.8	30.7	26.3	28.2				

Cont. Table 9*Responses to the reality of the learning process dimension in a descending order*

No.	Statement	Frequency	Degree of agreement					Mean	Standard deviation	Deg. of agreement	Order
			Strongly disagree %	Disagree	Moderately agree	Agree	Strongly agree				
11	Some parents think that e-learning is ineffective for their children	f	16	56	86	80	78	3.47	1.18	A	11
		%	5.1	17.7	27.2	25.3	24.7				
9	The school administration holds organized virtual meetings with parents	f	25	59	73	87	72	3.39	1.24	MA	12
		%	7.9	18.7	23.1	27.5	22.8				
Total mean								3.81	0.628	A	

SD = strongly disagree, D = disagree, MA = moderately agree, A = agree, SA = strongly agree

It can be seen from Table 9 that the participants agreed (M=3.81) with the reality of parental participation in the e-learning of students with intellectual disabilities during the Covid-19 pandemic. Their views concerning this participation varied with means ranging from 3.39 to 4.29, which indicates agreement ranging from the moderate agreement, agreement to strong agreement. The item that achieved the highest mean (M=4.29) in this dimension was 'Parents' participation contributes to the success of the e-learning of their children'. This reveals that parents are well aware of the importance of their effective participation in the success of e-learning and the achievement of the greatest possible benefit for their children. This finding is inconsistent with the studies of Alshamri (2021) and Abuzaid (2021) that did not refer to the weak participation of parents as one of the challenges that faced the education of these students electronically during the pandemic. Conversely, the study of the Inclusive Education Initiative (IEI, 2020) reported

that parents' weak participation was among the most important educational challenges during the pandemic.

Discussion

A number of studies were conducted globally exploring the e-learning of students with disabilities, including the study conducted by the International Trust Fund for the Inclusive Education Initiative (IEI, 2020) to investigate the outcomes of teaching students with disabilities during the Covid-19 pandemic. Data were collected from various sources, including a survey conducted by the initiative that included 3,993 responses, five group discussions with teams representing World Bank countries around the world, and data from the Global Partnership for Education (GPE). The study identified a set of challenges that faced the e-learning of students with disabilities, the most important of which are: poor teacher training, lack of financial capabilities, and poor parental and family participation during the pandemic. The study also presented suggestions to maintain the continuity of e-learning using the Universal Design of Learning (UDL), the most important of which are preparing the comprehensive teacher, benefiting from community services to support families, and ensuring safety when schools reopen. At the University of Arizona, Gin et al. (2021) conducted a study to explore the impact of the rapid shift to e-learning on students with disabilities during the Covid-19 pandemic. Interviews were conducted with 66 university students, 55% of them have learning difficulties, and 65% have mild intellectual disabilities. By using inductive coding, the results showed that the e-learning environment presented new challenges to these students without appropriate facilities.

Among the studies conducted in the local environment, the qualitative study by Al-Shamri (2021) explored the challenges faced by teachers in the e-learning of children with intellectual disabilities during the Covid-19 pandemic in the northern region of the Kingdom of Saudi Arabia. Semi-structured interviews were conducted with 15 teachers. The results showed that the closure periods negatively affected children with intellectual disabilities, as e-learning was not found to fit these students. The most prominent challenges of the e-learning of these students were poor connection and poor technical

expertise of teachers and professionals. Abuzaid (2021) also conducted a study to identify the attitudes of teachers of children with intellectual disabilities towards e-learning during the pandemic using the descriptive method. The sample consisted of 100 teachers who responded to an electronic questionnaire. The results revealed that special education teachers displayed a positive attitude towards using e-learning with their students during the pandemic regarding flexibility in planning, implementing, and evaluating lessons. However, the results showed a noticeable limitation in teachers' use of instructional technology due to the poor infrastructure and lack of resources. In another study, Al-Maliki and Shaaban (2020) used the descriptive method to explore the reality of the e-learning of students with intellectual disabilities in the Saudi city of Jeddah from the teachers' perspective. The instrument used for data collection included 31 items measuring three domains: requirements, skills, and obstacles. The sample consisted of 95 male and 76 female teachers. The results showed that teachers' rating of the e-learning employment requirements was high. However, statistically, significant differences were found by gender, teaching experience, and training.

Conclusion

The results of the current study showed that the participating teachers agreed with the effectiveness of the e-learning of students with intellectual disabilities during the Covid-19 pandemic. Parental participation ranked first with a total mean of 3.81, which indicated agreement. There was variation in the participant's responses to the individual items with means ranging from 3.39 to 4.29, i.e., ranging from moderate agreement, agreement to strong agreement. The learning process ranked second with a total mean of 3.58, which indicated agreement. There was variation in the participant's responses to the individual items with means ranging from 3.07 to 4.17, i.e., ranging from moderate agreement to agreement. Students' performance ranked third with a total mean of 3.36, which indicated moderate agreement. There was variation in the participant's responses to the individual items with means ranging from 3.07 to 3.97, i.e., ranging from moderate agreement to agreement.

Recommendations

The following recommendations are suggested based on these findings:

Enhancing teacher training: It is recommended that teacher training in the field of e-learning for intellectual education teachers be enhanced. This could include providing teachers with additional training opportunities on how to effectively use e-learning tools to support the education of students with intellectual disabilities.

Developing e-learning teaching and performance measures: The study suggests that there is a need to develop a range of e-learning teaching and performance measures. These measures could be used to evaluate the effectiveness of e-learning and to identify areas for improvement.

Extending the use of e-learning: The study also suggests that there is a need to extend the use of e-learning beyond private schools and to bring it to public schools. This could help to ensure that all students, regardless of their socioeconomic background, have access to high-quality e-learning tools and resources.

Overall, the study suggests that e-learning can be an effective tool for educating students with intellectual disabilities, particularly during times of crisis such as the Covid-19 pandemic. However, there is room for improvement, and it is recommended that teacher training be enhanced, e-learning teaching and performance measures be developed, and the use of e-learning be extended to public schools. These recommendations could help to ensure that e-learning is used effectively to support the education of students with intellectual disabilities.

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واقع التعلم الإلكتروني للطلبة ذوي الإعاقة الفكرية في المملكة العربية السعودية أثناء جائحة كوفيد - 19 من وجهة نظر معلمهم

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كلية التربية - جامعة الملك سعود

المملكة العربية السعودية

الملخص

الأهداف: تحول النظام التعليمي في المملكة العربية السعودية إلى التعلم الإلكتروني في أثناء جائحة كوفيد- 19، كمعظم الأنظمة التعليمية في جميع أنحاء العالم. وما تزال بعض الشكوك حول مدى نجاح استخدام التعلم الإلكتروني مع الطلبة ذوي الإعاقة الفكرية قائمة حتى الآن بسبب التحديات التي تفرضها الإعاقة الفكرية على ذويها. وتهدف هذه الدراسة إلى تعرّف واقع التعلم الإلكتروني للطلبة ذوي الإعاقة الفكرية في السعودية خلال جائحة كوفيد - 19 من وجهة نظر معلمي ومعلمات التربية الفكرية. **المنهجية:** جُمعت بيانات الدراسة من خلال استبانة إلكترونية، شارك فيها 316 معلماً ومعلمة، ضمن ثلاثة محاور: 1 - عملية التعلم. 2 - أداء الطلبة. 3 - مشاركة أولياء الأمور. **النتائج:** أظهرت النتائج أن آراء المشاركين كانت إيجابية على جميع المحاور، حيث جاءت مشاركة أولياء الأمور في المرتبة الأولى، ثم عملية التعلم، ثم أداء الطلبة. **الخلاصة:** قدمت هذه الدراسة عدداً من التوصيات في ضوء النتائج الحالية. **الكلمات المفتاحية:** التعلم الإلكتروني، الإعاقة الفكرية، الطلبة ذوو الإعاقة الفكرية، معلمو التربية الفكرية، كوفيد-19.

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