

تصور المعلمين في قطاع غزة حول فاعلية تطبيق نظام التعلم عن بعد الإنترنت خلال جائحة كورونا واستمراره في المستقبل

Teachers' Perception in the Gaza-Strip about the Effectiveness of Implementing the Online Distance Learning System during the Corona Pandemic and its Continuity in the Future

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المخلص:

تهدف هذه الدراسة إلى التحقق من فعالية تطبيق نظام التعلم عن بعد خلال جائحة كورونا في تحقيق أهداف التعلم واستمراره، وتحديد إلى أي مدى يمكن الحفاظ على التعلم عن بعد كنموذج بديل للتعليم المباشر -وجهاً لوجه- وذلك من وجهة نظر المعلمين في قطاع غزة بفلسطين، ولتحقيق أهداف الدراسة، صممت الباحثتان أداة دراسة (استبيان) من خلال برنامج جوجل فورم، وبعد خضوعها لاجراءات التحكيم تم إرسالها إلكترونياً إلى جميع المعلمين الذين أنشأوا فصولاً افتراضية في الفترة من 2020/8/21 إلى 2021/1/13 في مدارس مدينة غزة، وقد جاءت الردود على الاستبيان من (195) معلماً ونسبة (6.5%) من مجتمع الدراسة والبالغ (3000) معلم ومعلمة. واشتمل الاستبيان على (27) سؤالاً مغلق الإجابة ويستغرق استكمالها (5) دقائق تقريباً. بالإضافة إلى سؤال متعدد الاختيارات حول إمكانية تحقيق استمرارية تطبيق نظام التعلم عن بعد في المستقبل. ومن أهم نتائج الدراسة: "فاعلية تطبيق التعلم عن بعد في المدارس الفلسطينية في قطاع غزة" قد جاءت بدرجة متوسطة من وجهة نظر المعلمين. حيث تراوح الوسط الحسابي للأبعاد الأربعة بين (2.8 - 3.8) وأعلى هذه الأبعاد كان "فاعلية منصات التعلم في التعلم عن بعد عبر الإنترنت" وأقل هذه الأبعاد كان "فاعلية أنشطة التعلم في التعلم عن بعد عبر الإنترنت". كما أن هناك (79%) من المشاركين يعتبرون نظام التعلم عن بعد غير مناسب وفي نفس الوقت بديل ضعيف جداً لنظام التعليم المباشر في مدارس غزة، لذلك من الصعب الاستمرار في تطبيق هذا النوع من التعليم في المدارس بالمستقبل.

الكلمات المفتاحية: التعلم عن بعد، جائحة كورونا، فاعلية التعلم، استمرارية التعلم.

ABSTRACT:

This study aims to investigate the effectiveness of applying a distance learning system during the Coronavirus pandemic in achieving continuing education, and determining to what extent it is possible to sustain distance learning as a replacement model for direct/face-to-face education from the teachers' point of view. To achieve the objectives of the study, the two researchers used a purposive online survey for the teachers in the Gaza city schools who created virtual classes in the period from 21/8/2020 to 13/1/2021. The responses for the survey were from (195) teachers at a percentage of (6.5%) of the study population; (3000) teachers. The survey consisted of (27) closed-ended questions and took approximately (5) minutes to complete. In addition to 28 multiple-choice questions about the

possibility of achieving the continuity of distance education in the future. Among the most important results of the study was: “the effectiveness of applying distance learning in Palestinian schools in the Gaza Strip” which was moderate from the teachers’ point of view. The arithmetic mean of the four dimensions ranged between (2.8 – 3.8) and the highest of these dimensions was “The effectiveness of learning platforms in distance learning online” and the least of these dimensions was “The effectiveness of learning activities in distance learning online”. There are (79%) of the participants who regard the distance learning system as not suitable and at the same time a weak alternative to the face-to-face education system in Gaza schools, so it is difficult to continue with implementing this type of education in the future schools.

Keywords: distance learning. corona pandemic, continuing learning, Effectiveness of learning.

Methodological Framework:

INTRODUCTION:

The impact of the Corona pandemic is very bad on the education worldwide (Papapicco, 2020. p10). For example, the pandemic has affected students' learning environment with short notice at a large international scale, and the spread of the pandemic has affected the lives of more than 1.5 billion students and their families in the world. (Setiawan, 2020. p12). Most governments in the world put the immediate policy to ensure continuing curriculum-based learning through implementing remote learning modalities and utilizing E-learning tools, TV, radio, and paper-based take-home materials, in addition to trying to strengthen support to teachers by adjusting their assessment and examination policies. (Viner, et al., 2020. p5) The Palestinian Ministry of Education decided to lock down educational

institutes, together with many facilities within the country, and adopted the option of distance learning. Despite all these smart technologies that we use in this age, the implementation of the distance learning system in schools suddenly due to the pandemic has created many problems and challenges for schools, teachers, and students, especially with bad circumstances governing the lives in the Gaza strip. But, despite the difficult life in the Gaza Strip, there was an increasing technological awareness among teachers, students, and parents, so they refused to stop learning and they had the desire to continue learning through implementing distance learning techniques like other countries.

Study Problem:

The closure of teaching institutions and the introduction of the distance education system on schools interrupted and changed the normal teaching practices, so the educational researchers started to ask and discuss the effectiveness of implementing distance learning as an alternative to direct learning in the school system, and how they can innovate new practices to motivate students remotely and encourage them to learn. In addition to that, they started to research and put plans for education after the pandemic has finished, so this study came to answer these questions:

- First Question: To what extent the effectiveness of online distance learning during the Corona pandemic was achieved in the Gaza strip schools from the views of government school teachers?
- Second Question: Are there statistically significant differences between the teachers' groups regarding the effectiveness of online distance learning during the Corona pandemic concerning gender, educational stages, and teaching fields?
- Third Question: How suitable is a distance learning system as an alternative to the face-to-face education system in future schools from the views of the teachers?

Study hypotheses:

- There are no statistically significant differences at the level of ($p > 0.05$) between the average scores of the teachers' groups about the effectiveness of online distance learning during the Corona pandemic concerning gender (male, female).
- There are no statistically significant differences at the level of ($p > 0.05$) between the average scores of the teachers' groups concerning teaching fields (Scientific, literary, other fields).
- There are statistically significant differences at the level of ($p < 0.05$) between the average scores of the teachers' groups concerning educational stages (the primary, preparatory and secondary stages).

Study Objectives:

- Investigate the effectiveness of applying distance learning during the Corona virus pandemic in achieving continuing education.
- Determining to what extent it is possible to sustain distance learning as a replacement model for direct/ face-to-face education from the point of view of teachers.

Importance of the study:

The importance of this study stems from what follows:

- Contribution to the literature review of the rules of distance learning and e-learning in reducing the negative effects of Corona pandemic outbreak on the learning sector.
- Research study investigates the effectiveness of applying distance learning in schools.
- The study highlights the great role of the Palestinian Ministry of Education in the Gaza strip in facing the problem of closing schools and interrupting education.

- The study highlights how to utilize e-learning tools to introduce effective learning.
- This study will answer an important question that all those who work in the education field ask: Will distant learning, by utilizing modern technology, be a good alternative to learning inside schools and classes in the future?

The second topic: THEORETICAL FRAMEWORK

Distance learning:

They are some differences between distance learning and E-learning.. Distance learning may incorporate online learning, but it may also include other components such as online platforms, television, radio, and paper-based take-home packages, while E-learning can be defined as utilizing just electronic technologies to access educational curriculum outside a traditional classroom. Researchers stated that E-learning is a form of distance learning. They defined E-learning as “the wide set of applications and processes which use available electronic media and tools to deliver vocational education and training” (Abbas et al., 2005.p13). Roblyer & Edwards define distance learning as: “The acquisition of knowledge and skills through mediated information and instructions, encompassing all technologies and other forms of learning at a distance” (Roblyer & Edwards 2000.p15). The authors defined Distance learning in this research as “It is a system in education that is applied remotely by utilizing available electronic media and online tools”.

In the first quarter of 2020 Coronavirus (COVID-19) pandemic swept through the world and affected many aspects of human endeavor: from the decline in industrial production to their adjustments in the academic calendar of all educational institutions globally, so most countries tried to avoid the disruption of learning and offered distance learning as an active option to

face the crisis. Most educational institutions from kindergarten to the university began implementing electronic learning through providing online lessons, lectures, different assessments, and several learning platforms for over 60% of the students around the world, and online channels were introduced in at least 96 countries for continuing learning in this period (e.g. China, Egypt, France, Italy, Japan, Saudi Arabia, United Arab Emirates, Palestine, and United States). (Demuyakor & Technologies, 2020.p9). This sudden switch forced both students and teachers to learn new features of E-learning and learning platforms, such as social communications programs (What's App, Telegram) or learning platforms (Teams, Zoom, Google Classroom, Rawafed). For example, the UAE adopted the LMS and teams platforms in their schools and conducted online virtual classes and recordings, while in Palestine the Palestinian Ministry of Education launched the Rawafed platform of electronic learning, and the pedagogues used social communication tools to mentor students and continue teaching processes. (Malkawi, & Bawa'aneh, 2020. p7).

Distance learning in Palestine through Corona pandemic:

Palestine responded to the warnings of social distancing imposed by the spread of the Coronavirus, and All schools was closed in the West Bank and Gaza Strip, from 5/3/2020 until further notice. It affected (1.3) million children and young people aged from (3 to 17) years. This procedure was done as a preventive measure to combat and contain the spread of COVID-19. To maintain the continuity of the learning of students during the time of emergency, the Palestinian Ministry of Education announced the implementation of an emergency plan to face the unexpected closure of the schools. Most schools published statements to inform students and educators about the adoption of technologies for distance learning. A team of specialists from the Ministry of Education and UNRWA had started to develop electronically educational materials from educational videos, learning cards, and electronic tests and provide various educational services

by creating electronic platforms for students to interact with and complete their educational materials, and prepare, record, and broadcast the lessons on the Voice of Education, live audio (102.7 FM) and through live broadcasts on social media like WhatsApp and Facebook. This was to maintain academic communication between the student and their school, and not to completely stop the educational process. (Ministry,2020) The Ministry has launched an "ONLINE Secondary" project, through cooperation with television and satellite channels, to start broadcasting scientific lessons through it. This project is based on allocating an electronic platform for the ministry that has been activated at this stage, and the project targeted high school students to help them overcome difficulties that they may encounter in reviewing study subjects. (2Ministry,2020). The academic year 2020/2021 began in Palestine schools on 24/8/2020, with only teachers returning to schools; To monitor student learning remotely and to provide various educational activities through electronic educational platforms that provide the Palestinian curriculum via recorded videos that were given by teachers accredited by the Palestinian Ministry of Education, and utilizing the Google classroom, Zoom platform, and networking social platforms such as, WhatsApp and Telegram. It has also activated other learning platforms such as (Ipal-Idunation – Rawafed). (Marbán, 2021. p8)

Forms of distance education in Palestine during the Corona pandemic:

There are different forms of distance learning such as synchronous learning, asynchronous learning, and blended learning, where many learning tools and electronic platforms were employed to apply these types of learning in Palestine schools.

- ***First: synchronous learning:***

Synchronous learning is learning in which the teacher and the learner meet during a direct electronic meeting, as the learning takes place through the provision of lessons to the students directly and the communication

أسية الضمان المعتمدين والمطالب إلى الصفوف الافتراضية في مقررات التربية والتعليم:
معدل الفترة (2020/08/21 وحتى الآن) مساء 2021/01/13 الساعة: 10:00 (ساعة):



Asynchronous Learning is a form of "e-learning" that the students are provided with content regularly and provided support for them through online learning platforms and communication social tools. (Coppola, 2002). This form of learning was implemented in the private Schools of the United

Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) in the Gaza Strip during the corona pandemic, as its forms and tools varied, such as self-learning cards, explanatory videos, supporting videos, electronic assessment cards. (UNRWA.2020).

Self-learning cards:

UNRWA's school teachers and educational supervisors prepared self-learning cards designed to make the student responsible for their learning and achieving their goals. They also addressed the parents as a supporter of their children's learning and who have a major and important role in the absence of traditional learning (UNRWA.2020). The self-learning cards have been designed with a focus on important ideas, main concepts, and basic skills. Teachers in the Gaza Strip continued to utilize self-learning cards through the first semester 2020-2021, and they managed the interaction between students electronically through social media groups (WhatsApp and Telegram), and they provided appropriate evaluation, immediate feedback, monitored common mistakes to students and allowed them to ask questions and inquiries, and also encouraged them to participate in the education of their peers (peer education). This was done to compensate for the absence of direct interaction. (Rawafed,2020).

- 1) **Explanatory Videos:** Each self-learning card is accompanied by a video explaining the lesson, in which a teacher explains the most important ideas and clarifies the concepts and skills contained in the lesson, and answer some questions and do exercises, thus compensating for another part of the absence of direct interaction between the teachers and students in direct education. The student can watch the video several times to further understand, clarify and confirm important ideas. (UNRWA.2020).
- 2) **Supporting Videos:** These are related educational videos that enhance the students' learning and enrich the lesson, and are chosen from

educational platforms or sites that allow the reuse of their videos. The supporting videos may take a different form from the explanatory videos, as the explanatory videos take the form of direct explanations, while the supporting videos take other forms such as educational representative films, cartoon films, educational games, and educational puzzles. (Rawafed platform, 2020).

- 3) **Electronic assessment Cards:** After each lesson, an electronic evaluation card is presented through WhatsApp groups, and it aims to measure students' learning and the extent of their acquisition of concepts and their possession of educational skills. Questions are presented in the form of relevant questions such as multiple-choice, true, or false questions. Students must answer them and send them to the teacher. In turn, the teacher monitors students' grades, identifies common mistakes, and provides required feedback. (Rawafed platform, 2020).

- ***Third: Blended Learning:***

Blended education is education that combines face-to-face education and distance learning and classroom-based tuition with E-learning using interactive multimedia resources. Mayadas and Picciano (2007) define blended learning as a combination of face-to-face and online learning. (Radwan, 2020). The blended learning period in the Gaza strip began at the beginning of November 2020 and was limited only to the preparatory stage and secondary school students. As for primary school students from the first to the sixth grades, they continued to study remotely. The students in the blended learning were divided into two groups, group A and group B so that each group lasts for three days a week, and so half the students attend daily and receive face-to-face education in which they interact directly with the teachers and their colleagues, then continue their education and activities related to their distance learning electronically (2Ministry, 2020).

Evaluation during the pandemic period

In the period of the pandemic, the approach was to evaluate through worksheets so that the student would do them at home and then send them to the school for evaluation in a descriptive manner with qualitative grading (excellent – average – acceptable – weak). The evaluation took various divisions, including midterm evaluation, and monthly evaluations, participation and interaction assessments via WhatsApp groups, flashcard solving, and class-end evaluation. (Radwan, 2020.p8).

METHODS AND PROCEDURES:

This study used a purposive online survey for the teachers in the Gaza strip schools. According to Toepoel (2017), the online survey is very important as the best means for cutting-down costs when carrying out a study, and it effective way of getting authentic data from the online population. (Toepoel, 2017. p2) The objectives of this study were to:

- Investigate the effectiveness of applying distance learning during the Corona virus pandemic in achieving continuing education.
- Determining to what extent it is possible to sustain distance learning as a replacement model for direct/ face-to-face education from the teachers' point of view.

Sample Size and Sampling Technique:

The population for the study was the teachers of the government's schools in Gaza city who created Virtual classes in the period from 21/8/2020 to 13/1/2021 and the number was (3000) teachers (Ministry of Education report /2021). Data Collection and Analysis surveyed online were conducted via google forms and WhatsApp groups because there was a nationwide call for self-isolation and social distancing of all citizens. After a request was made to the Ministry of Education to apply the survey online, the online questionnaire was sent to the whole teachers in Gaza city and

shared via the WhatsApp groups in the Gaza schools. According to the bitly site, the teachers who opened the link were (500) teachers; percentage (16.6%) of population study, but the responses for survey were (195) teachers; percentage (6.5%) of the study population. The survey consisted of (27) closed-ended questions and took approximately (5) minutes to complete. The (27) item questionnaire was divided into four main dimensions: (1) The effectiveness of learning platforms in distance learning online", (2) the effectiveness of learning activities in distance learning online", (3) the effectiveness of teaching activities in distance learning online", and (4) the effectiveness of evaluation and assessment strategies in distance learning online ".In addition to (28) multiple-choice questions about the possibility of achieving the continuity of distance education in the future. To ensure that our survey was as representative as possible of the situation in Gaza city as a whole, we ensured that respondents with a wide variety of characteristics responded to the survey. We achieved this by starting the survey with several screening questions about the teacher's gender, education field, and education stage that they teach.

Table 1: Participant's Distribution

		Frequency	Percentage	Validity	Commulative
Gender	Male teachers	61	31.3	31.3	31.3
	Female Teachers	134	68.7	68.7	100
	Total	195	100	100	
Educational field	Scientific articles	73	37.4	37.4	37.4
	Libraraly subjects	111	56.9	56.9	94.4
	Additional subkects	11	5.6	5.6	100
	Total	195	100	100	
	Primary	63	32.3	32.3	32.3

Educational stage	Preparatory	46	23.6	23.6	55.9
	Secondary	86	44.1	44.1	100
	Total	100	100	100	

According to Table (1), the study sample included (195) male and female teachers. Of them, (131) are female teachers, (68.7%), and (61) male teachers, (31.3%). The sample is distributed at three-educational fields: the percentage of teachers in scientific subjects was (37.4%), while the percentage of teachers in Literary subjects was (56.9%), and the percentage of teachers in Additional subjects was (5.6%). The study also covered all stages of education where the percentage of Secondary stage teachers was the highest (44.1%), the percentage from Primary stage teachers was (32.3%), while the percentage from the Preparatory stage teachers was the lowest (23.6%).

Validity and Reliability of the Questionnaire:

To test the validity of this questionnaire, it was submitted to a group of educational experts. The experts were invited to give their opinion regarding the clarity and appropriateness of individual items and their suitability for gauging the goals designed to measure. Considering their feedback and comments, necessary adjustments were made to nine items, and the instrument in its final version included 27 items. The researchers also calculated the reliability factor by using the Cronbach Alpha equation on an experimental sample composed of (30) participants and reached (0.922) in the four dimensions. The reliability factor for the first dimension "The effectiveness of learning platforms in distance learning online" was (0.787) and its number of items was (7) items. The second dimension "the effectiveness of learning activities in distance learning online " was (0.862) and its number of items was (9) items. The third dimension "the effectiveness of teaching activities in distance learning online" was (0.855) and its number of items was (6) items. The fourth dimension "the

effectiveness of evaluation and assessment strategies in distance learning online " was (0.751) and its number of items was (4) items. These results are considered acceptable for scientific research.

Data Collection Procedure:

The researchers used google forms to design the questionnaire and shared it via WhatsApp groups with all teachers in the Gaza schools. The researchers, therefore, used a simple random sampling technique, where every teacher has an even chance and likelihood of being selected in the sample.

Data Analysis:

The obtained data were coded, validated, and analyzed using SPSS version 24 (IBM, Armonk, NY, USA). Descriptive analysis was applied to calculate the frequencies and proportions. The chi-square test was used to investigate the level of association among variables. A p-value of less than 0.05 was considered statistically significant. Results: a total of (195) teachers participated.

Statistical Standard:

The following equation was adopted for paragraph classification (Al-Rashidi, 2018; Bawaneh, & Moumene, 2020): (Upper limit of scale – Lower limit of scale) / number of required categories: = $(5 - 1) / 3 = 1.3$ (Categories are chosen: (1 – 2.67: Weak (W), 2.68 – 3.5: Medium (M), and 3.5 – 5.0: Strong

Study results and discussion:

To answer the first question of this study: "To what extent effectiveness of online distance learning during the Corona pandemic was achieved in the Gaza strip schools from the views of government school teachers?" The researchers calculated the Mean and the Standard Deviation (SD) of the

instrument items prepared for this purpose, and the results are shown in Tables (2,3,4,5).

Table 2: Mean. Standard Deviation when N = 195

N	Items	Mean	SD	Category
1	The employment of distance learning tools contributed to improving your educational skills	3.6718	1.02292	S
2	Educational structure and material are well organized through E-learning tools and learning platforms	3.5487	0.96934	S
3	Distance learning via electronic educational platforms is an appropriate solution in times of emergency.	4.0103	0.94154	S
4	Educational programs and activities through social media tools add a burden on students, teachers, and parents.	4.1385	0.91736	S
5	Social media help to achieve effective learning because it was easy to use for teachers and students	3.2051	1.17490	m
6	There are clear instructions from the ministry and reliable e-learning platforms and tools to distance learning clearly and smoothly.	3.4872	1.05693	m
7	Students faced several problems in distance learning such as technological resources at home	4.5590	0.71822	S
	Dimension 1	3.8029	0.55022	S

The results in Table (2) show that the overall Mean is about (3.8). This indicates that the effectiveness level of learning platforms in distance learning online was strong (S). From the teachers' point of view, the Category for most items of this dimension was strong, except for (items 5,6) was Medium (M). The highest Mean is (4.5) corresponding to the seventh item "Students faced several problems in distance learning, such as the

lack of technological resources at home". This was followed directly by item number (14) with a Mean of (4.1)," educational programs and activities through social media tools add burden on students, teachers, and parents". Items number (5 and 6) came at the bottom in the order in terms of the Mean with (3.2), and (3.4), respectively. which indicates that social media (WhatsApp, Telegram, and Google classroom educational platforms) didn't help to achieve effective learning because it was not easy to use for teachers and students, and there are no clear instructions from the ministry, which helped the transition to distance learning clearly and smoothly. Lastly, the overall Mean for this dimension indicates that the application of distance learning in that period was difficult and complex, and everyone faced a big problem in applying it, whether students, teachers, or parents.

This may be due to the sudden and rapid transformation of this pattern of learning and the inability of the Ministry to provide reliable educational platforms for learning instead of relying on social media tools that are not properly equipped for education as they are unsafe and do not store files and information accurately.

Table 3. Means, SD, and the Category for the second dimension"

N	Items	Mean	SD	Category
8	Students received adequal training for dealing with distance learning tools and employing them in their learning	2.4103	1.07737	W
9	Distance learning allows students to ask questions, inquiries, and opinions.	3.4667	1.02679	M
10	Distance learning encourages students to analyze, synthesize, and interpret information	3.2000	1.10575	M
11	In distance learning, students acquire the basic skills of research using the scientific method.	3.1795	1.07146	M
12	Distance learning encourages students to analyze, synthesize, and interpret information.	2.8974	1.11214	M

13	Distance learning activities promote holistic learning and the development and critical and creative thinking skills in solving problems.	2.9333	1.10792	M
14	New strategies in distance learning emerge from better knowledge of learner behaviors and study patterns using technology.	3.3385	1.00939	M
15	The diversity of online assignments and activities helps meet students' educational needs.	3.1846	1.05848	M
16	Distance learning enhances students' independence of learning.	3.2615	1.07852	M
	Dimension 2		3.0969	M

The results in Table (3) show that the overall Mean is about (3.2) which indicates that: The effectiveness of learning activities in distance learning online was medium (M). The Categories for most items of this dimension were medium from the teachers' point of view, an exception in item (8) was weak (w) just (4.2)"Students received adequate training on dealing with distance learning tools and employing them in their learning." The highest Mean was (3.4) corresponding to the (9) item, " Distance learning allows students to ask questions, inquiries and express opinions". This was followed directly by item number (14) with a Mean of (3.3), " New strategies in distance learning emerge from better knowledge of learners' behaviors and study patterns using technology. Lastly, looking at the general average for this dimension, we find that it was medium, and this indicates that the educational activities that were used in distance learning were not very effective from the teachers' point of view. Although these activities sometimes encourage the independence of the learner, asking questions and answers, and positive interactions among students, these activities don't develop critical and creative thinking skills. This may be due to the need to train students and teachers on how to use distance learning tools and platforms to deliver effective educational activities.

Table 4. Means, SD, and the Category for the third dimension”

N	Item	Mean	SD	Category
17	The latest development in distance learning has made critical changes in your teaching and learning strategies and methodologies.	3.5897	0.93934	S
18	Individual and group learning strategies are varied through distance learning	3.4000	1.08599	M
19	Teachers can provide instant feedback to students through distance learning tools	3.4718	1.08551	M
20	Achieving integration between theoretical and applied aspects and between curricular and extracurricular activities in distance learning.	3.0000	1.11226	M
21	Teaching and learning strategies and methodologies are constantly adapting because of the new advantages that technology provides.	3.5333	0.94850	S
22	The teacher provides educational support to the student in distance learning more than direct learning.	2.3538	1.12741	W
	dimension 3	3.2248	0.78687	M

The results in Table (4) show that the overall Mean is about (3.2) which indicates that “the effectiveness of teaching activities in distance learning online” was medium (M) from the teachers' point of view, the highest Mean was (3.58) corresponding to the (17) item, “The latest development in distance learning has made critical changes in your teaching and learning strategies and methodologies”. This was followed directly by item number (21) with a Mean of (3.53), " Teaching and learning strategies and methodologies are constantly adapting because of the new advantages that technology provides. Item number (22) came at the bottom order in terms of the Mean with (2.3), "The teacher provides educational support to the student in distance learning more than indirect learning." Looking at the general average for this dimension, we find that it was medium, and this

indicates that the teaching activities carried out by the teacher were not very effective, as one item (22) indicated that the support provided by the teacher to the student in distance learning is much less than the support provided indirect learning. Also, the integration between curricular and extracurricular activities was medium and not strong despite the distance learning techniques being available to all, and this may be due to the teachers' need for more training and raising their level of awareness of distance teaching mechanisms and strategies, and on how to employ distance learning platforms and tools accurately.

Table 5. Means, SD, and the Category for the effectiveness of evaluation and assessment strategies in distance learning online fourth dimensions (N=195)

Items	Mean	SD	
There is high security in the evaluation procedures to determine students' knowledge and progress in their studies through electronic assessment tools	2.6205	1.1127	W
There is credibility in the results of the tests taken during the distance learning periods	2.5231	0.89858	W
The formative assessment activities in distance learning are easy to set up and debug electronically, and their results are reliable	3.0000	1.20992	M
There is a combination of student's self-evaluation and teachers' evaluation in the distance learning period	3.1436	1.03540	M
Assessment strategies in distance learning vary between exams, student participation, and interaction, and solving assignments	3.7026	0.93265	S
dimensions 4	3.9979	0.78988	M

The results in Table (5) show that the overall Mean is about (2.9) which indicates that "The effectiveness of evaluation and assessment strategies in distance learning online" was medium (M) from the teachers'

point of view. The highest Mean was (3.7) corresponding to the (27) item, "Assessment strategies in distance learning vary between exams, student participation, and interaction, and solving assignments". This was followed directly by item number (26) with a Mean of (3.10), "There is a combination of student's self-evaluation and teacher evaluation in the distance learning period. Items number (23,24) came at the bottom order in the mean, item of the (23) was (2.6)". There is high security in the evaluation procedures to determine students' knowledge and progress in their studies through electronic assessment tools" and item (24) was (2.5), "There is credibility in the results of the tests taken during the distance learning period". So, looking at the general average for this dimension, we find that it is closer to the weak than the medium, as there are two weak items (23 and 24). Although the evaluation methods in distance learning varied between exams, self-learning cards, and electronic learning platforms were employed to apply the exams and achieve a degree of credibility. The teachers see that there is no safety or confidence in the electronic procedures for assessments and the extent of students' knowledge and progress cannot be determined because there is no great confidence in the results of electronic tests. The weakness of evaluation strategies in distance learning may be due to the lack of educational platforms to implement evaluation strategies with transparency and credibility, especially in Gaza schools, which are based on the traditional direct evaluation, so this shift came as a shock to teachers, students, and parents who were not accustomed to this type of self and electronic evaluation.

To answer the second question of this study: "Are there statistically significant differences between the teachers' groups about the effectiveness of online distance learning during the Corona pandemic concerning gender, educational stages, and teaching fields?" To answer this question, the following hypotheses were tested:

Hypothesis (1): There are no statistically significant differences at the level of ($p > 0.05$) between the average scores of the teachers' groups about the effectiveness of online distance learning during the Corona pandemic concerning the gender '(male teachers / female teachers). To verify this hypothesis, a "T-test of two independent samples" was used.

Table (6) the results of the T-test for two independent samples

Question		N	Mean	SD	T	Sig
The effectiveness of learning platforms in distance learning online	Teacher female	61	3.8197	.60040	.286	.286
	Teacher male	134	3.7953	.52801		
the effectiveness of learning activities in distance learning online	Teacher female	61	3.0510	.76995	.545	.545
	Teacher male	134	3.1177	.80260		
the effectiveness of teaching in distance learning online	Teacher female	61	3.2486	.73888	.285	.285
	Teacher male	134	3.2139	.81023		
the effectiveness of evaluation and assessment strategies in distance learning online.	Teacher female	61	3.0295	.79569	.376	.376
	Teacher male	134	2.9836	.78980		
(The difference between the two averages is statistically significant at a significance level of $0.05 \geq a$.)						

Table (6) shows that the probability value (Sig.) Corresponding to the "T-test for two independent samples" in all areas of the resolution is greater than the significance level 0.05 and thus it can be concluded that there are no statistically significant differences at the level of ($p > 0.05$) between the average scores of the teachers' groups about the effectiveness of online

distance learning during the Corona pandemic concerning the gender (male teachers, female teachers).

Hypothesis (2): There are statistically significant differences at the level of ($p < 0.05$) between the average scores of the teachers' groups concerning teaching fields (Scientific, literary, other fields). To verify this hypothesis "Enova –test was used.

Table (7) the results of the Angva –test for three independent samples, scientific–literary–other field)

		N	Mean	SD	F	Sig
The effectiveness of learning platforms in distance learning online	Scientific article	73	3.8082	.54618		
	Literary subjects	111	3.7979	.53814	.012	.998
	Additional subjects	11	3.8182	.73427		
	Total	195	3.8029	.55022		
the effectiveness of learning activities in distance learning online	Scientific article	73	3.1005	.75590	1.721	.182
	Literary subjects	111	3.0531	.82141		
	Additional subjects	11	3.5152	.62711		
	Total	195	3.0969	.79115		.711
the effectiveness of teaching in distance learning online	Scientific article	73	3.2671	.68253		
	Literary subjects	111	3.1862	.86274		
	Additional subjects	11	3.3333	.65405	.342	.251
	Total	195	3.2248	.78687		
the effectiveness of evaluation and assessment strategies in distance learning online.	Scientific article	73	3.0137	.72902	1.392	
	Literary subjects	111	2.9514	.83349		.251
	Additional subjects	11	3.3636	.68011		

	Total	195	2.9979	.78988		
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Table (7) shows the results of the one-way analysis of variance, and from it, we conclude that there are no statistically significant differences regarding the effectiveness of distance education from the perceptual viewpoint of the teachers of the school fields, where the value of sig in the four domains was greater than (0.05), so it is not statistically significant ($p > 0.05$). The table also shows that the division of the averages in the four domains ranged between (2.9979 – 3.8182) and this indicates the convergence of teachers' opinions about the effectiveness of distance learning in the four domains.

Hypothesis (3): There are statistically significant differences at the level of ($p < 0.05$) between the average scores of the teachers' groups concerning educational stages (the primary, preparatory, and secondary stages).

Table (8) The results of the ANOVA test

		N	Mean	SD	F	Sig
The effectiveness of learning platforms in distance learning online	Primary	63	3.9070	.46832		
	Preparatory	46	3.9130	.54584		
	Secondary	86	3.6678	.58326	4.826	.009
	Total	195	3.8029	.55022		
the effectiveness of learning activities in distance learning online	Primary	63	3.1887	.81909		
	Preparatory	46	3.2029	.73041	1.912	.151
	Secondary	86	2.9729	.79302		
	Total	195	3.0969	.79115		
the effectiveness of teaching in distance learning online	Primary	63	3.3413	.75990	3.390	.036
	Preparatory	46	3.3696	.71312		
	Secondary	86	3.0620	.82130		
	Total	195	3.2248	.78687		
	Primary	63	3.1429	.81235	4.671	
	Preparatory	46	3.1565	.75060		.010

the effectiveness of evaluation and assessment strategies in distance learning online.	Secondary	86	0.8070	.76046		
	Total	195	2.9979	.78988		

Table (8) shows the results of the one-way analysis of variance, and from it, we conclude that there are statistically significant differences between the averages of teachers' scores in the first field (1), The effectiveness of learning platforms in distance learning online. There the arithmetic means of the domain was (3.80) and the value of F (4.826) with a semantic value –sig– (0.009), which is a statistically significant function at the level of significance ($p < 0.05$).

There are also statistically significant differences between the mean scores of teachers in the fourth domain. "(4) the effectiveness of evaluation and assessment strategies in distance learning online. "Where the arithmetic mean of the domain was (2.99) and the value of F (4.671) with a semantic value –sig– (0.010), which is a statistically significant function at the level of significance ($p < 0.05$).

Table (8) also shows that there are no statistically significant differences between the mean scores of teachers in the second and third domains according to the variable of the school stage, where the arithmetic mean of the second domain was (3.09) and the value of F (1.9) with an indicative value –sig– (0.151) which is ($p > 0.05$), so it is not statistically significant. While the arithmetic means of the third domain was (3.22) and the value of P (3.390) with a semantic value (0.036), which is greater than (0.05), so it is not statistically significant ($p > 0.05$).

Table (9) Post HOC Result

Dependent Variable	Stage of teach (I)	Stage of teach (J)	I-J	Sig
The effectiveness of learning platforms in distance learning online	Primary	Preparatory	-.00601	.998
		Secondary	.23926*	.030
	Preparatory	Primary	.00601	.998
		Secondary	.24527*	.048
	Secondary	Primary	-.23926*	.030
		Preparatory	-.24527*	.048
the effectiveness of evaluation and assessment strategies in distance learning online.	Primary	Preparatory	-.01366	.996
		Secondary	.33588*	.035
	Preparatory	Primary	.01366	.996
		Secondary	.34954*	.050
	Secondary	Primary	-.33588*	.035
		Preparatory	-.34954*	.050

Table (9) shows the results of the Post Hoc Comparisons, Scheffer Test that the individual differences between the average grades of teachers at the secondary level, the preparatory stage and the primary stage were in favor of the secondary stage in the first field. "(1) The effectiveness of learning platforms in distance learning online" with a significant difference (0. 23926 *) from the primary stage and a difference Significant (0.24527 *) for the preparatory stage, where the probability value-sig- came (0.030, 0.048), respectively, and it is less than (5. 0), While the differences in the average grades of teachers in the preparatory stage and the primary stage were not statistically significant, as the probability value -sig-came (0.998), which is greater than (5. 0). Table (9) also shows the results of the Post Hoc Comparisons -Scheffe' Test- that the individual differences between the average grades of teachers at the secondary level, the preparatory stage, and the primary stage were in favor of the secondary stage in the fourth field." The effectiveness of evaluation and assessment strategies in distance learning online." with a significant difference (0. 335 *) from the

primary stage and a difference Significant (0.349 *) for the preparatory stage, where the probability value–sig– came (0.035, 0.050), respectively, and it is less than (5.0). While the differences in the average grades of teachers in the preparatory stage and the primary stage were not statistically significant, the probability value –sig–came (.996), which is greater than (5.0).

To answer the third question of this study: How suitable is a distance learning system as an alternative to the face-to-face education system in future schools from views the teachers? The researchers put a multiple-choice question, which is” **Do you think that the distance education system is a good and effective alternative to the direct education system and can replace it in school education in the future?**

Table (10) the percentages and frequencies for a multiple-choice question

Choice	Freq	Percent	Valid percent	Commulative
I do not think that distance learning can be a good alternative to face-to-face learning, especially in schools	63	32.3	32.3	32.3
I think it can be a good alternative just only in emergencies cases emergencies	91	46.7	46.7	79.0
Yes, I think it can be a good alternative, but not completely, only 50% as blended learning.	33	16.9	16.9	95.9
Yes, I think it can be a complete substitute for 100% face-to-face education	8	4.1	4.1	100.0
Total	195	100.0	100.0	

The results Table (10) show that (46.7) of teachers think that distance learning can be a good alternative in emergency cases only, (while 32.3)

of teachers don't think that distance learning can be a good alternative to face-to-face learning, and just (4%) think it can be a complete substitute for face-to-face education. Lastly, these findings clarify that there are (79%) of the participants see the distance learning system isn't suitable and a weak alternative to the face-to-face education system in Gaza schools, so it is difficult to continue with implementing this type of education in future schools.

Conclusion:

It is clear from this study results that the degree of effectiveness of distance education that was implemented in Palestinian schools in the Gaza Strip in the period from (21/8/2020 to 13/1/2021) was moderate from the teachers' point of view. The arithmetic mean of the four dimensions ranged between (2.8 – 3.8) and the highest of these dimensions was "The effectiveness of learning platforms in distance learning online" and the least of these dimensions was "The effectiveness of learning activities in distance learning online".

This indicates that there were efforts made by the Palestinian Ministry of Education to provide educational platforms via the Internet to achieve continuity and uninterrupted learning, and worked to reach students with the various available technological means. But the sudden and rapid transformation of this pattern of learning created many problems for students and teachers because there are no clear instructions from the ministry about how to use distance learning tools and platforms to deliver effective educational activities. Also, there is not enough training to teachers and students for teaching mechanisms and strategies and on how to employ distance learning platforms and tools correctly. In addition, the poor infrastructure and the weakness of life facilities in the Gaza Strip made most students and their families suffer from this type of education and dealing with technological learning platforms. They cannot provide private

computers for all their children and they suffered from technological illiteracy so they cannot help their children in their studying. This created a large gap in academic achievement among students depending on the cultural and economic level of the family more than their performance and abilities. Therefore, most teachers (79%) in this study see that distance learning is only a temporary alternative to face-to-face learning, especially in emergencies in Palestine.

Despite its effectiveness and its achievement of continuity and uninterrupted education in the light of the corona pandemic, it cannot continue as an educational system at a rate of 100%, especially in public schools due to the weak capabilities and technological infrastructure that support this type of learning.

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