

The Effect of E-Learning Programs and Applications on Teachers and Educational Process in the Period of Distance Learning during the Spread of CORONA Virus

تأثير البرامج والتطبيقات المحوسبة على المعلمين والعملية التعليمية في فترة التعلم عن بعد في ظل انتشار فيروس كورونا

השפעתן של תכניות ויישומים ממוחשבים על המורים ועל התהליך החינוכי בתקופת הלמידה מרחוק לאור התפשטות נגיף הקורונה.

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Abstract

The purpose of the current research was to investigate the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus, and to achieve this goal, the descriptive analytical approach was used for its suitability for the purposes of this research. A questionnaire consisted of two scopes to measure the teacher's attitudes towards distance learning programs, and the difficulties that teachers face in applying these programs in distance learning. The research concluded the following results: The degree of teachers' attitudes towards distance learning programs is very high, the degree of the difficulties that teachers face in implementing is moderate, there were no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to variables: (age, academic qualification, and years of experience), there were statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to gender on the two scopes for the benefit of females, and there were statistically significant differences at the level of significance ($\alpha \geq 0.05$) due to training courses on the difficulties scope. The differences were for the benefit of the teachers who received more training courses. Upon the results the researcher put some recommendations including the contribution of the Ministry of Education in providing facilities, programs and Internet service for teachers and students to motivate them to interact and use distance education methods and programs, and providing a guide for students that shows how to use computerized programs and applications.

Keywords: Distance learning programs, Learning during the Spread of CORONA Virus, Google Forms, Quizizz, Mentimeter, Zoom, Google Classroom, Google Meet, Padlet, Elucidat, SEESAW, Mindspark.

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I. Introduction:

The provision of educational material through mobile devices has become a catalyst for learning rather than merely traditional study, through which the student develops appropriate knowledge and skills that qualify him/ her to meet the needs of the labor market (Jaber, 2014). The use of the Internet in the educational process is not a result of the moment, but rather goes back to before 2000, as most universities today use what are called "Learning Management Systems" (Al-Khatib, 2020).

In light of the "Corona crisis" experienced by the world; the majority of educational institutions have moved towards e-learning as a more appropriate alternative to ensure the continuity of the educational process. The use of online video chatting applications such as Zoom, Google and Meeting has increased significantly. The Corona Virus crisis has clouded the education sector. This forced schools, universities and educational institutions to close their doors, reducing the chances of its spread. This has caused great concern among those affiliated with this sector, especially students who are ready to take exams that they consider to be fateful, such as Tawjih, Cambridge and others, in a crisis that may drag on (Ghanem, 2016).

All this prompted educational institutions to switch to E-Learning, as a long-discussed alternative, and the necessity of integrating it into the educational process, especially after the educational process was directly affected by the automation of industry and the development of "artificial intelligence" technology and "the

Internet". Likewise, the information technology revolution, which invaded most forms of human life and became an integral part of it (Basilaia & Kvavadze, 2020).

Google Educational Applications is a set of productivity applications, provided by Google for free, to schools and educational institutions, and these applications include Google Forms, quizizz, Mentimeter, Zoom, Google Classroom, Google Meet ... etc. (Jaber, 2014). All of these applications can be accessed through the Internet directly, and they have advantages and disadvantages that will be recognized during the research.

The current research aims to recognize the effect of e-learning programs and applications on teachers and educational process in the period of distance learning during the spread of CORONA virus.

II. Theoretical framework

2.1 Distance Learning:

2.1.1 Distance Learning Definition:

Distance learning defined by (Al-Qahtani, 2010) as an unorthodox learning style that provides an opportunity for learners to learn wherever they are, through a set of interactive means and tools, which add to the learner facilities that serve his/her life and help him/ her accomplish tasks, and achieve goals easily and easily without time and place restrictions.

Furthermore, (Bozkurt, 2019) stated that distance learning, also called distance education, e-learning, and online learning, is a type of education where the main elements include physical separation of teachers and students during teaching and the use of various technologies to facilitate communication between the teacher and students. Distance learning traditionally focuses on non-traditional students, such as full-time workers, military personnel, non-residents, or individuals in remote areas who cannot attend classroom lectures. However, distance learning has become a well-established part of the world of education, with trends pointing to continued growth.

2.1.2 E-Learning Programs Used for Distance Learning:

The most prominent educational programs are the following:

1. Google Forms:

A free Google tool that enables the user to create a form to organize a trip, request employment, or poll, or collect specific information, or tests for students, in an easy and fast way. Where the responses are collected in one place and instantly, called Google Sheets tables, with the ability to analyze the results obtained with one click of a button, through the option of Summary of Responses found in Google Sheets (Ibrahim, 2019).

(Ghanem, 2016) has indicated that Google Forms can be used in the educational process in more than one way, where the teacher can create a form, to collect student data; name, e-mail, hobbies, and any other information the teacher would like to know about students. Also, the teacher can compile the assignments submitted to students easily, quickly and automatically. Moreover, Google Forms allows designing an educational Rubric that automatically calculates the evaluation (Ibrahim, 2019).

2. Quizizz:

A free educational program, which supports the Arabic language based on the system of play and response in the classroom that would energize and motivate learners and encourage them to move from the traditional atmosphere to enthusiasm, fun and competition atmosphere.

Quizizz introduces the concept of learning to play in the classroom in a very easy and useful way using technology. Learners participate, compete and enjoy the lessons using any device they are familiar with or available at school (mobile, iPad, laptop, tablet). The quizizz also provides the opportunity to participate for all learners, even those who refrain from participating and engaging in class activities within classes (Mei et al., 2018).

(Owayid & Uden, 2014) has indicated that quizizz is a set of multiple-choice questions that are pre-designed across a system that covers any topic or subject, using any language and at different levels, quizizz is an individual business but has a kind of enthusiasm and interaction, where each learner quickly answers within a specified period to collect points, as their names and points that they have obtained appear on the screen, so that the spirit of competition is cultivated in them to reach the highest result, and even the shy learner participates more effectively in these games where it promotes self-confidence.

3. Mentimeter

It is an application that allows users to create presentations and receive notes, in real time, in classrooms, meetings, conferences and other group activities, and this application also allows users to get comments through surveys, tests, word withdrawals, questions, answers and other interactive features included in the presentation (Al-Najjar, 2019)

(Al-Qahtani, 2010) confirmed that the Mentimeter app is a computerized tool for student activation during class, the application allows building questions in multiple formats (open question, closed question, opinion poll, cloud of words), and provides a display of answers in multiple images on the teacher board.

4. Zoom

The program is used to organize meetings, as it helps the teacher, the lecturer and the businessman to organize the meetings in high quality with the ability to share files with the attendees at the meeting, whether through the teacher or the learner, provided that everyone has their own account. Zoom is a cloud service that provides meetings and webinars, and provides the ability to share content and video conferences. It helps teachers bring their students together in a friction-free environment to do more (Guzacheva, 2020).

According to (Bhat et al., 2018), the Zoom features allow teachers to explore student skills through rich interactions with students. In addition to screen sharing, Zoom prompts teachers to comment on their shared screen, making lessons more interactive (Ibrahim, 2020).

Teachers can record their lessons in the cloud or locally - students can also record and turn recording on and off as many times as they like during the lesson if the teacher enables this feature. Teachers can record lessons and watch them again to assess students' strengths and weaknesses, and learners can self-assess their skills by watching the recorded lessons. Moreover, students can watch lessons recorded in a sequence to see their improvement over time. In addition, teachers can assess student development by offering the recorded lesson to another teacher who they trust, and asking constructive notes (Rahim and Khan, 2020).

Whereas (Al-Shobaki, 2020) mentioned that Zoom gives teachers the content of their lessons in different ways. Sharing the Zoom screen can give teachers a great opportunity to develop students' intercultural skills by sharing engaging materials such as videos, articles and presentations. During and after watching the lessons, teachers can encourage students to use active questions to analyze and evaluate their learning. Teachers can also ask students to think about their lessons by recording and sharing a video (Bhat et al., 2018).

5. Google Classroom

Google Classroom is an e-learning system based on the "Blended learning" principle, which is based on the integration of learning in a classroom with the teacher and learning via the Internet. The teacher and trainer can use it to facilitate the learning process that takes place in the class better, by using the teaching techniques available in the system (Khleif, 2020), the most prominent of which are:

- **Assignments:** Google Classroom allows students to impose assignments, to answer them and send them to the teacher electronically with the possibility of direct correction. The program also allows students to collaborate with the teacher or other students to answer assignments.
- **Degrees:** The program supports many ways to monitor grades for students in a purely electronic way; teachers have the advantage to upload students' grade files to the program, while students can directly review their grades (Khleif, 2020).
- **Communication:** The teacher can place an advertisement for students on the platform about anything he/ she wants, while students can comment on the announcement and ask the teacher and communicate with him. The teacher can easily attach any file (video, text, audio) and others with the advertisement.
- **Archive lessons:** If the time for a specific subject or curriculum ends at the end of the year or semester, the teacher can archive this subject with all files, comments, and grades, so that this material appears in the archiving section. The wonderful thing is that everyone, students and teachers, can access it anytime they want (Sulaiman, 2020).
- **Mobile learning:** This application is characterized by having an application on smartphones, which gives greater and quick access to students and teachers.
- **Keeping time:** To reach the student to the required subject or semester in the program, the teacher can create a new chapter in a few seconds, then the system generates a small code consisting of letters and numbers, to publish it to students to use it to enter the class by entering this code into a dedicated incubator on the main page. The program also provides time for teachers to publish publications or scientific materials, so that the teacher can publish files and ads in a number of chapters with one click of a button without the need to publish in each chapter separately (Ibrahim, 2020).
- **Academic Calendar:** The application provides the study calendar service, which allows students and teachers to know the dates of assignments, exams, lessons and other important details, and it is distinct that they are directly related to the e-mail and the calendar available in the mobile phone (Khleif, 2020).

The Google Classroom application is a great leap towards the development of educational processes in our organizations today, as the program provides many features, including (Al-Najjar, 2019):

- The program is generally free and easy to use.
- The program is based on the principle of "facilitating the educational process."

- The program does not require any software modification or otherwise, it is ready to work directly on its own website.
- The program is fully available in Arabic.
- The program has an application on smartphones to facilitate access to students and teachers.

6. Google Meet

This app is used to communicate with the business team from anywhere, through easy-to-join video calls, and through which face-to-face meetings can be held, Meet is fully integrated with G-Suite, to join meetings directly from a calendar event or an email invitation. All details of important events are also available when needed, whether joined from a computer, phone, or conference room (Afrianto, 2017).

7. Padlet

It is a free sharing web tool that can be used by computers or mobile devices, allowing the teacher to create virtual walls with specific addresses and attractive backgrounds, and the teacher and students are allowed to share notes, texts and multimedia by adding them as small “notes” affixed to this wall, with the possibility of Exported as images or files (PDF, CSV, Excel), and can be easily shared with students or other teachers. This application may be employed in the classroom through several innovative methods, such as (brainstorming, student achievement files, electronic board for models of active learning strategies, student question bank ... etc) (Al-Zahrani, 2018).

8. Elucidat

It is an easy-to-use distance learning program, with the ability to modify the features to make it unique to the learner, by including text, graphics and other media, through drag and drop, and it can also be modified via HTML, CSS and JavaScript. Visual design can be controlled via an editable interface, which makes it easy to brand and customize the appearance of an individual's e-learning environment, without any complexity, in addition to the ability to manage hundreds of courses at the same time. Among its advantages are that (Al-Hmoud, 2016):

- It provides several aspects of features to choose from.
- Meets all screen sizes.

9. SEESAW

Seesaw helps students see their own growth and provide an audience for their work, whether it's peers, parents, or the entire world. For parents, it provides the immediate framework for a child's personality so that they can support learning at home. For teachers, it saves time to organize and communicate, makes formative assessment easier, and provides a safe place to teach digital citizenship skills (Zayed, 2020).

Seesaw has many features including (Dunker, 2020):

- Easy to capture student learning in any form: students can use photos, videos, graphics, text notes, links or PDFs to show what they know and save in a digital wallet. Teachers can also browse the work for all students or for one student, and they can also place references to items in the digital wallet for follow-up or review in parent-teacher meetings.
- Login for all ages: seesaw provides the ability to register young and old students with their email address or Google account.
- Encourage reflection and make the audience interested in student work: Seesaw helps document the learning process and not just the end result. Students can use this app to record and draw audio tools built into thinking about what they have learned or explaining how they got their answer. It gives students an interested audience from their peers and parents, to encourage better work and real feedback.
- Promote links between school and home: seesaw allows parents to participate in the learning process by inviting them to view periodic updates of their child in this app and direct visual updates in this app which can be seen directly by parents and provide encouragement to students.

10. Mindspark

Mindspark is an Adaptive Learning Program (ITS) created by Educational Initiatives (EI), a cloud-based application that can run on computers, tablets and mobile phones and allows users to connect to Mindspark servers via a web browser. Mindspark is currently available in Gujarati, Hindi and English (Al-Khatib, 2020). Moreover, (Muralidharan et al., 2018) stated that Mindspark was conceived as a self-learning tool that does not require continuous supervision of the teacher. It is based on the constructive theory of learning, and strategies such as gamification and behavior.

2.1.3 The requirements for employing E-Learning programs in distance education

Al-Qahtani (2017) mentioned that there are basic requirements for employing E-Learning programs in the teaching and learning process in general, and these requirements can be summarized in four dimensions, namely:

First: technical requirements:

There are several elements included in this dimension, including those related to technology and its suitability for interactive Google applications and one of the main technical requirements is to create a Google account for the learner, and some applications require the creation of a special account in (Gmail).

Second: Human requirements:

These requirements concern the training of learners (students) and teachers (faculty), school or university teachers (practical and theoretical) on how to transfer information using the Google App.

Third: Regulatory requirements:

One of the organizational requirements is what requires the use of Google applications in it, supporting the administration of the organization from the relevant organizational requirements, whether it is (university or school) and encouraging them to integrate these applications in education for ease of use and availability, also specifying a period of time to implement the plan to integrate Google applications into the educational program presented, where the process of merging takes place in stages and small steps in step, providing an appropriate educational environment to use the required application, then knowing previous experiences of using these applications and trying to benefit from them, that the relevant authority is able to provide Infrastructure of devices and the Internet to be able to integrate Google applications in their environment, and finally to promote the importance of using Google applications.

Fourth: Educational requirements:

It consists of the most appropriate courses for using Google applications and choosing the appropriate training and activities, and providing faculty and teachers with appropriate instant references, and appropriate evaluation methods (Al-Qahtani, 2017).

2.1.4 Advantages of using E-Learning programs for distance learning

(Al-Najjar, 2019) mentioned a number of the advantages of E-Learning programs, the most important of which are the following:

1. Ease of use.
2. Most programs are free "Does not require any financial commitment".
3. Helping in communicating and accomplishing tasks anywhere and anytime.
4. Easy to use and manage applications.
5. It allows users to work better and focus on the important things.
6. The ability to collaborate and participate.
7. Speed at work and gain time.
8. Some applications allow the possibility of audio and video communication via the Internet, in addition to the ability to record a video of what is circulated through the session, and then display it via any social media means of attending it later.

2.1.5 Disadvantages of using E-Learning programs in distance learning

Despite the many advantages of distance learning programs, they face some disadvantages, the most important of which are:

- Some of the program is available for free for 14 days only, and you need to make a subscription by paying a sum of money.
- Lack of reliability of distance learning certificates.
- Difficulty in choosing a good course, appropriate to the students' abilities and individual differences (Dunker, 2020).
- The learner feels overwhelmed by spending too much time on smartphones and others to follow different study subjects.

(Al-Qahtani, 2017) added that the disadvantages of using these programs in the time of corona are:

- Distance learning programs are less motivating for students, which lead to lower student incentives and a feeling of isolation, and competition, which is an important part of education, is reduced to the lowest levels of distance learning.
- The student faces difficulty in these programs, due to the lack of familiarity with the use of this type of education before, in addition to not receiving orientation programs and training courses to prepare students before starting to implement this system.
- Students find it difficult to focus when surrounded by distractions inside the home, with no teachers or colleagues to interact face-to-face as in the classroom.

- Parents' inability to participate in children's education through the use of these programs, because they need training and preparation before adopting them.
- These programs pose a critical challenge to first graders, as they need a lot of help because they are not well versed in technology and can find this difficult.
- Each student possesses different educational capabilities from the other, each of them has its own specificity, and certainly the success of the educational process depends on understanding how the student learns better through the appropriate tools, so it will be difficult for the teacher to pay attention to the differences between students individually, and choose the appropriate activities and ways in which students interact with and learn content using these programs.

In this study, a field study will be conducted in the North region in the Arab sector, who use the mentioned programs in a compulsory or optional manner, where a questionnaire will be distributed that includes teachers' attitudes toward the aforementioned educational programs, in addition to the difficulties that teachers in these schools have faced or face.

2.2: Corona virus

2.2.1 Corona Virus Definition

The World Health Organization has defined Coronavirus as: a large family of viruses that may cause disease in humans and animals, and it is known that a number of coronaviruses in humans cause respiratory infections that range from common colds to more severe diseases such as the Middle East Respiratory Syndrome and respiratory syndrome, Severe acute respiratory syndrome (SARS), as the Corona virus causes (Covid 19), which is an infectious disease caused by the newly discovered Corona virus, and there was no knowledge of the existence of this virus and this emerging disease before its outbreak in Wuhan, China in December 2019 (Zyoud, 2020).

This was confirmed by (UNRWA, 2020), which indicated that (Covid 19) is an infectious disease caused by the Corona virus, the symptoms of which are fever, fatigue, dry cough, in addition to nasal congestion, cold, sore throat or diarrhea, and the symptoms are usually mild and gradually begin to increase.

2.2.2 Effect of Corona Virus on Educational Process

Several studies mentioned that the Corona virus affects the educational process in several aspects, including:

1. Stop going to educational institutions of all levels, whether school, university or kindergarten, and the absence of social interaction.
2. Students spend their free time doing something unhelpful, due to interruptions of learning, especially in educational institutions that have not adopted distance education (Zyoud, 2020).
3. Increased dropout rates, in light of distance education, many students neglected to follow their lessons constantly, which led to low levels of achievement.
4. The low desire to learn among students, especially in light of the educational decisions that are not clear and capricious.
5. The teachers and students exert a lot of time and effort to complete the educational process, due to the absence of pre-training on the use of distance education.
6. Increasing the parent's burden, to provide care for their children and manage their distance learning.
7. Inability of poor and needy families to obtain learning outside of school, due to the lack of modern technical capabilities for distance learning.
8. Anxiety and tension experienced in educational policy, due to the lack of prior plans and mechanisms for education in emergency situations, which negatively affected the educational process in terms of the accumulation of duties and activities required by teachers and students (Dunker, 2020).

2.2.3 Compulsory of Distance Learning in the Period of Corona Virus

For distance learning to be feasible, it is important to be clear and well organized as possible, especially when students learn a new topic. In the school environment, teachers can monitor students if they don't understand things, and it is easier for them to provide information gradually so that students don't get lost, teachers provide notes in real time (Martin, 2020).

In the Internet environment and distance learning, it is difficult to monitor students' understanding, and there is a fear that the lessons are poorly organized and the materials are delivered very early, which leads to the loss and dispersion of learners. To avoid and reduce these risks, countries have followed some instructions, such as online lessons which must be clear and well organized, and be presented in manageable parts, allowing students to practice what they have learned and enabling the teacher to see student work and provide comments at the time Specified, when the teacher is satisfied, students can provide more targeted and self-directed learning activities via the Internet (Khleif, 2020).

(17, 2020) stated that the decision of the state and the Israeli education system to disrupt education and the transition to distance learning in the various educational institutions due to the spread of Corona, reinforces the need to rethink the methods of learning in an environment of uncertainty. Accordingly, an opportunity was created to establish a new relationship between learners and the information they obtain in the learning process, so teachers and lecturers are no longer seen as possessing knowledge, but as partners in the process where knowledge is created and reshaped every time and everywhere. The current crisis also represents a great opportunity to reconsider the government's policy in promoting new educational materials , as institutional participation is of great importance at the local level, and the participation of decision makers in supporting, promoting, financing and implementing learning technologies that support new educational materials.

If we look closely at the present time, we will find far from the constraints, fears and social and economic consequences expected from the use of modern technologies in education, but the use of these technologies through portals and digital learning sites increases awareness of their existence and guides teachers and students to use them, as well as encouraging teachers and lecturers to establish and adopt new subjects, in lessons and courses taught as an innovation and competency for curricula in the teaching profession.

III. Research Methodology

Research methodology: The current research adopted the descriptive and analytical approach that relies on collecting & analyzing data, for its suitability for the purposes of this research, in order to describe the impact of computerized programs and applications on teachers and the educational process in the distance learning period in light of the spread of the Corona virus, in terms of their attitudes towards these programs and applications and to find out how they affect them.

The research sample: The researcher selected a random sample of (100) teachers who use distance learning programs in the Arabic schools in Israel.

The following table shows the characteristics of the research sample:

Table (1):

variable	Valid	Frequency	Percent
Gender	Male	52	52%
	Female	48	48%
Age	Less than 25	16	16%
	25- 35	36	36%
	36- 49	32	32%
	50 or more	16	16%
Academic qualification	Bachelor	36	36%
	Master	64	64%
Years of Experience	Less than 5	36	36%
	5- 10	46	46%
	More than 10 years	18	18%
Training courses	Less than 3	22	22%
	3- 6	44	44%
	More than 6	34	34%

Search variables:

- Independent variable: distance learning programs.
- The dependent variable: Attitudes towards distance learning programs and difficulties faced by teachers in the Arabic schools in Israel.

Research tool:

The researcher used a questionnaire that consisted of two parts, the first part contained personal data, while the second part contained the paragraphs of the questionnaire, which were divided into two scopes. The first scope included teachers' attitudes towards distance learning programs, while the second scope included the difficulties that teachers face in the application of these programs in distance learning. The researcher adopted Likert scale to answer the paragraphs of the questionnaire, where (5 = Strongly Agree, 4 = Agree, 3 = Neutral, 2 = Disagree, 1 = Strongly Disagree).

Reliability:

The reliability of the tool was verified by the statistical treatment by the (Cronbach - alpha) test on all the items of the questionnaire. The reliability coefficient reached (0.83), which is a suitable reliability coefficient that meets the purposes of the study.

Statistical analysis:

Data was processed by the statistical package program (SPSS), through which percentages, means and standard deviations were extracted, as well as One Way ANOVA and T-test for independent samples in order to find the results of the study.

Tool Correction Key:

Degrees of response	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Degree of response	1	2	3	4	4
Mean	1-1.80	1.81-2.60	2.61-3.40	3.41-4.20	3.41-4.20

IV. Results

• **Results related to research questions:**

First: (What is the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus?)

In order to answer this question, the means and standard deviations of the responses of the study sample individuals on all the paragraphs and their total scope were extracted, and the following is an explanation of these results:

1. What are the teacher's attitudes towards distance learning programs in light of the spread of the Corona virus?

Table (2)

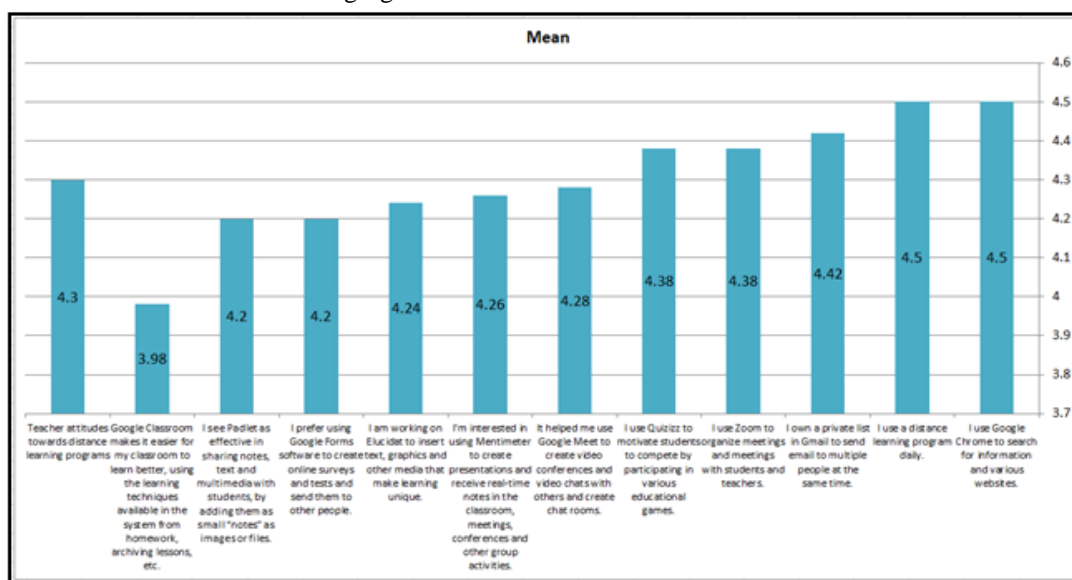
Means and standard deviations of the responses of the study sample individuals in the field of teachers' attitudes towards distance learning programs

Number	Arrangement	Paragraph	Mean	Std. Deviation	Percent %	Degree response	of
1.	1	I use Google Chrome to search for information and various websites.	4.50	.505	90%	Very high	
2.	2	I use a distance learning program daily.	4.50	.505	90%	Very high	
3.	3	I own a private list in Gmail to send email to multiple people at the same time.	4.42	.574	88%	Very high	
4.	6	I use Zoom to organize meetings and meetings with students and teachers.	4.38	.752	88%	Very high	
5.	7	I use Quizizz to motivate students to compete by participating in various educational games.	4.38	.696	88%	Very high	
6.	5	It helped me use Google Meet to create video conferences and video chats with others and create chat rooms.	4.28	.729	86%	Very high	
7.	9	I'm interested in using Mentimeter to create presentations and receive real-time notes in the classroom, meetings, conferences and other group activities.	4.26	.599	85%	Very high	
8.	11	I am working on Elucidat to insert text, graphics and other media that make learning unique.	4.24	.624	85%	Very high	
9.	4	I prefer using Google Forms software to create online surveys and tests and send them to other people.	4.20	.699	84%	High	
10.	8	I see Padlet as effective in sharing notes, text and multimedia with students, by adding them as small "notes" as images or files.	4.20	.699	84%	High	
11.	10	Google Classroom makes it easier for my classroom to learn better, using the learning techniques available in the system from homework, archiving lessons, etc.	3.98	.742	80%	High	
Teacher attitudes towards distance learning			4.30	.157	86%	Very high	

Number	Arrangement	Paragraph	Mean	Std. Deviation	Percent %	Degree of response
		programs				

The table shows the means and standard deviations for the scope of teachers' attitudes towards distance learning programs, as it was found that the degree of response to this scope was (Very high) with a mean of (4.30), which means that teachers' attitudes towards distance learning programs is very high, as there was a very high agreement between them about their use of Google Chrome to search for information and various sites, and their use of distance learning programs on a daily basis, they also have accounts in Gmail to send messages to several people at the same time, and they also use Zoom program for easy organization of online meetings with students and teachers, as well as Quizizz program to motivate students to compete by participating in various educational games, and there was a similarity in their answers about their interest in using Mentimeter program to create different presentations and receive feedback, as well as their consensus that Elucidat program which inserts text and graphics and makes learning more unique.

The results are shown in the following figure:



2. What are the difficulties that face teachers in applying these programs in distance learning in light of the spread of the Corona virus?

Table (3)

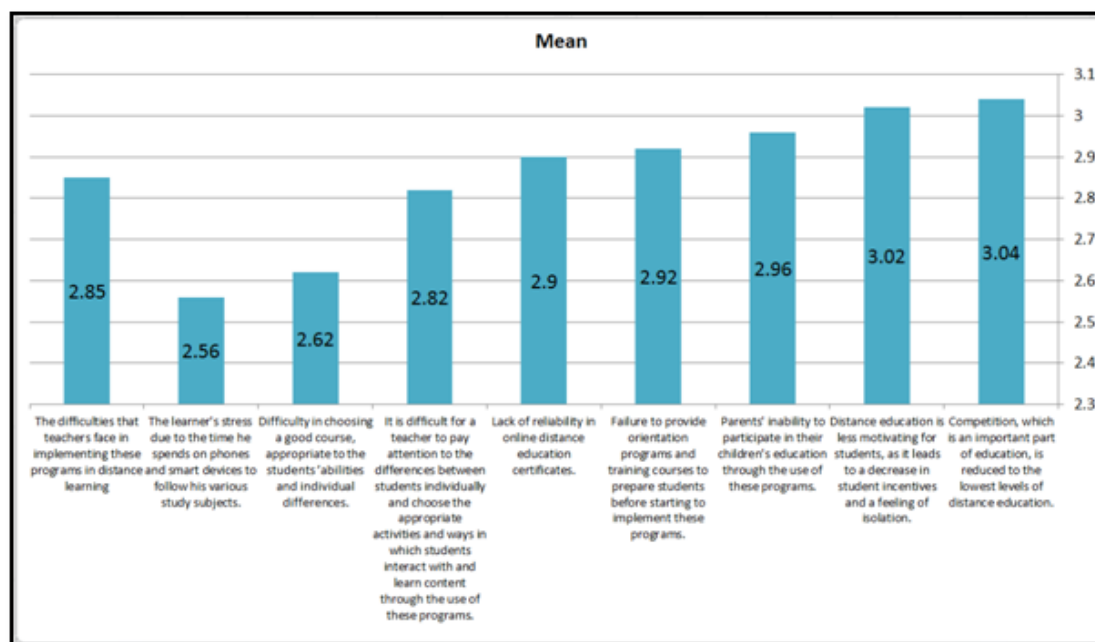
Means and standard deviations of the responses of the study sample individuals in the field of difficulties that teachers face in applying distance learning programs

Number	Arrangement	Paragraph text	Mean	Std. Deviation	Percent %	Degree of response
1.	16	Competition, which is an important part of education, is reduced to the lowest levels of distance education.	3.04	.807	61%	Moderate
2.	15	Distance education is less motivating for students, as it leads to a decrease in student incentives and a feeling of isolation.	3.02	.868	60%	Moderate
3.	17	Parents' inability to participate in their children's education through the use of these programs.	2.96	.902	59%	Moderate

Number	Arrangement	Paragraph text	Mean	Std. Deviation	Percent %	Degree of response
4.	12	Failure to provide orientation programs and training courses to prepare students before starting to implement these programs.	2.92	.853	58%	Moderate
5.	13	Lack of reliability in online distance education certificates.	2.90	.886	58%	Moderate
6.	18	It is difficult for a teacher to pay attention to the differences between students individually and choose the appropriate activities and ways in which students interact with and learn content through the use of these programs.	2.82	.849	56%	Moderate
7.	14	Difficulty in choosing a good course, appropriate to the students' abilities and individual differences.	2.62	.805	52%	Moderate
8.	19	The learner's stress due to the time he spends on phones and smart devices to follow his various study subjects.	2.56	.907	51%	Low
The difficulties that teachers face in implementing these programs in distance learning			2.85	.341	57%	Moderate

The previous table shows the means and standard deviations for the scope of difficulties that teachers in applying these programs in distance learning. It was found that the degree of response on this scope was (Moderate) with a mean of (2.85), which means that there are difficulties that face teachers in applying these programs in distance learning in a moderate degree, as there was a difficulty caused by not providing training programs and courses for them before starting to implement these programs, and the lack of confidence in distance learning certificates, as well as the difficulty of choosing good educational programs that are appropriate for the teachers' abilities, students and their individual differences, the inability of parents to participate in the education of their children through the use of these programs, and the difficulty of differentiating between students and choosing activities that are compatible with their levels.

The results are shown in the following figure:



• **Results related to research hypotheses**

1. (There are no statistically significant differences at the level of ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable gender).

To test this hypothesis, an independent sample t-test was used and the following table shows the results of this test.

Table (4)

Results of (T) test for independent samples according to the gender variable

Field	gender	N	Mean	Std. Deviation	df	t	Sig
Teacher attitudes towards distance learning programs	male	52	3.28	.179	97	-.787-	.035
	female	48	4.32	.131			
The difficulties that teachers face in implementing these programs in distance learning	male	52	2.94	.323	97	-.291-	.027
	female	48	2.76	.367			

*statistically significant at the level (0.05)

From the previous table, it is evident that there are statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable gender on the two scopes of the study, since Sig. value is lower than the imposed value. So, the hypothesis related to the variable gender is rejected.

On the scope of the teachers' attitudes towards distance learning programs, the differences between males and females were for the benefit of females since the mean of their responses on this scope was (4.32) higher than the males' mean which was (3.28).

On the scope of the difficulties that the teachers face due to distance learning programs, the differences between males and females were for the benefit of females since the mean of their responses on this scope was (2.76) lower than the males' mean which was (2.94).

2. (There are no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable age).

To ensure the validity of the previous null hypothesis, One Way ANOVA test was performed and the following tables illustrate the results of this test.

Table (5)

Results of the One Way ANOVA test according to the age variable

Field	Between Groups			Within Groups			F	Sig.
	Sum of Squares	df	Mean Square	Sum of Squares	df	Mean Square		
Teacher attitudes towards distance learning programs	.066	3	.022	1.150	97	.025	.885	.456
The difficulties that teachers face in implementing these programs in distance learning	.648	3	.216	5.082	97	.110	1.956	.134

*statistically significant at the level (0.05)

The previous table shows that there are no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable age on all scopes of the study, since its value is higher than the value imposed, and the hypothesis related to the variable age is accepted.

3. (There are no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable academic qualification).

To test this hypothesis, the independent sample t-test was used and the following table shows the results of this test.

Table (6)

(T) test results for independent samples to compare two means for two independent samples (Independent Sample t-test) according to the variable academic qualification

Field	Academic qualification	N	Mean	Std. Deviation	df	t	Sig
Teacher attitudes towards distance learning programs	Bachelor	36	4.26	.111	97	-1.393-	.170
	Master	64	4.32	.175			
The difficulties that teachers face in implementing these programs in distance learning	Bachelor	36	2.91	.343	97	.956	.344
	Master	64	2.82	.341			

*statistically significant at the level (0.05)

From the previous table, It is evident that there are no statistically significant differences at the significance level ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable academic qualification on all fields of the study, since its value is higher than the imposed value, and the hypothesis related to the variable academic qualification is accepted.

4. (There are no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable years of experience).

To ensure the validity of the previous null hypothesis, One Way ANOVA test was performed and the following table illustrates the results of this test.

Table (7)

Results of the One Way ANOVA test according to the variable years of experience

Field	Between Groups			Within Groups			F	Sig.
	Sum Squares	of df	Mean Square	Sum Squares	of df	Mean Square		
Teacher attitudes towards distance learning programs	.019	2	.010	1.198	47	.025	.375	.689
The difficulties that teachers face in implementing these programs in distance learning	.432	2	.216	5.298	47	.113	1.915	.159

*statistically significant at the level (0.05)

The previous table shows that there are no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable years of experience on all fields of study, since its value is higher than the value imposed, and the hypothesis related to the variable years of experience is accepted.

5. (There are no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable training course).

To ensure the validity of the previous null hypothesis, the One Way ANOVA test was performed, and the following tables illustrate the results of this test.

Table (8)

Results of the One Way ANOVA test according for the variable training course

Field	Between Groups			Within Groups			F	Sig.
	Sum Squares	of df	Mean Square	Sum Squares	of df	Mean Square		
Teacher attitudes towards distance learning programs	.015	2	.007	1.202	97	.026	.290	.74

The difficulties that teachers face in implementing these programs in distance learning	.234	2	.117	5.496	97	.117	.999	.03
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*statistically significant at the level (0.05)

The previous table shows that there are no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to the variable training courses on the scope of the attitudes towards distance learning programs, since its value is higher than the value imposed, while there are statistically significant differences at the level of significance ($\alpha \geq 0.05$) on the scope of the difficulties of distance learning programs and the hypothesis related to the variable training courses is rejected.

In order to determine the differences in training courses, the means were extracted as shown in the following table:

		N	Mean
Teacher attitudes towards distance learning programs	Less than 3	22	4.28
	3-6	44	4.32
	More than 6	34	4.29
The difficulties that teachers face in implementing these programs in distance learning	Less than 3	22	2.86
	3-6	44	2.92
	More than 6	34	2.76

The table shows that the differences in the difficulties scope were for the benefit of the teachers who received more training courses, since the mean of their responses on the difficulties scope was lower than the others.

This means that the more the training courses received by teachers, the less the difficulties that face them due to distance learning programs.

V. Discussion:

The purpose of the current research was to investigate the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus, and to achieve this goal, the descriptive analytical approach was used for its suitability for the purposes of this research. A questionnaire consisted of two scopes to measure the teacher's attitudes towards distance learning programs, and the difficulties that teachers face in applying these programs in distance learning. The research concluded the following results:

The mean of the scope (Teacher attitudes towards distance learning programs) was (4.30), with a very high degree of response. This result agreed with (Al-Najjar, 2019) and (Al-Hmoud, 2016) studies which revealed that teachers have high attitudes towards distance learning programs because of their advantages, such as ease of use, most programs are free "Does not require any financial commitment", it allows users to work better and focus on the important things, the ability to collaborate and share and some applications allow the possibility of audio and video communication via the Internet, in addition to the ability to record a video of what is circulated through the session, and then display it via any social media means of attending it later.

The mean of the scope (The difficulties that teachers face in implementing these programs in distance learning) was (2.85) with a moderate degree of response. This result agreed with what was shown by the studies of (Dunker, 2020) and (Al-Qahtani, 2017), which showed some difficulties in distance learning, such as the difficulty in choosing a good course, appropriate to the students' abilities and individual differences, distance learning programs are less motivating for students and the lack of familiarity with the use of this type of education before, in addition to not receiving orientation programs and training courses to prepare students before starting to implement this system, and parents' inability to participate in children's education through the use of these programs, because they need training and preparation before adopting them.

It was found that there were no statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to variables: (age, academic qualification, and years of experience).

It was found that there were statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to gender. On the scope of the teachers' attitudes

towards distance learning programs, the differences between males and females were for the benefit of females since the mean of their responses on this scope was (4.32) higher than the males' mean which was (3.28). On the scope of the difficulties that the teachers face due to distance learning programs, the differences between males and females were for the benefit of females since the mean of their responses on this scope was (2.76) lower than the males' mean which was (2.94). This means that the degree of male teacher's attitudes towards distance learning programs was lower than the females' degree, while the degree of male teacher's difficulties due to distance learning programs was higher than the females' degree. In other words, females have more positive attitudes and fewer difficulties due to distance learning programs.

It was found that there were statistically significant differences at the level of significance ($\alpha \geq 0.05$) in the impact of computerized programs and applications on teachers and the educational process through distance learning program in light of the spread of the Corona virus due to training courses on the difficulties scope. The differences were for the benefit of the teachers who received more training courses, since the mean of their responses on the difficulties scope was lower than the others. This means that the more the training courses received by teachers, the less the difficulties that face them due to distance learning programs.

VI. Recommendations:

At the end of the study, the researcher recommends a set of practical recommendations that contribute to achieving a good impact of computerized programs and applications on teachers and the educational process through distance learning programs, and these recommendations are represented in the following points:

1. The contribution of the Ministry of Education in providing facilities, programs and Internet service for teachers and students to motivate them to interact and use distance education methods and programs.
2. Providing a guide for students that show how to use computerized programs and applications.
3. Providing specialized meetings and training courses for teachers and students to employ computerized programs and applications in the distance learning process and make use of them in other sides of life.
4. The need to use such modern programs and applications in developing educational content and improving the quality of distance learning.
5. The need to work on developing programs, applications and teaching methods to match the levels of teachers and students according to the requirements of distance learning.

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