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Online learning in the Jordanian kindergartens during Covid-19 pandemic

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Abstract

This study aims to investigate the level of utilization of online learning in kindergartens in Jordan during the covid-19 pandemic from the teachers' point of view. The study sample consists of 225 female teachers from both public and private schools in Jordan. To collect data, a survey was developed and implemented to the study sample after obtaining its validity and reliability. The survey intended to measure three dimensions (teaching, communication, and technological competencies). The results have shown that the mean scores of the level of utilization of online learning in kindergartens during the covid-19 pandemic from a teachers' point of view were moderate and it also showed statistical differences in the level of utilization of online learning attributed to the type of school in favor of private schools. A correlation between the number of years of expertise and both academic qualification and private education was also noticed.

KEYWORDS: Kindergartens, Jordanian Children, Online Learning, Covid 19 Pandemic.

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1. Introduction

Nowadays, the world is being exposed to the Covid-19 pandemic, which has been classified as one of the most dangerous, global pandemics that humanity faced in a hundred years, as it caused human and financial losses (Van Overmiere, 2020). The World Health Organization called on all countries to take preventive measures and procedures to try to alleviate the severity of the epidemic. Due to the total lockdown and closures, all sectors of life have been negatively affected, including the social, economic, political, and educational sectors (World Health Organization, 2020).

The education sector is one of the sectors that are mostly affected by the pandemic, because of the closure of all educational institutions. Due to the importance of the educational sector, it was necessary to maintain its continuity by employing technical and technological development, and moving from traditional, face-to-face education to online learning (Alan, 2020; Bonal & González, 2020). Online learning is a type of self-education that provides students with the opportunity to obtain various knowledge, experiences, and skills, while spatially away from school, by relying on means of communication and modern technology, as well as the creation of integrated educational platforms (Markova, Glazkova & Zaborova, 2017). The importance of online learning lies in the fact that it provides flexible learning paths and makes education accessible to everyone without exception so that it greatly enhances access to education from anywhere and at any time (Themeli & Bougia, 2016).

In Jordan, a public quarantine and a closure of all the educational institutions' decision was imposed to respond to the crisis. Education for more than 2 million students have been interrupted since schools closed (UNESCO, 2020). With the spread of COVID-19, Jordan took the quick decision to continue education through distance leatoder to minimize learning losses (Akour et al., 2020). Shifting to distance learning decision came to ensure that children could learn during the schools' closures. To facilitate distance learning through online lessons, a swift setting up of the online

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education platform took place in partnership with the Ministry of Education (MOE) and the Ministry of Digital Economy and Entrepreneurship and private sector providers Edraak, Mawdoo3, Abwaab and JoAcademy platforms to develop distance education platforms. Among these were "Darsak," an official e-learning portal which offers short video clip courses. Moreover, the national TV channels was dedicated to broadcast educational lessons. These resources cover the curriculum's core subjects for 1 through 12 grades (UNICEF, 2020).

However, Jordanian parents criticized the online learning and were dissatisfaction with distance learning modality. A study conducted by Abuhammad (2020) revealed that Jordanian Parents believe that online learning is not as effective as the traditional way of teaching and should not substitute face-to-face learning. Many barriers were encountered by parents that may affected their briefs. These barriers according to Abuhammad (2021) were related to personal, financial, technical, and logistical issues. The UNICEF (2020) reported that only about half (54%) of 1,124 vulnerable households under survey had connected to the MOE-Darsak learning platform. In addition, about 23 percent of the children did not have a regular internet connection.

The utilization of educational practices for preschool children in online learning has not been emphasized in teacher training programmes, therefore, the Covid 19 pandemic created a great challenge for kindergarten teachers, even for those who were well prepared and experienced (Darling-Hammond & Hyler, 2020). During Covid 19 pandemic a significant body of research has been carried out in Jordan and around the world to study the effect of this crisis on education. The main focus of the research has been on elementary and secondary classes and there was little focus on the effects that the pandemic has caused in kindergarten. This study will fill this gap by investigating the kindergarten teachers' utilization of online learning during the COVID-19 pandemic.

2. Research Questions

The study is based on investigating the level of employment of online learning in kindergartens in light of the Covid-19 pandemic from the teachers' point of view by answering the following questions:

- What is the level of employment of online learning in kindergartens in light of the Covid-19 pandemic from the point of view of female teachers?
- Are there relationships between teachers' level of online utilization and their demographic characteristics (School Type, years of experience)?

3. Literature Review

3.1 The challenges of Covid 19 in Education

The increasing spread of the Covid-19 pandemic and the inability of the countries of the world to contain and control it has been a reason to take the necessary precautionary measures that help alleviate its spread and try to reduce its negative effects on the health, economic, and educational systems. Most of the countries of the world declared a state of emergency, imposed restrictions, imposed home quarantine, closed factories, companies, schools, and universities, which negatively affected all educational systems around the world (Brinks & Ibert, 2020). The closure of schools caused a huge impact at societal and educational levels. Schools and families had to react swiftly to use online learning methods instead of traditional education to ensure the continuity of the educational process (Bonal & González, 2020). A study conducted in Greek (Foti, 2020) aimed at identifying the challenges and limitations facing the process of online learning for the Greek kindergarten stage during the Covid-19 pandemic. The study was conducted in Greece, and the descriptive analytical approach was used. The electronic questionnaire was used as a study tool, and the study sample consisted of (100) female teachers. The results of the study showed that the teachers use different methods in the process of online learning such as e-mail, platforms, and social media. The results also indicated that among the challenges and limitations of online learning was the weakness of some teachers in dealing with technology, and the difficulty of making children acquire many skills which need face-to-face learning.

Sari and Nayir (2020) conducted a study aimed at identifying the challenges of online learning during the Covid-19 pandemic. The study was conducted in Turkey, and the descriptive analytical approach was used. Open interviews were used as a tool for the study, and the study sample consisted of (65) teachers. The results showed that teachers face difficulties in accessing the internet, lack of infrastructure, in addition to classroom and human resources management. The results also indicated that students are not ready for the online learning process and that there is a lack of application in this regard related to technological, online learning, and training support. Moreover, students do not have sufficient knowledge and experience about online learning.

3.2 Advantages of online learning for children

Researchers believe that online learning in kindergartens is not effective and prefer to return to conventional classes (ALEZRA, 2020). Moreover, parents had negative attitudes about the value system and the benefits of online learning for children (Dong & Mertala, 2020). However, this believe was refuted by

a study carried in Cyprus (Kara & Cagiltay, 2017) which revealed that teaching online learning for kindergarten children has many advantages. According to Kara & Cagiltay (2017) teachers kindergarten teachers believe that using online learning with children can Improve their psychomotor skills, a curiosity of children, and self-confidence. Learning with technology will make learning a pleasant experience for children. The results of a study carried out by Dong (2016), revealed that children had high competencies and high interest in using digital technology in learning and experienced enjoyment and success while they work on digital activities.

There are researchers (Edwards et al. 2018; Manches and Plowman 2017) reported that the online learning experience in preschool offers great potentials to involve children in creative and thinking activities for children. The quality of online learning experiences for children can vary depending on the support provided. Family support for children while there are engaged in online learning can help children to acquire knowledge and skills and develop positive attitudes toward online learning (Kim,2020).

Online learning gives children a vast array of learning opportunities to access new concepts in unusual ways and to activate their role in the educational process as main participants in it using modern technological methods and means, which reduces individual differences between them (Ferri, Grifoni & Guzzo, 2020). The online learning process increases the effectiveness of delivering knowledge and experiences to students because it allows the use of audio and visual media (Arthur-Nyarko, Agyei & Armah, 2020). Online learning, which is spread and employment increased and expanded in the educational process during the Covid-19 pandemic, is also characterized by its ability to save time and effort exerted in the process of face-to-face education, and to provide new skills and knowledge to students without access to school, at any place and time. In addition to that, the use of modern technology, internet networks, and interactive means that contain sound and images in explaining the school curriculum contributes to overcoming the boredom resulting from explaining the lessons using traditional methods (Ferraro, Ambra, Aruta, & Iavarone, 2020).

Preschool teachers can work with parents to sustain psychological and pedagogical contact with children. Teachers can share with parents different activities like songs, short educational stories, simple games, and readings told by the teachers. (Ferri, Grifoni and Guzzo, 2020).

3.3 Online competencies for Kindergarten teachers

The number of children using online tools is increasing rapidly due to technologies of touch screens and internet access. Children had no experience in online learning, which is an unusual method of learning for preschool children (Yıldırım, 2021). Therefore, it was necessary to develop teachers' competencies to be able to teach in an online learning environment. In designing educational activities, the teacher is also supposed to take into account the individual differences between students in proportion to each child's abilities and interests by communicating with the family, trying to know their child's tendencies, and cooperating with them in designing an activity that meets his/her needs and develops his skills properly. Also, teachers should follow up with the child, should be keen on obtaining feedback from his/her family, and evaluate the learning process of each child continuously and daily (Bigatel et al., 2012).

Using digital technology and online learning in kindergarten is not an easy task, therefore teachers need to equip with the knowledge and skills to use technology and deliver the lessons (Gayatri, 2020). Teachers play an important role in enhancing children's participation in online learning, and their competency in the use of technology increases the effectiveness of online learning (Kim, 2020). However, A study conducted in Jordan (Alkhawaldeh, Hyassat, Al-Zboon & Ahmad, 2017) found that Kindergarten teachers did not have clear understandings of the benefits of young children's technology use. Research (Alan, 2021) reported that early childhood teachers need to acquire technological competencies. To encourage kindergarten teachers, use online learning, they must have a positive attitude toward online learning and possess effective skills in a digital environment (Kim, 2020). Childhood teachers must have access to interactive resources, be able to work with an educational platform that is intended for the children, be communicate with the parents and them with learning resources for their children (Ferri, Grifoni & Guzzo, 2020).

Among the skills needed to employ online learning for the kindergarten stage is the ability of teachers to deal with technological advances, and the use of all technological capabilities related to the teaching and learning process, such as the ability to design simple and attractive educational videos using various programs and technologies. In addition to these skills, there is employing all forms of communication through phone and computer applications in a way that provides effective communication between teachers, parents of children, and children themselves, and the teacher's ability to provide educational and entertainment activities for children in a way that is close to traditional, face-to-face education (Ferreira, Behrens, Torres & Marriott, 2018).

3.4 Children Use of Online learning during Covid 19

There is limited research on e-learning in the kindergarten, and in general, up to a few years, there was still a strong debate about the integration of technology in learning in the kindergarten (Campana et

al., 2019). However, after the Covid 19 outbreak, researchers realized the importance of studying online learning in preschool learning. Although disliked, but in previous research findings, research participants agreed that online learning is the only solution to maintain children learning during the Covid 19 pandemic (Mahyoob, 2020). The crisis has revealed the crucial need to improve the quality of distance learning in early childhood (Alan, 2021). Research has been conducted on children's online learning programs during the Covid 19 pandemic attempted to study the effect of the pandemic on children learning from different aspects and suggest strategies to improve these programs. A study was conducted in Indonesia (Nuraini et al, 2020) aimed at identifying online learning strategies during the Covid-19 pandemic for primary schools showed that the process of online learning has become easier due to technological development. Online learning is characterized by being more student-focused, more advanced, and more flexible in use. The results also indicated that the challenges of online learning include difficulties related to modern technology such as download and installation errors, login problems, audio, and video problems, etc. Students sometimes find online teaching boring and unattractive, and the study indicated that teachers should follow up on students to keep focusing on learning and make as many efforts as possible to humanize the distance learning process. Other studies analyzed online learning activities during the Covid-19 pandemic. Kocoglu and Tekdal (2020) found that the field of "accessibility and flexibility" got a percentage of (24%) and that the field of "infrastructure for interactive programs" got a percentage of (26%). The field of "availability of face classroom education" got a percentage of (20%), and the "resource sharing" field got a percentage of (14%). Lastly, the field of "access to virtual resources" got a percentage of (16%). The finding of a study carried out by Barnet and Jung (2020) supported the fact that the pandemic harms children learning. it revealed that only 10% of children were involved in online learning activities daily during the crisis and that online learning could not replace the learning activities that children practice in conventional classes.

4. Methods and Procedure

In Jordan, formal Schooling is compulsory starts at the age of 6 (First grade). Kindergarten is optional for children; Parents have the choice to attend their children younger than age 6 in kindergarten (Fayez, Ahmad & Oliemat, 2016). During Covid 19 pandemic, all kindergartens turned to online learning, this study investigates the level of kindergarten teachers' utilization of online learning.

The participants of the study included all kindergarten teachers (215) in the city of Madaba. Madaba is a small city located southwest of Amman, the capital of Jordan. All the participants were female teachers, 62% of them (135) work in public kindergartens, and 37.2% (80) work in private kindergartens. came from public and private kindergartens. With regards to the years of experience, 21.4% of the teachers (46) had less than five years, 33% (71 teachers) had from 5 to less than 10 years, and 45.6% of them (98 teachers) had more than 10 years of teaching experience.

The researchers developed a survey to assess kindergarten teachers' level of utilization of Distance learning. The survey comprises 33 items with three subscales: teaching (25 items), communication (6 items), and Teachers competencies (6). The items assess Teachers' level utilization and are rated on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). To establish face validity and content validity, the survey was reviewed by a panel of six experts who specialize in curriculum and instruction and instructional technology at the College of Education, Middle East University in Jordan (Frankfort-Nachmias, Nachmias & DeWaard, 2015). The suitable revisions and modifications were made to the survey based on the comments provided. The reliability of the questionnaire was verified by calculating the Cronbach Alpha coefficient for the sub-tool domains and the level, which ranged between (0.931-0.975). These are acceptable values to achieve the goal of the study, as Peter (2014) indicates that the values of the reliability coefficient (>0.60) are considered educationally acceptable.

The survey data were analyzed to answer the first research question, descriptive statistics (means and standard deviations) were calculated. The results of the average mean scores were categorized into three levels: 1.00 to 2.49 indicates the low level of utilization, 2.50 to 3.49 indicates the Medium level of utilization, and 3.50 – 5.00 indicates the high level of utilization. For the second research question, MANOVA was utilized to determine if there were any statistically significant differences among kindergarten teachers in their utilization of online learning in their teaching.

5. Results

This part deals with a presentation and an explanation of the findings of the current study after applying the study tool, data collection, and analysis. The results of the study are presented below.

The level of utilization of online learning

The first question of the study states that "What is the level of employment of online learning in kindergartens in light of the Covid-19 pandemic from the point of view of female teachers?" The mean scores and standard deviations of the level of online learning

utilization in kindergartens under the Covid-19 pandemic were calculated from the teachers' point of view for each field of the online learning utilization level scale used in the study.

Teaching

The overall scores had a mean of 3.40 (SD = 0.69), with a minimum and maximum mean score of 3.67 and 2.88, respectively. Table 1 shows that the level of employment of online learning in kindergartens in light of the Covid-19 pandemic from the teachers' point of view for the points of the teaching field were all average, as the mean scores ranged between (2.88 - 3.67), and the standard deviations between (0.82-1.08). Point (16) came in the first rank, which states: "I give children sufficient time to receive and send assignments through online learning", with a mean score of (3.67), and a standard deviation of (0.85). Point (1) came in the last rank, which states: "I can achieve the objectives of the educational subject through online learning", with a mean score of (2.88), and a standard deviation of (0.91).

The standard deviations are for all items and the overall means are relatively low indicating that there is a moderately strong agreement among the teachers when evaluating these items. The highest degree of agreement concerns the item "I apply different teaching methods with my children (dialogue, stories, problem-solving, discovery, and others)." as, in average, the teachers' scores show a deviation of 0.78 points with respect to the mean. On the other hand, the lowest degree of agreement is for item "Engage children in interactive activities through live, direct lessons (remotely)." as the standard deviation is (1.08) points with respect to the mean.

These results may be attributed to the attempt of kindergarten teachers to take into account the varying level of children's ownership of technological and material requirements; some of them cannot connect to the internet continuously to receive and send assignments, and some of them may have one computer at home while more than one child in the family study online especially if we know that the average number of children in the same family is high. A recent study (Bani Hani, et. al, 2021) showed that Jordanian household size was 5.48 on average, ranging from 1 to 12 members and some families may have 5 to 6 six children in schools. In addition to the existence of individual differences between children related to their abilities to understand and solve homework. This result may also be attributed to the difficulty of achieving the goals of some educational materials through online learning, as they require face-to-face education within the classroom and direct interaction between children and teachers. This includes providing children with values, principles, and skills that require the presence of the child among his peers away from the family. This also includes skills related to emotional and social development, language and movement development, and enhancing personal qualities such as self-confidence, responsibility, cooperation, and getting rid of introversion and shyness. What supports this point of view is what Foti (2020) indicated about the difficulty to provide children with many of the skills that need face-to-face education through means of online learning.

The mean scores and standard deviations of the level of utilization teaching strategies in kindergartens were calculated in light of the Covid-19 pandemic for each of the teaching field included points as shown in Table 1.

Communication

The mean score and standard deviations of the level of employment of online learning in kindergartens were calculated in light of the Covid-19 pandemic for the points of the field of communication, as shown in Table 2.

It appears from Table 2 that the total score for the field of communication came to a medium level, as the mean score was (3.26), and the standard deviation was (1.04). The field points were all of a moderate level, as the mean score ranged between (3.19-3.31), and the standard deviations between (1.05-1.13). These levels of teachers' utilization of distance learning deviate from the mean score of 3.26 because the standard deviations in all the items and the overall average are relatively large and scattered. As a result, these indicate that the instructor answers have a 'strong heterogeneity. The item that state: "I exchange experiences with other teachers in the same field" with a mean score of (3.31) and a standard deviation of (1.05). Point (30) came in the last rank, which states: "I communicate with people with experience in the field of online learning on an ongoing basis", with a mean score of (3.19), and a standard deviation of (1.04). The study attributes the average level in the field of communication with a mean score of (3.26) to the keenness of some teachers to benefit from their teaching experiences and methods of dealing with various programs and technical means during the online learning process and the way to prepare lessons and assignments in an attractive way for children, especially that the online learning process is a modern, unprecedented experience for teachers during the Covid-19 pandemic, which prompted them to exchange experiences to make the distance learning process as successful as possible.

This result can also be explained by considering the ability of kindergarten teachers to deal with online learning as a result of their knowledge of its mechanisms and as a result of the internet and YouTube clips, which contributed to enabling them to communicate remotely with children and their families smoothly and easily. This result may also be attributed to the teachers who have attended training courses and workshops for mechanisms to deal with online learning. Despite all this, it was not enough to make the level of communication between teachers, children, and

their parents high. This also may be because the teachers' interest in developing their expertise in this field did not go beyond being individual cases. Also, the training that was held remotely, may not have achieved the desired and planned results. This result is consistent with the findings of Abubakar's study (Abubakar, et al, 2020) on the average level of communication between teachers, children, and their parents.

Teachers' competencies

The mean score and standard deviations of the level of Teachers' competencies of online learning in kindergartens under the Covid-19 pandemic were

Item	Mean	SD
I give children sufficient time to receive and send assignments through online learning.	3.67	0.85
I take into account the individual differences between children during online learning	3.65	0.87
I follow up on the homework I assign to the children.	3.61	0.88
I focus on the children's interaction with me in the lessons on an ongoing basis.	3.59	0.84
I evaluate the skills required for the stage in children in several ways.	3.55	0.86
I use the multimedia of audio, pictures, videos, and animation to teach children about online learning.	3.53	0.88
I abide by sending activities and assignments to the children at specific times, considering the parents' circumstances.	3.51	0.88
I encourage the studious children who participate in the lesson on an ongoing basis.	3.5	0.97
I motivate children to participate using various methods.	3.48	0.9
I apply educational activities that meet the developmental criteria of children.	3.47	0.85
I offer continuous feedback to children and their parents.	3.46	0.93
I use a variety of child-friendly evaluation methods (notes- cross lists-evaluation scales).	3.43	0.82
I use various evaluation methods to measure goals related to cognitive, skills, and emotional aspects.	3.43	0.83
I consider the allocation of time to carry out various activities.	3.4	0.92
I work on the interaction of the children together during the lessons.	3.4	0.93
I give children practical assignments aligned with the lessons.	3.37	0.92
I offer lessons in the form of pre-made videos (asynchronous).	3.36	0.89
I develop plans to implement and deliver lessons remotely	3.34	0.9
I send enriching activities to children on an ongoing basis.	3.34	0.88
I send remedial activities for children if necessary.	3.34	0.91
I continuously evaluate the children through online learning.	3.25	0.89
I present lessons in an interactive, live format with children (synchronized).	3.23	0.89
I apply different teaching methods with my children (dialogue, stories, problem-solving, discovery, and others).	3.18	0.78
Engage children in interactive activities through live, direct lessons (remotely).	3.4	1.08
I can achieve the objectives of the educational subject through online learning	2.88	0.91
Total	3.40	0.69

Table 1 - The mean score and standard deviations of participants' responses on the Teaching subscale.

Items	Mean	SD
I exchange experiences with other teachers**.**	3.31	1.05
I communicate with parents frequently to follow up on their children.	3.28	1.16
I support outstanding children in a variety of ways.	3.28	1.08
I send to the parents the weekly plan including educational content and activities.	3.24	1.13
I receive constant parent feedback about children's performance.	3.24	1.13
I communicate with experienced people in the field of online learning on an ongoing basis.	3.19	1.07
Total	3.26	1.04

Table 2 - The mean score and standard deviations of participants' responses on the Teaching strategies.

Items	Mean	SD
I possess the skills necessary to convert the educational content in the book into interactive electronic content.	3.21	0.98
I participate in the Ministry's training courses on online learning techniques.	3.2	1.01
Children have devices and tools that support online learning (smart devices).	3.16	1
I am keen to develop my technological skills to raise my efficiency in online learning.	3.15	1.03
The child/parent has the necessary technical skills for online learning.	2.95	1.08
Total level in the Teaching competencies	3.16	0.89

Table 3 - The mean score and standard deviations of participants' responses on the Teachers Competencies

calculated for the points of the technical field used in teaching, as shown in Table 3.

It appears from Table 3 that the total score for the field of Teachers' competencies came to a medium level, with a mean score of (3.16) and a standard deviation of (0.89). The points came between the high and medium levels, as the mean score ranged between (2.95 -3.99), and the standard deviations ranged between (0.97 - 1.08). Point (33) came in the first rank, which states: "I have constant internet connection", with a mean score of (3.99), a standard deviation of (0.97), and with a high level. The standard deviations for the overall mean are relatively low indicating that there is a moderately strong agreement among the teachers when evaluating teachers' competencies as a whole. However, for most of the items, the standard deviations large and scattered. The highest degree of agreement concerns the item "I possess the skills necessary to convert the educational content in the book into interactive electronic content." as, in average, the teachers' scores show a deviation of 0.98 points with respect to the mean. On the other hand, the lowest degree of agreement is for item "The child/parent has the necessary technical skills for online learning." as the standard deviation is (1.08) points with respect to the mean.

The lowest rank was for the item that states, "The child/parent has the necessary technical skills for online learning", with a mean score of (2.95), a standard deviation (1.08), and a medium level. The average score, with a mean score of (3.16), can be attributed to the fact that the classes times came at times that did not constitute the peak of the use of the internet, which contributed to its stability. In addition to distributing the times when assignments are sent and received, some parents do this directly after their children finish assignments, while others may have to send them at another time because they are busy at work or other things. It can also be explained why the result is medium and not high, that the internet connection is not stable without interruption in all regions, but rather suffers from some interruptions. This is consistent with what was indicated by the study of Sari and Nayir (Sari & Nayir, 2020), whose results showed that teachers face difficulties in accessing the internet as a result of poor infrastructure.

Relationships between teachers' level of online

The second research question is "Are there relationships between teachers' level of online utilization and their demographic characteristics (School Type, years of experience)?"

Table 4 illustrates the variation in the means and standard deviations of teachers' responses on the scale of the study. This variation is due to the type of school (Public, Private), and years of teaching experience. It was observed that private school teachers have a higher level of online learning utilization than public schools. It was also observed that the teachers with low teaching experience showed the level of utilization than other teachers who have more learning experience.

To answer this question, multiple analysis of variance (MANOVA) was used to test the significance of the differences between the mean scores of the level of utilization of online learning in kindergartens in light of the Covid-19 pandemic from the point of view of the teachers according to the study variables, and Table 5 illustrates that.

The results of Table 5 indicate the existence of statistically significant differences in the fields of the level of utilization of online learning in kindergartens in light of the Covid-19 pandemic from the point of view of teachers according to the variable of the school type in all fields of study and the level of utilization of distance learning as a whole. The level of significance in all fields was less than (0.05). Returning to the mean scores, the differences were in the private school type, meaning that the level of online learning utilization among kindergarten teachers in the private sector is higher than in the public sector. Table 5 also shows that the effect size of the school type variable (0.047), which is small effect size, means that the school type variable explains 4.7% of the total variance in the level of online learning utilization. This may be attributed to the private school type's keenness to pursue online learning and develop teachers' skills in this aspect for goals related to the economic aspect of its kindergartens, and taking care of this critical stage through designing lessons, electronic activities, homework, constantly communicating with parents, following up the children, and evaluating their performance, because that leads to the ability of these kindergartens to continue in the field of competition in education. This may also be attributed to the keenness of the private school type to remain within the performance levels as in face-to-face education and to maintain its competitive advantage in the quality of education it provides to students at all levels, including kindergarten.

There are no statistically significant differences in the fields of the level scale of online learning utilization in kindergartens in light of the Covid-19 pandemic from the teachers' point of view according to the academic qualification variable in all fields of study and the level of utilization of distance learning as a whole, as the level of significance is higher than (0.05). Table 6 also shows that the effect size of the scientific qualification variable (0.002) is a very small impact size and means that the academic qualification variable explains 0.2% of the total variance in the level of utilization of online learning. This may be attributed to the fact that kindergarten teachers, regardless of their qualifications, employ online learning for kindergarten with a similar mechanism, by preparing and explaining lessons, preparing assignments, sending, and receiving them, designing interactive and educational activities, and

following up on students' performance through various technological means.

There are statistically significant differences in the domains of the level of online learning utilization scale in kindergartens in light of the Covid-19 pandemic from the teachers' point of view depending on the variable number of years of experience in all fields of study, and in the level of distance learning utilization as a whole (except for the field of communication) as the significance in these fields is less than (0.05). To find out to whom the differences between the mean scores are attributed according to the variable of years of experience, the results of Scheffe's post-comparison test were extracted and Table 6 shows that. This may be attributed to the keenness of kindergarten teachers, in general, to communicate with the parents of kindergarten students through various means of communication, and to constantly follow up their performance with parents, because this is at the heart of the teacher's work to ensure that the required information reaches the children, in addition to the teacher's communication with each other to exchange experiences, skills, and benefit from the various methods of employing online learning and follow-up lessons.

Table 6 shows the existence of statistically significant differences in the fields of teaching and the field of technology used remotely between the category (less than five years) and the rest of the categories. The differences came in favor of the group (5-10 years), as it obtained a mean score of (3.54), (3.32) respectively. The same differences came in the level of employment of online learning as a whole. The differences were in favor of the group (5-10 years), as it had the highest mean score of (3.49). This may be attributed to the fact that teachers with average experience are more passionate about the teaching profession, and thus, more interested in and able to use and apply different

Variables	*Teaching*		*Communication*		*Technology*	
	M	*SD*	*M*	*SD*	*M*	*SD*
Type of School						
Public (n = 80)	3.21	0.51	2.60	0.97	2.75	0.75
Private (135)	3.52	0.76	3.64	0.87	3.41	0.88
Years of teaching experience						
Less than 5 (n = 46)	3.03	0.88	3.13	0.99	2.95	1.01
5 to less than 10 (n = 71)	3.54	0.56	3.61	0.77	3.32	0.76
More than 10 (n = 98)	3.48	0.63	3.06	1.16	3.15	0.91

Table 4 - Means and standard deviations of teachers' responses on the scale of the study

Source	*Dependent Variable*	*Sum of squares*	*DF*	*Mean squares*	*Value (F)*	*Sign*	*Eta*^{2}
School type	Teaching	2.13	1	2.12	5.77	.017*	.027
	Communication	4.15	1	4.14	5.96	.015*	.028
	competences	7.43	1	7.43	12.18	.001*	.056
	Total	4.30	1	4.30	10.18	.002*	0.47
Years of experience	Teaching	5.12	2	2.56	6.94	.001*	.063
	Communication	1.66	2	.828	1.190	.306*	.011
	competencies	5.73	2	2.865	4.695	.010*	.044
	Total	3.78	2	1.873	4.434	.013*	.041

Table 5 - Summary of factorial MANOVA for teachers' level of utilization of online learning for variables of the study

Domain	Categories	Less than 5	From 5 to less than 10	More than 10
Years of experience	Less than 5 years			
	5 to less than 10 years	.5115*		
	More than 10 years	.4475	.0640	
Teachers' Competencies	Less than 5 years			
	5 to less than 10 years	.3645*		
	More than 10 years	.1950	.1695	
Level of employment of online learning	Less than 5 years			
	5 to less than 10 years	.4539*		
	More than 10 years	.1917	.2622*	

*****p < .001

Table 6 - The results of Scheffe's test for dimensional comparisons on the variables of the study

teaching methods and strategies, prepare and implement lessons and activities, prepare plans, follow up and evaluate students using different evaluation methods, focus on methods of developing students' skills, and taking into account individual differences between them. That is because they have enough experience on the one hand, and are still able to renew their methods willingly. This may be since the teachers of this category possess advanced skills and greater knowledge about dealing with technology, and thus, can employ them in teaching using smart devices, software, and various techniques.

6. Conclusions and Implementations

The COVID-19 pandemic has affected all aspects of life. One of these aspects is education. Upon the breakout of the pandemic, substantial changes were introduced in education all over the world, and online learning has turned out to be the main way of education. However, educational systems all over the world were not ready for this exceptional crisis and encountered many obstacles maintaining education and utilizing online learning especially with children (United Nations (UN), 2020). The current study aimed to investigate the level of kindergarten teachers' utilization of online learning during the COVID-19 pandemic.

Kindergarten teachers bust provide children with different meaningful learning experiences by creating technology-enriched learning environments and learning activities suitable for children (Keengwe & Onchwari, 2009). The results of the current study found that kindergarten teachers need to have a high level of technical skills to teach effectively using online learning. The Starting Strong Teaching and Learning International Survey (TALIS Starting Strong) has pointed to this issue, the survey concluded that kindergarten teachers feel less confident about the integration of digital technology to support students' learning (OECD, 2020).

The success of online learning depends on the teachers' technological abilities to use digital resources (Kim, 2020). It can be concluded from this study that teaches need more training to be able to teach effectively in the online learning environment. Thus, the results of this study provide a foundation for governments, and education decisions to design and implement action plans to contribute high-quality online learning for children in Kindergarten. Further studies might endorse the implementation of action plans to meet the needs of Kindergarten teachers to assess the effectiveness of the implementations. moreover, since this study used only the survey to collect, further research using different data collection methods and triangulating data to study the current issue in depth. In light of the findings of the study, it recommends the Jordanian government give more attention to kindergarten teachers. A professional development plan should be provided for kindergarten teachers to Enhance their abilities to implement online learning effectively through the use of various techniques in teaching. It is known that the Jordanian government launched educational platforms to grades from 1-12, and no platform dedicated for kindergartens, therefore it is a most to launch a platform for kindergarten that includes interactive activities, homework, and explanation of lessons through attractive videos, songs, educational games, and stories.

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