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The Level of Advanced Digital Leadership Practice Among Public School Principals in Karak Governorate from the Point of View of the Teachers Themselves

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Abstract
The current study aimed to identify the level of advanced digital leadership practice among public school principals in Karak Governorate from the point of view of the teachers themselves, and to detect differences in the level of digital leadership practice among public school principals according to the variables of gender, experience and educational qualification. The study used the descriptive analytical approach. A questionnaire was developed to measure the level of digital leadership practice among school principals, its validity and reliability indicators were verified, and the study sample consisted of (365) male and female teachers who were randomly selected. Teachers were average, and it was found that there were statistically significant differences in the level of digital leadership practice among public school principals in Karak governorate from the teachers' point of view due to gender and in favor of females, as well as the presence of differences attributed to experience and in favor of those with higher experience, while the results showed that there were no differences due to educational qualification The study recommended that there should be efforts and measures that should be taken by the Ministry of Education, directorates and schools to develop the level of school principals' practice of digital leadership, such as providing the necessary training and qualification for principals and teachers on the use of technology in education, and providing the necessary resources to improve the digital infrastructure in the school. Which requires the integration of the efforts of the administration, teachers, students and parents to improve the level of digital leadership in schools.
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INTRODUCTION

The world is witnessing a lot of progress and prosperity in the field of science and information and communication technology, which requires modern organizations and institutions to change their policy and business style in order to keep pace with these rapid changes so that they focus on innovation, creativity and achievement in order to achieve their goals, and digital leadership is considered as the fruits of technical achievements in the modern era Where developments in the field of communications, and the creation of advanced communication technologies, led him to think about benefiting from the achievements of the technical revolution by using computers, Internet networks, and smart phones, and linking them in modern leadership management.

The success of any collective action within the institution depends on the ability of the administrative leaders to achieve the goals of the institution by carrying out their duty in conducting its business, according to their capabilities and qualifications that enable them to influence others, especially that the world today is experiencing a huge scientific and technological revolution in all aspects of political and social life. Therefore, it is not possible to rely on the old traditional methods that are characterized by stagnation and stereotypes to bring about the desired change. Therefore, modern management has tended to use modern leadership methods that are flexible and modern, which are concerned with speedy achievement and high efficiency in order to advance the institution and achieve its goals (Ahmed, 2021).

Leadership is one of the main elements of management. Leadership focuses on human relations and is also concerned with vision, various strategies, follows the example method, and relies on participation and social interaction between the boss and his subordinates according to standards and principles to be a successful leadership (Fenech & Ivanov, 2019). Leadership in the digital age is about empowering others to lead and creating self-organizing teams to improve day-to-day operations, eliminate hierarchy and bureaucratic processes, and enhance the participation of all team members. They should also be able to take steps forward to bring their followers together to power them forward by taking advantage of information technology called digital leadership (Van &Attoti, & De Waal, 2020).

Digital leadership is one of the concepts that described and clarified the role of leadership, and it was necessary to distinguish between two categories of leadership related to one different one, the first: leadership in the digital age, which indicates that leadership in any organization or sector is an integral part of the broad

transformations towards a more society Knowledge and development, as all leaders in various fields are aware of the new restrictions and work to provide opportunities related to information and communication technology and use them effectively, and the second is digital leadership and refers to leadership in the basic sectors of society, many leadership innovations have arisen in the information technology sectors And basic communications, such as using Internet portals to connect customers with suppliers. (Collin et al, 2015)

Based on the foregoing, it is necessary for public schools to start using this type of leadership in the public system of the school so that it can gradually adapt to the new work environment with its technological progress and new challenges. view of the teachers themselves.

STUDY PROBLEM:

School leadership is one of the most important pillars of the educational process, in addition to the teacher, the student, and the curriculum, because of its essential role in achieving the goals of this process. (Awad, 2019).

The current study indicates that despite the great development in the technological structure in many public schools in the Hashemite Kingdom of Jordan, the school system's benefit from that technological development and progress does not rise to the desired level of ambition, in addition to its slow pace in keeping pace with the information and communication technology revolution. The problem of the study appears through the researcher's work as a teacher in the Ministry of Education in one of the schools in Karak Governorate, where through her work she noticed many administrative obstacles between principals and teachers and the size of the burdens that fall on the school principal, including the lack of a database and information to be referred to when needed. To take advantage of them to improve the quality of educational outputs in quantity and quality. Where she crystallized the idea of investing in information and communication technology, and shifting from traditional leadership to digital leadership in public schools, to keep pace with the accelerating technology, achieve the objectives of the Ministry of Education, and improve the quality of school administration and the quality of education. Which identified the main problem of the study in knowing the level of digital leadership practice among public school principals in Karak Governorate from the point of view of the teachers themselves, to reach a set of conclusions and recommendations at the end of the current study, which may benefit those in charge of the educational process.

STUDY QUESTIONS:

THE CURRENT STUDY SEEKS TO ANSWER THE FOLLOWING QUESTIONS:

1. What is the level of digital leadership practice among public school principals in Karak Governorate from the point of view of the teachers themselves?
2. Are there statistically significant differences at the level of significance ($0.05 \geq \alpha$) in the responses of the study sample on the level of digital driving practice due to the variables (gender, years of experience, educational qualification)?

OBJECTIVES OF THE STUDY:

THE CURRENT STUDY SEEKS TO ACHIEVE THE FOLLOWING OBJECTIVES:

1. Finding out the level of digital leadership practice among public school principals in Karak Governorate from the point of view of the teachers themselves.
2. To know if there are statistically significant differences in the level of digital leadership practice among public school principals due to the variable (sex, years of experience, educational qualification).

THE IMPORTANCE OF THE STUDY:

The importance of the research stems from the importance of practicing digital leadership among school principals from the point of view of teachers, because of its effective role in keeping pace with modern school administration, and its expected role in supporting the future entrepreneur in the educational system. The importance of the study can be highlighted through the following:

FIRSTLY. THEORETICAL IMPORTANCE:

- Reaching a framework for building a solid foundation for the concept of digital leadership in the Hashemite Kingdom of Jordan.
- It can provide enrichment for studies and research in the field of educational administration and provide academic scientific benefit, regarding the issue of digital leadership in school administration.
- It is also possible that this study will be a reference for researchers in this field, as well as opening new horizons for research in this field through the recommendations that will be presented by the current study.
-It may be useful to identify the reality of the level of digital leadership practice in public schools by clarifying and explaining the strengths and weaknesses in employing this type of leadership in order to enhance the strengths and address the weaknesses.

SECONDLY. SCIENTIFIC SIGNIFICANCE:
-The results of this study are expected to contribute to the transformation or adoption of a modern administrative approach that keeps pace with technological developments, represented by digital leadership in public schools.
- The results of this study inform those in charge of the education process in Jordan of the importance of developing programs for preparing public school principals to match the actual needs of digital leadership according to teachers' views on it.
- This study can also benefit by providing a clear picture to the Ministry of Education of the extent of principals' use of digital leadership in public schools, to provide the necessary training courses and workshops for principals in the light of the results of the current study.
- Helping school administrations in Karak Governorate to launch initiatives for all principals to enhance their orientation towards digital transformation represented by digital leadership.
It may be useful to identify the reality of applying digital leadership in general education schools, and to indicate the strengths and weaknesses in employing this type of leadership in order to enhance the strengths and address the weaknesses.

TERMINOLOGY OF STUDY :
LEADERSHIP IN LANGUAGE:
The opposite of the market, driving the animal from in front of it and driving it behind it, so driving from the front and driving from behind, and driving from horses that are led by their handlebars, and gathering a leader of leaders or pimps (Ibn Manzoor, 2003).

LEADERSHIP :
-It is an interactive process that expresses a relationship between an individual and a group, or rather between a boss and subordinates, through which the boss can directly influence the behavior of the individuals who work with him in order to achieve a common goal (Al-Omari, 2019).

DIGITAL:
The term digital is the translation of the term (digital) in English, and it means electronic technology that generates, stores and processes data in terms of two positive and non-positive cases, the positive is expressed or represented by the number 1 and the non-positive is the number 0, therefore, the data transmitted or stored using digital technology is expressed as a string of 0 and 1. (2005, Rose).

DIGITAL LEADERSHIP:
It is defined as the unification of a set of methods and techniques to bring skills and knowledge together by motivating members of the organization to enhance knowledge and share it within a team or group to develop a deeper understanding, or transfer it from outside the organization to within it (Sheninger, 2019).

The researcher defines digital leadership as the practices of school principals that rely on digital technology, techniques and software to achieve the goals of the educational system efficiently and effectively.

DIGITAL LEADERSHIP IN EDUCATION:
The concept of digital leadership in education refers to the integration of the use of a group of technologies and tools such as: the Internet of Things, electronic platforms, webinars, social media, artificial intelligence, digital data, machine learning, when carrying out leadership practices, teaching and learning (Antonopoulou&Beligiannis, 2020).

The researcher defines digital leadership in education (procedurally) as integrating digital technologies such as computers, mobile devices, communication applications, and web applications into the leadership practices of school leaders and directing them towards a sustainable change in the use of technology in schools.

THE LIMITS OF THE STUDY:
The limits of the study are as follows:
-TEMPORAL LIMITS: This study was applied in the second semester of the academic year (2022/2023).
-SPATIAL LIMITS: public schools in Karak Governorate.
-HUMAN LIMITS: Public School Teachers.
-OBJECTIVE LIMITS: This study was limited to the level of digital leadership practice among public school principals in Karak Governorate from the point of view of the teachers themselves.

THEORETICAL FRAMEWORK
School leadership plays a pivotal role in the success and achievement of the goals of the educational process. It

also has many administrative tasks in organizing the educational process, guiding teachers, building and preparing students in all aspects, mental, social, psychological and physical. The process of developing education depends on its ability to integrate and keep pace with developments in The field of information and communication technology, and one of the most prominent manifestations of integration and keeping abreast of developments is digital leadership and the leader's contribution to the transformation towards a knowledge society. The technical revolution using computers and Internet networks to accomplish business, and the importance of digital leadership appears through its strategic importance that contributes to supporting and supporting workers in educational institutions such as school principals, in order to simplify administrative procedures and facilitate the decision-making process, in addition to enabling departments and leaders to plan efficiently and effectively to take advantage of Work requirements, and presenting high-quality works in accordance with technical and other high-tech standards that keep pace with the requirements of the times and achieve their goals.

The concept of digital leadership: Al-Aqtash (2019) defined it as a process of social influence led by advanced information technology, with the aim of changing the intention of individuals, groups, and organizations in terms of attitudes, feelings, behavior, thinking, and performance.

Afoliokahi defines it as quoting (Al-Duhli, Al-Kharousi, and Al-Shuaibi, 2021) as social influence processes by means of advanced information technology to produce a change in attitudes, feelings, thinking, behavior, and performance with individuals, groups, or organizations.

THE IMPORTANCE OF DIGITAL LEADERSHIP: AL-RAQAB (2022), AL-KHUDARI (2019) AND KHAN (2016) POINT OUT THE IMPORTANCE OF DIGITAL LEADERSHIP IN SCHOOLS WITH SEVERAL POINTS, INCLUDING:

1. Help maintain a digital database of the school as a whole.
2. The possibility of meeting the scientific and cognitive needs and desires of students.
3. Update information continuously.
4. Improving the process of memorizing and recalling the acquired information.
5. Improve performance and reduce errors.
6. Enhancing the role of parents in following up their children.
7. Save time, effort and money.
8. Improving material and human outputs in quantity and quality.

Characteristics of digital leadership:

DIGITAL LEADERSHIP IS CHARACTERIZED BY A SET OF CHARACTERISTICS, THE MOST IMPORTANT OF WHICH ARE AS PRESENTED BY AHMED (2021), QUOTING (AL-AQTASH, 2019):

1. Digital leadership is a leadership that is not tied to a specific time and place, as the process of communication between the leader, managers, and students is without borders or temporal or spatial restrictions.
2. Digital leadership and the educational process depend entirely on information technology, which reduces the effort exerted for the leader.
3. A leadership that has a sense of technology, as the digital leader is sensitive to the dimensions of technical development in electronic devices, software, networks, and applications.
4. Innovative leadership with qualifications and skills characterized by the spirit of competition and the ability to challenge other competitors.

JUSTIFICATIONS FOR IMPLEMENTING DIGITAL LEADERSHIP: AL-RAQAB (2022) MENTIONS A SET OF FACTORS THAT NECESSITATED THE NEED TO MOVE TOWARDS DIGITAL LEADERSHIP, INCLUDING:

- Investing in the intellectual capital of educational institutions.
- Information and communication technology revolution.
- Business revolution and the Internet.
- Globalization, as the school needs a different type of teachers and leaders who possess multiple skills that can be constantly developed.
- The differences between traditional leadership and digital leadership:

BOTH ABU HAYA (2021), YUCEBALKAN, 2018) POINT OUT THAT DIGITAL LEADERSHIP DIFFERS FROM TRADITIONAL LEADERSHIP IN SEVERAL ASPECTS, WHICH ARE AS FOLLOWS:

1. A traditional leader emphasizes performance-centered management, while digital leadership gives autonomy to employees, supports their individual actions, and values performance, field experience, and target culture.

2. The traditional leader is focused on the product and takes more consideration of the product development processes; While a digital leader wants to understand the whole and act accordingly, while having the skill of organizational improvement.
3. A traditional leader oversees employees, while a digital leader devotes time to talent development strategies.
4. The traditional leader does not comprehensively use the Internet and the opportunities of the digital age, while the digital leader uses them effectively.
5. The traditional leader focuses on the objectives, while the digital leader constantly analyzes the outputs as well.
6. The traditional leader aims for a slower, more precise path toward the right thing; Whereas the digital leader wants to get there in the quickest way possible.
7. Data is important to the traditional leader, but the digital leader is arguably more interested.

PREVIOUS STUDIES:

In this aspect, the previous Arab and foreign studies related to the subject of digital leadership have been arranged, in terms of chronology, from the oldest to the most recent, as follows:

Busaily (2022) conducted a study aimed at identifying the reality of applying digital leadership in general education schools in the urban Abha region. To achieve the objectives of the study, the study followed the descriptive analytical approach, and used the questionnaire as the main tool for the study. It was distributed to a random sample of (343) leaders, their deputies, and administrators of both sexes. The results of the study revealed that the degree of practicing the dimensions of digital leadership obtained a total average of (3.51 out of 5) with a percentage of (70.18) and a verbal estimate (large). The position is in favor of those whose position is undersecretary and according to experience and in favor of those whose experience is less than 5 years, while there are no statistically significant differences between the mean estimates of the respondents due to the educational qualification variable.

Al-Fahdawi (2022) conducted a study aimed at determining the role of digital leadership in its dimensions (digital competence, digital insight, digital culture, digital strategy) in achieving organizational brilliance in its dimensions (brilliance in leadership, brilliance in service and innovation, brilliance in knowledge) in Iraqi telecom companies (Zain Iraq, Asiacell, Cork). To achieve the goal of the research, the descriptive analytical approach was used to describe the research variables, and analyze the data by means of the questionnaire, which is the main tool for data collection. It was distributed to a sample consisting of (102) managers. Vital to the brilliance of the company, the ability of companies to achieve competitive advantage depends on the digital leader. A set of recommendations was presented, most notably the need for the departments of the surveyed companies to pay attention to the digital leadership style in their strategic framework, especially with regard to taking into account the external factors produced by the economic and technological situation and their repercussions on the process of providing better services.

Al-Raqab (2022) conducted a study aimed at identifying the degree of practicing digital leadership by the principals of private schools in the capital, Amman, from the point of view of teachers. The degree of digital leadership practice by private school principals is high, and there are no statistically significant differences attributed to the variables of gender (educational qualification), while there were statistically significant differences attributed to the variable of years of experience in favor of 10 years or more.

De Araujo (De Araujo, 2021) A study aimed at identifying digital leadership practices in global organizations, and the study was applied in Indonesia, and leaders' attitudes towards implementing digital leadership and their experience in it, the study followed the analytical descriptive approach, and used the systematic review of previous literature that dealt with the issue of digital leadership globally. One of the most important findings of the study is that digitization and technological developments have led companies to transform organizational structures, processes, business models and strategies into digital operations, and digital leaders use and enhance the company's digital assets and digital leaders have different capabilities and perspectives compared to traditional leaders. Understand the value of digital leaders, which leads to underperformance and irreparable failures.

METHODOLOGY AND DESIGN

This chapter includes a presentation of the study methodology, its community and sample, the tool adopted in data collection, how to prepare and develop it, and how to verify its validity and reliability. It also includes the study procedures and the statistical methods used to process the data and draw conclusions.

STUDY METHODOLOGY:

This study relied on the analytical descriptive approach, by referring to the theoretical literature related to the subject of the current study, which was concerned with clarifying the level of digital leadership practice among public school principals in Karak Governorate from the teachers' point of view.

STUDY POPULATION:

The study population consisted of all (6102) male and female teachers in Al-Karak Governorate in Jordan, with (2067) male and (4035) female teachers, distributed over (315) schools, according to the statistics of the Jordanian Ministry of Education for the academic year 2022/2023. Table (1) shows the distribution of the study population by directorate and gender:

TABLE (1): DISTRIBUTION OF THE STUDY POPULATION BY DIRECTORATE AND GENDER

Directorate	Male teachers	Female teachers	Total	Schools
Karak	732	1409	2141	118
Southern Mazar	544	1036	1580	87
Algaser	404	828	1232	71
Southern Valley	387	762	1149	39
Total	2067	4035	6102	315

THE STUDY SAMPLE:

The sample was selected by the cluster random method, where (10) male schools and (13) female schools were randomly selected, and the sample size was determined by the Thompson equation (Thompson, 2002). The questionnaire was applied to all male and female teachers in the schools. The chosen one, where it was distributed among (365) male and female teachers at a rate of (6%) of the study population, and table (2) shows the distribution of the study sample members according to gender, educational qualification, experience and directorate:

TABLE (2): DISTRIBUTION OF STUDY SAMPLE MEMBERS ACCORDING TO GENDER, EDUCATIONAL QUALIFICATION AND EXPERIENCE

Variable	Category	NO.	Percentage
Gender	Male	130	35.6%
	Female	235	64.4%
Qualification	Bachelor	269	73.7%
	Postgraduate	96	26.3%
	Less than 5 years	91	24.9%
Experience	5-10 years	137	37.5%
	More than 10 years	137	37.5%
	Karak	107	29.3%
Directorate	Southern Mazar	113	31.0%
	Algaser	70	19.2%
	Southern Valley	75	20.5%
Total		365	100%

SCIENTIFIC TRANSACTIONS OF THE STUDY TOOL:

FIRSTLY. VALIDITY OF THE STUDY TOOL:

The indications of virtual honesty were verified using the honesty of the arbitrators by distributing the questionnaire in its initial form to (12) arbitrators from Jordanian universities (Mu'tah, Jordanian, Al-Balqa Applied University) "Appendix (C)", and their opinions, suggestions and amendments were taken into account, as (10) were deleted) paragraphs of the questionnaire paragraphs, with an agreement rate of (80%), and the wording of some paragraphs was modified based on their suggestions.

The validity of the questionnaire was also verified using the validity of the internal consistency by calculating the correlation between the degree of the paragraph and the degree on the dimension to which the paragraph belongs on an exploratory sample of (30) male and female teachers who were randomly selected from within the community and were not included in the study sample. Table (3) shows the coefficients Link:

TABLE (3): THE VALIDITY OF THE INTERNAL CONSTRUCTION OF THE QUESTIONNAIRE BY CALCULATING THE PEARSON CORRELATION COEFFICIENT BETWEEN THE DEGREE ON THE PARAGRAPH AND THE SUB-DEGREE ON THE DIMENSION TO WHICH THE PARAGRAPH BELONGS (N = 30).

Equality and citizenship		Leadership and vision		innovation		technological culture		Material and financial resources	
1	.650	9	.367	17	.706	25	.516	33	.642
2	.561	10	.361	18	.652	26	.672	34	.572
3	.611	11	.484	19	.487	27	.727	35	.714
4	.601	12	.493	20	.482	28	.708	36	.691
5	.534	13	.534	21	.573	29	.324	37	.675
6	.575	14	.602	22	.372	30	.630	38	.457
7	.453	15	.377	23	.583	31	.581	39	.617
8	.610	16	.626	24	.467	32	.551	40	.553

It can be seen from Table (3) that the questionnaire achieved good internal constructive validity indicators, as the correlation coefficients ranged between (.361-.762). The correlation coefficient was also calculated between the score on the domain and the total score on the questionnaire, as shown in Table (4):

TABLE (4): CORRELATION COEFFICIENT BETWEEN THE SCORE ON THE DOMAIN AND THE TOTAL SCORE ON THE QUESTIONNAIRE

Dimension	correlation coefficient
Equality and citizenship	.625**
Leadership and vision	.583**
Innovation	.575**
Technological culture	.588**
Material and financial resources	.607**

(**) function at the significance level (α≤0.01)

It is clear from the data in Table (4) that the correlation coefficients for the dimensions ranged between (.575-.625), all of which are statistically significant, which indicates that the questionnaire has appropriate internal consistency and validity indicators.

SECONDLY. STABILITY OF THE STUDY TOOL:

The indications of the stability of the questionnaire were verified using the Cronbach alpha equation for internal consistency on the same survey sample (n = 30). Table (5) shows the stability coefficients of the questionnaire:

TABLE (5): COEFFICIENTS OF STABILITY OF THE RESOLUTION.

Dimension	Items NO	CronbachAlpha	Repeatstability coefficient
Equality and citizenship	8	.84	.83
Leadership and vision	8	.88	.85
Innovation	8	.81	.81
Technological culture	8	.82	.80
Material and financial resources	8	.86	.84
Total	40	.92	.91

It is clear from Table (5) that the stability coefficient of Cronbach's alpha for the resolution as a whole was (.92) and for the dimensions it ranged between (.81-.88). The coefficient of repeat stability for the resolution as a whole was (.91), and for the dimensions, it ranged between (.80-.85).

RESOLUTION CORRECTION

The response to the questionnaire is done according to the five-point Likert scale (very high, high, medium, low, very low), and grades are given (5, 4, 3, 2, 1) in order, and the level of practice is judged based on the following standard:

Arithmetic Mean	level for the mean
1- 2.33	Low
2.34 – 3.66	Average
More than 3.67	High

STUDY VARIABLES:

A. INDEPENDENT VARIABLES: DIGITAL LEADERSHIP.

The dependent variable: the degree of responses of the study sample according to the variable (gender, educational qualification, years of experience).

STATISTICAL METHODS USED:

To answer the questions of the second study, the following statistics were used:

1. MEANS AND STANDARD DEVIATIONS TO ANSWER THE FIRST QUESTION.

Multivariate analysis of variance (MANOVA). Then two way analysis of variance (Tow Way ANOVA) and Schaffe test for post comparisons to answer the second question

RESULTS AND DISCUSSION

THE RESULTS RELATED TO THE FIRST QUESTION AND THEIR DISCUSSION: WHAT IS THE LEVEL OF DIGITAL LEADERSHIP PRACTICE AMONG PUBLIC SCHOOL PRINCIPALS IN KARAK GOVERNORATE FROM THE TEACHERS' POINT OF VIEW?

To answer the question, the arithmetic means and standard deviations were calculated, and Table (6) shows that:

TABLE (6): THE ARITHMETIC MEANS AND STANDARD DEVIATIONS OF THE AGGREGATES AND DIMENSIONS OF THE LEVEL OF DIGITAL LEADERSHIP PRACTICE AMONG PUBLIC SCHOOL PRINCIPALS IN KARAK GOVERNORATE FROM THE TEACHERS' POINT OF VIEW

Dimension	Arithmetic Mean	Standard Deviation	Rank	Level
Equality and citizenship	3.61	.80	1	Average
Leadership and vision	3.52	.84	2	Average
Innovation	3.51	.81	3	Average
Technological culture	3.47	.78	4	Average
Material and financial resources	3.44	.86	5	Average
Total	3.51	.76	-	Average

It is noted in Table (6) that the level of digital leadership practice among public school principals in Karak Governorate from the teachers' point of view was average, with an arithmetic mean (3.51) and a standard deviation (.76), where the dimension (equality and citizenship) came in the first place with an average level and an average. arithmetic (3.61) and a standard deviation (.80), while the dimension (physical and financial resources) came in the last place at an average level with an arithmetic mean (3.44) and a standard deviation (.86).

The reason may be attributed to the average level of digital leadership practice among public school principals in Karak governorate from the point of view of teachers, due to the lack of financial resources and infrastructure necessary to implement digital leadership fully, and the lack of training and qualification required for principals to use technology and its applications in the educational process, in addition to The difficulty of adapting to the continuous technological changes and maintaining the level of training necessary to keep pace with them, as well as the lack of sufficient confidence among some principals in the use of technology and digital applications in the educational process, the lack of a clear strategic plan for the application of digital leadership in the school, and its failure to include it in the annual work plans and planning School strategy.

School principals were high, and this also differs with the Raman (2018) study, which concluded that the level of technical leadership among school principals was high.

The following are the arithmetic means and standard deviations for the paragraphs of each domain of the questionnaire:

FIRST: AFTER EQUALITY AND CITIZENSHIP

TABLE (7): MEANS AND STANDARD DEVIATIONS FOR THE ITEMS AFTER EQUALITY AND CITIZENSHIP

NO	Item	Arithmetic Mean	Standard Deviation	Rank	Level
1	The school principal respects the digital rights and privacy of teachers.	3.84	.96	1	High
2	The principal ensures that all teachers have equal opportunities to use digital tools.	3.69	.96	2	High
8	The school principal is committed to the policies of the Ministry of Education regarding the use of technological means in the teaching process	3.65	.99	3	Average
5	The school principal explains to the teachers the ethics of dealing with digital tools.	3.57	.99	4	Average
7	The school principal is committed to using technology in accordance with the values, customs and traditions of the community.	3.57	.99	5	Average
3	School principals are using digital tools to contribute to positive social change	3.55	.97	6	Average
6	The school principal provides a safe and healthy environment for teachers when using digital tools.	3.54	.99	7	Average
4	The principal ensures that all teachers use digital tools in the classroom.	3.44	.98	8	Average
	Equality and citizenship	3.61	.80	-	Average

It is noted from Table (7) that Paragraph No. (1), which states that "the school principal respects the digital rights and privacy of teachers," came in the first place with a high level, with an arithmetic mean (3.84) and a standard deviation (.96), and this may be due to the fact that he must There is mutual respect between the principal and the teachers in the school. Including respecting the digital privacy rights of teachers, so the principal must deal with the teachers as he wants them to deal with him, and therefore the privacy of teachers must be respected, as respecting the digital privacy rights of teachers is an essential part of effective school management and helps to build an educational environment Safe, and good work in any educational institution depends on trust and safety between the administration and the teachers. When the teachers feel that their personal data and digital information are safe and protected, they feel confident in the principal and the administration, which leads to a positive work environment, and the school principal must abide by the laws and legislation related to digital privacy protection, which protects teachers and students alike. Failure to respect digital privacy rights can lead to legal and ethical problems, in addition to holding the principal responsible for preserving the privacy of teachers and their digital information, and this includes protecting their data from hacking and unauthorized access. This requires respect for privacy rights. Paragraph No. (4), which states that "the school principal provides a safe and healthy environment for teachers when using digital tools," ranked last, with an average level, an arithmetic mean (3.44) and a standard deviation (0.98), and this may be attributed to many factors. Among the reasons are: the difference in technical skills, as some teachers may not be familiar with digital tools or they may not have the same level of technical skills as others. Thus, it may be difficult for them to use these tools efficiently and effectively, which may affect the quality of the education provided. There may also be discrepancies between the grades and subjects taught by teachers, and digital tools may not be suitable for all grades and subjects. For example, digital drawing tools may be more useful in the visual arts, while they may not be useful for teaching English, and it may be difficult for a school to provide digital tools to all teachers and classrooms. This may require updating equipment and purchasing modern equipment and expensive software, which may cause an increase in education costs and difficulty in providing them, in addition to that the use of digital tools may require preparation and additional training for teachers.

SECOND: AFTER LEADERSHIP, VISION AND STRATEGIC PLANS

TABLE (8): MEANS AND STANDARD DEVIATIONS FOR ITEMS AFTER LEADERSHIP, VISION AND STRATEGIC PLANS

NO	Item	Arithmetic Mean	Standard Deviation	Rank	Level
9	The school principal contributes to the formulation of the school's vision, depending on the use of technology in the school.	3.62	.95	1	Average
15	The Principal creates and facilitates change processes that increase meaningful learning using digital resources.	3.56	.99	2	Average
10	The school principal involves teachers and all stakeholders in preparing the school's technological plan.	3.54	1.00	3	Average
14	The principal of the school is constantly working to enhance programs to support the implementation of plans to inculcate technology in the administrative and educational processes.	3.53	.97	4	Average
16	The principal identifies the strengths and weaknesses of the digital technology of the indoor school environment.	3.52	.98	5	Average
12	The school principal periodically updates the strategic plan based on the results of the periodic evaluation on the uses of technology in the educational process.	3.51	.96	6	Average
13	The school principal sets long-term goals for the use of technology in the administrative and educational processes in the school	3.49	.97	7	Average
11	The principal shares with the principals of other schools the best ways to use digital technology.	3.40	1.01	8	Average
	Leadership and vision	3.52	.84	-	Average

It is noted from Table (8) that Paragraph No. (9), which states “The principal of the school contributes to formulating the school’s vision based on the use of technology in the school,” came first with an average level, an arithmetic mean (3.62) and a standard deviation (.95), and it may return This is due to the conviction of school principals in directing efforts towards employing technology in education, which increases the principal’s contribution to formulating the school’s vision on the basis of employing technology in the school, as the school principal can help direct financial investments to provide technical equipment and software necessary for employing technology in education. And help direct training efforts for teachers and provide the necessary support for them to learn and use educational technologies effectively, and help provide the necessary infrastructure for employing technology in education, and this includes providing internet connection and the necessary hardware and software, as well as the school principal can motivate teachers and students to effectively use educational technologies And make the most of it in the learning process

While Paragraph No. (11), which states “the school principal exchanges with principals of other schools the best ways to use digital technology,” came in last place with an average level with an arithmetic mean (3.40) and a standard deviation (1.01). Their ideas about the use of digital technology in the school, as they may consider this topic an area of competition with the principals of other schools, and some principals may have different experiences in the use of digital technology, which can affect the level of interest in the subject and the ability of the principal to provide adequate advice to others, as well A principal may already be occupying too much time with other management tasks and therefore not have enough time to exchange with other principals about the use of digital technology. Some principals may also have an interest in keeping information and ideas within the school and not want to share this information outside of the school.

THIRD: AFTER INNOVATION

TABLE (9): MEANS AND STANDARD DEVIATIONS FOR ITEMS AFTER INNOVATION

NO	Item	Arithmetic Mean	Standard Deviation	Rank	Level
22	The school principal promotes a culture of innovation and collaboration among teachers to explore and experiment with technological tools and applications.	3.70	.98	1	High
21	The school principal motivates teachers to take advantage of the Internet and keep abreast of technological developments in the educational process.	3.58	1.00	2	Average
20	The school principal motivates teachers who are creative in employing and innovating the requirements of technology in the educational process.	3.57	.99	3	Average
19	The school principal facilitates the use of technology such as computer labs, smart boards, projectors, etc., in meeting the needs of the educational process.	3.50	1.04	4	Average
17	The principal of the school presents new strategies in implementing digital technology in the school	3.46	.98	5	Average
23	The principal encourages teachers to participate in computerizing the curriculum and preparing digital materials to support teaching.	3.44	.95	6	Average
18	The school principal prepares the technological requirements that stimulate innovation for teachers.	3.41	1.04	7	Average
24	The school principal publishes teachers' success stories in using digital technology in the educational process.	3.40	.97	8	Average
	Innovation	3.51	.81	-	Average

It is noted from Table (9) that Paragraph No. (22), which states “The school principal promotes a culture of innovation and cooperation among teachers to explore and experiment with technological tools and applications,” came in the first place with a high level, with an arithmetic mean (3.70) and a standard deviation (.98), and it may be attributed To the procedures provided by the school principal, such as providing logistical support and the necessary resources for teachers to explore and experiment in the field of educational technology, encouraging them to cooperate and effectively exchange experiences, ideas and knowledge in the field of educational technology, encouraging them to experiment and innovate in the use of educational technology and motivating them to search for new ideas and creative innovations, In addition to preparing a joint action plan for teachers to take advantage of educational technologies and identify the tools and applications they want to use in the classroom. While Paragraph No. (24), which states “the school principal publishes success stories of teachers in the use of digital technology in the educational process,” came last, with an average level, an arithmetic mean (3.40) and a standard deviation (.97), and this may explain that some principals may have Concern about encouraging teachers to innovate and effectively use educational technology, as they see this as a direct competition with the other school, and this may lead to a reluctance to publish, and some principals may believe that publishing these stories will not significantly affect the school or the educational process in general General, and some principals may consider that publishing is not the primary goal, and focus is placed on developing and improving the educational process.

FOURTH: AFTER THE TECHNOLOGICAL CULTURE

TABLE (10): THE ARITHMETIC MEANS AND STANDARD DEVIATIONS FOR ITEMS AFTER THE TECHNOLOGICAL CULTURE

NO	Item	Arithmetic Mean	Standard Deviation	Rank	Level
26	The school principal activates digital applications in the process of communication and communication with the local community.	3.59	.97	1	Average
27	The school principal uses digital applications to store and save data and information related to teachers.	3.53	.94	2	Average
30	The principal urges teachers to use digital applications to respond to communications received from them.	3.51	.92	3	Average
28	The principal of the school employs digital software in carrying out the administrative work of the school.	3.49	.94	4	Average
32	The school principal receives notes and complaints from teachers, students and parents through various digital applications.	3.47	.95	5	Average
31	The principal of the school uses digital devices to manage school meetings.	3.46	.97	6	Average
25	The school principal creates a digital system for the school through various social networking sites (Facebook, Twitter, Snape Instagram).	3.38	.95	7	Average
29	The school principal is keen to employ some of the school tests in electronic ways.	3.30	.99	8	Average
	Technological culture	3.47	.78	-	Average

It is noted from table (10) that Paragraph No. (29), which states "the school principal activates digital applications in the process of communication and communication with the local community," came in the first place with an average level, an arithmetic mean (3.59) and a standard deviation (.97), and it can be attributed This is because the activation of digital applications in the process of communication and communication with the local community is considered one of the important matters that the school principal should pay great attention to, as the use of digital applications may help in improving communication and communication between the school and the local community, between parents and teachers, and between students and teachers, This increases the transparency of the educational process and contributes to improving the quality of education, and can help provide effective communication channels between the school and parents, and provide them with important information and announcements related to education, which contributes to strengthening an effective partnership between the school and parents, as well as introducing the school and its educational facilities, and publishing advertisements about it. Extra-curricular events and activities that are held within the school, and enhance attendance and participation in them, in addition to saving a lot of time and effort for the school principal and teachers, as contacts and communication can be made quickly and efficiently without the need for meetings. While Paragraph No. (29), which states that "the principal of the school is keen to employ some of the school exams by electronic means," came in the last place with an average level and an arithmetic mean (3.30) and a standard deviation (.99). This may be due to the lack of experience and lack of knowledge of the principal. And teachers with modern technologies and computer programs, and they may need additional training to learn how to use electronic tools effectively, and the school principal and teachers may have doubts about the security of data and personal information that is stored on electronic systems, and this may lead to his unwillingness to use these tools In addition to the lack of availability of the necessary capabilities and limited financial and technical resources, and therefore the school cannot purchase the computers and programs necessary to employ some of the school tests in electronic ways, in addition to relying on traditional methods and the preference of the school principal and teachers for them in conducting the tests, as they feel comfortable and confident in these methods and they can test control.

FIFTH: AFTER MATERIAL AND FINANCIAL RESOURCES

TABLE (11): ARITHMETIC MEANS AND STANDARD DEVIATIONS FOR ITEMS AFTER MATERIAL AND FINANCIAL RESOURCES

NO	Item	Arithmetic Mean	Standard Deviation	Rank	Level
39	The school principal is keen to place teachers for electronic training courses in academic subjects.	3.51	1.01	1	Average
35	The school principal uses the digital capabilities in the school to provide training courses for teachers.	3.48	.98	2	Average
37	The principal of the school invests in technological hardware and software in the school to provide training courses remotely.	3.47	1.02	3	Average
36	The school principal designs a school website on the Internet and develops it on an ongoing basis.	3.46	1.07	4	Average
34	The school principal invests e-mail and social networks in communicating with community institutions to contribute to diversifying the school's resources.	3.45	.95	5	Average
33	The school principal builds a clear vision to invest the potential of technology in the school financing process.	3.43	.96	6	Average
40	The school principal holds training workshops for teachers in partnership with the local community, using modern technology.	3.42	1.03	7	Average
38	The school principal allocates part of the school budget to support the relevant technological technologies in the educational process.	3.34	1.07	8	Average
	Material and financial resources	3.44	.86	-	Average

It is noted in Table (11) that Paragraph No. (39), which states that "the school principal is keen to place teachers for electronic training courses in academic subjects," came first, with an average level, an arithmetic mean (3.51) and a standard deviation (1.01), and this may be attributed to Principals have convictions that through electronic training courses, teachers can learn how to employ modern technology in teaching, improve the quality of education and achieve the desired educational goals. Also, placing teachers in electronic training courses helps in improving their personal skills and learning new and advanced skills in the educational and technical field. It helps keep pace with technical developments in the world, and improve the use of technology in the educational process, and by employing modern technology in education, teachers can increase interaction with students and improve the effectiveness of the educational process according to modern teaching methods, in addition to that teachers who possess technical expertise and skills can This will increase their chances of getting jobs in other schools, and improve their chances of getting promotions. While Paragraph No. (29), which states that "the principal of the school works to allocate part of the school's budget to support relevant technological technologies in the educational process," came last, with an average level, an arithmetic mean (3.34) and a standard deviation (1.07), and this can be attributed to limited Schools budget, and it is incumbent on the school principal to direct the spending at certain and specific percentages on the various aspects of the school.

The results related to the second question and their discussion: Are there statistically significant differences at the level of significance ($0.05 \geq \alpha$) in the level of digital leadership practice among public school principals in Karak Governorate from the point of view of teachers due to demographic variables (gender, experience, and educational qualification)?

TO ANSWER THE QUESTION, THE ARITHMETIC MEANS AND STANDARD DEVIATIONS WERE CALCULATED AS IN TABLE (12):

TABLE (12): MEANS AND STANDARD DEVIATIONS FOR THE LEVEL OF DIGITAL LEADERSHIP PRACTICE AMONG PUBLIC SCHOOL PRINCIPALS IN KARAK GOVERNORATE FROM THE POINT OF VIEW OF TEACHERS ACCORDING TO DEMOGRAPHIC VARIABLES (GENDER, EXPERIENCE, AND EDUCATIONAL QUALIFICATION)

Variable	Category		Equality and citizenship	Leadership and vision	Innovation	Technological culture	Material and financial resources	Total
Gender	Male	Arithmetic Mean	3.30	3.18	3.16	3.19	3.10	3.19
		NO.	130	130	130	130	130	130
		Standard Deviation	.57	.55	.52	.51	.59	.49
	Female	Arithmetic Mean	3.58	3.47	3.47	3.39	3.36	3.46
		NO.	235	235	235	235	235	235
		Standard Deviation	.82	.85	.84	.80	.84	.76
Qualification	Bachelor	Arithmetic Mean	3.44	3.35	3.34	3.30	3.26	3.34
		NO.	269	269	269	269	269	269
		Standard Deviation	.74	.76	.74	.71	.78	.68
	Postgraduate	Arithmetic Mean	3.60	3.42	3.42	3.38	3.31	3.43
		NO.	96	96	96	96	96	96
		Standard Deviation	.76	.80	.79	.75	.76	.70
Experience	Less than 5 years	Arithmetic Mean	3.31	3.16	3.17	3.11	3.12	3.17
	5-10 years	NO.	91	91	91	91	91	91
		Standard Deviation	.87	.85	.84	.77	.87	.78
	Less than 5 years	Arithmetic Mean	3.40	3.33	3.28	3.32	3.26	3.32
	5-10 years	NO.	137	137	137	137	137	137
		Standard Deviation	.65	.67	.69	.63	.71	.60
	Less than 5 years	Arithmetic Mean	3.68	3.55	3.57	3.46	3.39	3.53
		NO.	137	137	137	137	137	137
		Standard Deviation	.73	.78	.71	.74	.75	.65

It is noted from table (12) that there are apparent differences between the arithmetic averages in the level of dimensions of digital leadership practice among public school principals in Karak governorate from the point of view of teachers according to the variables of gender, educational qualification and experience, and to find out the significance of these differences, a multivariate analysis of variance (MANOVA) was used, and the table (13) shows the results of the analysis:

TABLE (13): THE RESULTS OF THE MULTIVARIATE ANALYSIS OF VARIANCE (MANOVA) TO FIND OUT THE SIGNIFICANCE OF THE DIFFERENCES IN THE DEGREE OF THE DIMENSIONS OF THE LEVEL OF DIGITAL LEADERSHIP PRACTICE AMONG PUBLIC SCHOOL PRINCIPALS IN KARAK GOVERNORATE FROM THE POINT OF VIEW OF TEACHERS ACCORDING TO THE VARIABLES OF GENDER, EDUCATIONAL QUALIFICATION AND EXPERIENCE

Indicator	Value	F value	SIG
Hotelling's Trace (Gender)	.043	3.032	.011
Hotelling's Trace (Qualification)	.011	.765	.576
Wilks' Lambda (Experience)	.924	2.890	.002

It is clear from table (13) that there are no statistically significant differences at the level of significance ($0.05 \geq \alpha$) in the level of dimensions of digital leadership practice among public school principals in Karak Governorate from the point of view of teachers due to the educational qualification variable, where the value of Hotelling's Trace = (.011).), and the corresponding (P) value = (.765) and its level of significance = (.576), while it is noted that there are differences due to the gender variable, where the value of (Hotelling's Trace) = (.043), and the corresponding (P) value = (3.032) and its level of significance = (.011), and it is noted that there are differences due to experience, where the value of (Wilks' Lambda) = (.924) and the corresponding (q) value = (2.890) and its level of significance = (.002), and to determine in which dimensions in relation to These differences are due to gender and experience. Two-way ANOVA analysis of variance was used. Table (14) shows that:

TABLE (14): TWO WAY ANOVA TO INDICATE DIFFERENCES IN THE DIMENSIONS OF THE LEVEL OF DIGITAL LEADERSHIP PRACTICE AMONG PUBLIC SCHOOL PRINCIPALS IN KARAK GOVERNORATE FROM THE TEACHERS' POINT OF VIEW, ACCORDING TO THE VARIABLES OF GENDER AND EXPERIENCE

Variable	Contrast source	Squares sum	Freedom	Squares Mean	F value	SIG
Equality and citizenship	Gender	5.710	1	5.710	10.680	.001
	Experience	7.952	2	3.976	7.438	.001
	Error	192.988	361	.535		
	Corrected	207.507	364			
Leadership and vision	Gender	6.912	1	6.912	12.323	.001
	Experience	8.591	2	4.296	7.659	.001
	Error	202.476	361	.561		
	Corrected	218.068	364			
innovation	Gender	7.341	1	7.341	13.872	.000
	Experience	9.060	2	4.530	8.561	.000
	Error	191.029	361	.529		
	Corrected	208.421	364			
technological culture	Gender	3.791	1	3.791	7.687	.006
	Experience	6.931	2	3.466	7.028	.001
	Error	178.019	361	.493		
	Corrected	188.404	364			
Material and financial resources	Gender	5.997	1	5.997	10.401	.001
	Experience	4.194	2	2.097	3.637	.027
	Error	208.144	361	.577		
	Corrected	218.169	364			

It is noted from Table (14) that there are statistically significant differences at the level of significance ($\alpha \leq 0.05$) in all dimensions of the practice of digital leadership among public school principals in Karak Governorate from the point of view of teachers due to gender, and through the arithmetic means in Table (12) it is clear that the differences are in favor of It is also noted that there are differences in all dimensions of the practice of digital leadership among public school principals in Karak governorate from the teachers' point of view, due to experience, and to find out the direction of the differences according to the experience variable, the (Shaffee) test was used for post comparisons, and Table (15) shows that:

TABLE 15: RESULTS OF THE (SHAFFEE) POST-COMPARISON TEST OF THE DIRECTION OF DIFFERENCES IN THE DIMENSIONS OF DIGITAL LEADERSHIP PRACTICE AMONG PUBLIC SCHOOL PRINCIPALS IN KARAK GOVERNORATE FROM THE TEACHERS' POINT OF VIEW, ACCORDING TO THE EXPERIENCE VARIABLE

Field	Experience (A)	Experience (B)	Differences between Means	SIG
Equality and citizenship	Less than 5 years	5-10 years	-.09513	.637
		More than 10 years	-.36885*	.001
	5-10 years	More than 10 years	-.27372*	.010
	Less than 5 years	5-10 years	-.17963	.219
Leadership and vision		More than 10 years	-.39223*	.001
	5-10 years	More than 10 years	-.21259	.070
	Less than 5 years	5-10 years	-.10384	.584
innovation		More than 10 years	-.39490*	.000
	5-10 years	More than 10 years	-.29106*	.005
	Less than 5 years	5-10 years	-.21310	.086
		More than 10 years	-.34723*	.002
	5-10 years	More than 10 years	-.13412	.294
technological culture	Less than 5 years	5-10 years	-.13734	.419
		More than 10 years	-.26964*	.036
	5-10 years	More than 10 years	-.13230	.364

It is noted from table (15) that the differences in the two dimensions (equality, citizenship, and innovation) of the dimensions of digital leadership practice among public school principals in Karak Governorate from the point of view of teachers were between those with experience (more than 10 years) on the one hand, and those with experience (less than 5 years) and (5-10 years), on the other hand, in favor of those with experience (more than 10 years), and it is noted that there are differences in the three dimensions (leadership, vision, strategic plans, technological culture, and financial and material resources) between those with experience (less than 5 years) and those with experience (more than 10 years). For those with experience (more than 10 years); That is, the differences are in favor of those with higher experience.

The reason for the existence of differences in the level of digital leadership practice among public school principals in Karak governorate from the teachers' point of view, attributed to gender and in favor of females, may be attributed to the fact that females are more interested in details, so they may have better analytical and detail skills, and this makes them more able to plan, organize and control the digital educational process. They also have the skills of effective communication and cooperation with others, and this makes them have the ability to build an integrated and supportive work team to implement digital leadership, as it may be due to flexibility and ability to adapt to rapid changes, and this helps them to adapt to new technologies and apply them in the digital educational process, in addition to To interact and deal with the surrounding community, which is an important aspect of digital leadership in schools.

This result is consistent with the study of Bosaily (2022), which showed that there are differences in the application of digital leadership in general education schools in favor of females, as it is consistent with the study of Saadeh (2022), which showed that there are differences in the degree of practicing technological leadership and its fields among school principals due to gender and in favor of females. While this result differs with the study of Al-Dhuhli, Al-Kharousi, and Al-Sha'bli (2012), which found that there are no differences in the degree of school principals employing digital leadership due to gender, and also differs with the Al-Raqab study (2022), which indicated that there are no differences in the degree of practicing technology leadership among private school principals. attributed to sex

RECOMMENDATIONS

Based on the results obtained, the following can be recommended:

1. The need for efforts and measures to be taken by the Ministry of Education, directorates and schools to develop the level of school principals' practice of digital leadership, such as providing the necessary training and qualification for principals and teachers on the use of technology in education.
2. Providing the necessary resources to improve the digital infrastructure in the school. Which requires the integration of the efforts of the administration, teachers, students and parents to improve the level of digital leadership in schools.
3. Ensure that there is communication and exchange of ideas and experiences between school principals, as this can lead to improving the quality of teaching and learning in schools. Therefore, the school principal can look for suitable opportunities to communicate and exchange with other school principals about the use of digital technology in education.
4. The need for school supervision to follow up on the plans prepared by the school principal and their clarity

and comprehensiveness for the use of digital technology in education, and effective communication with teachers on this subject.

5. Conducting research studies to examine the relationship between the application of digital leadership, teachers' job performance, and institutional excellence in schools.
6. Researching the impact of digital leadership practice on the quality of education in public schools in Jordan.

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