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The Degree of Availability of Digital Transformation Requirements in Qasaba Amman Schools from the Point of View of School Principals and Educational Supervisors

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Abstract
The current study aimed to identify the degree of availability of the requirements of digital transformation in the schools of Qasaba Amman from the point of view of school principals and educational supervisors. The indicators of their validity and reliability were verified, and the study sample consisted of (150) principals and (45) supervisors, who were chosen randomly. Infrastructure requirements are generally high, while for the rest of the requirements, administration, students, and the digital teacher, and digital content are generally medium, and it turns out that there are no statistically significant differences in the degree of availability of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors due to gender, number Years of experience and current job, while the results showed that there are no differences attributable to educational qualification, and the study recommended that there should be efforts and measures that must be taken by the Ministry of Education, directorates, and schools to provide the requirements for digital transformation in public schools, such as providing the necessary training and qualification for principals, teachers, and supervisors to use Technology in education, and providing the necessary resources to improve the digital infrastructure in the directorates and schools. Which requires the integration of the efforts of the administration, teachers, students and parents to improve the level of digital transformation in schools and directorates at the level of the kingdom.
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INTRODUCTION

Educational institutions, including the school, seek to keep pace with the process of development and modernization that includes all institutions as a result of scientific and technological progress. The school and its community seek to take advantage of the change brought about by technology to facilitate the education process and provide service to teachers and students in an easier and better way. Among the things that the school is trying to provide is the educational digital transformation and what it requires in terms of infrastructure and educational content to serve the administration, the teacher and the student.

The Jordanian Ministry of Education has sought to develop the educational system and take care of students in all educational stages, including primary and secondary, to keep pace with the tremendous technical and informational development the world is witnessing. Building schools and providing them with scientific and digital laboratories, in addition to establishing and developing an infrastructure for information and communication technology (ICT) in all Jordanian schools. A good example of this is the Knowledge for reform Education Economy (ERfKE) project. (2013-2015) which is considered one of the best educational development programs witnessed by the Jordanian educational system, and the project occupied a distinguished position and great importance because it is a comprehensive and integrated project for educational transformation based on the national commitment to strive towards achieving the goals of qualitative development of learning according to specific time stages. The project aspires to become Jordan is a center for information technology in the region (Al-Zeyoudi and Al-Khawaldeh, 2011)

The digital transformation is one of the most important educational technological aspects that must be studied and researched in all its aspects because of its importance in serving the educational process in terms of delivering knowledge to students by relying on modern computer applications and technologies linked to each other through the Internet and its ability to enable students to Choosing what suits them from the various educational materials from the educational digital content and providing electronic tests with immediate feedback, as well as choosing the best teaching strategy that suits them and the study material (Lin and Chen, 2017)

And educational institutions, including schools, have become increasingly in need of digital transformation because it includes a new method in presenting educational content to students and providing them with skills using digital technologies and multimedia that work to create a stimulating and attractive learning environment that encourages students to actively interact with educational content and with the

teacher and meet the requirements of the accelerated scientific age. In addition to his ability to give students the possibility of education at anytime and anywhere, and the experience of the Corona pandemic was the best example of the importance of digital transformation and the importance of meeting its requirements in educational institutions because of its ability to adapt to various circumstances (Ali, 2011).

The advantage of digital transformation is that it works to develop self-learning among students and teaches them how to obtain knowledge and how to employ and produce it. It also attracts students and stimulates them towards learning and provides them with immediate feedback in addition to that it presents digital content using multiple media and facilitates the updating of content and information in an easy way and works to provide solutions In a more creative way than the traditional method that suffers from overcrowded classrooms and direct teaching methods that do not give space for educational digital technologies, digital transformation saves the production costs of academic studies compared to printed studies (Hamid and Awad 2019, p. 13)

mentions that among the requirements of digital transformation is the creation of an infrastructure, the beginning of a technological infrastructure, the availability of networks, computers, information systems and applications, while facilitating the process of accessing and using them, and increasing the possibility of exchanging information, finding effective communication channels, in addition to the ability to preserve the security, confidentiality and privacy of information and creating An electronic learning environment that measures students(Ahmed 2022) .

indicates that digital transformation requires acceleration and support in terms of administrative and financial aspects, as well as spreading the culture required by digital transformation in and outside schools, in addition to the availability of halls equipped with digital technologies and electronic networks to ensure effective communication that helps competition in the field of educational digitalization. Digital transformation also requires human elements who are fluent in Work in the digital world environment (Ampen 2018).

With digital learning, the calendar becomes a real calendar and is considered either the learner's actual learning. The educational content and educational activities will be meaningful and related to the real life that the learners will live in. Their real life outside the classroom is not purely theoretical, far from their living reality, and this would give education a real meaning and benefit. To the Internet, it will become an indispensable resource in educational institutions, as the Internet will become linked to learning and one of its sources.

STUDY PROBLEM:

We live in an era characterized by rapid scientific development in various fields of life, and among these areas is digital technology, which has become an urgent and indispensable necessity, especially in the educational process and its institutions. The school is one of the educational institutions that needs digital requirements that facilitate the work of the administration, the teacher, the student, the educational content, as well as the infrastructure to play its role and simulate the era of the ever-changing digital development, and thus help students to deal with and benefit from advanced scientific developments.

Some conferences, such as the Egyptian Society for Educational Technology in Egypt (2001 AD), the quality of e-learning in Jordan (2009 AD), and the seminars of the School of the Future in Saudi Arabia (2008 AD) recommended that those in charge of the educational process should pay attention to using modern educational techniques in teaching so that teachers become able to use technology Education so that learners benefit from the use of modern digital technology in education, and teachers must be made aware of the importance of using these developments and their effective role in advancing the educational process and working on training teachers and students to possess skills and methods of using them and integrating them into modern teaching strategies in order to help develop the educational process and get it out of their information isolation and achieve Permanent Learning (Turkish), 2019.

STUDY QUESTIONS:

The first question: What is the degree of fulfillment of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors?

The second question: Are there statistically significant differences at the level ($\alpha = 0.05$) in the degree of availability of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors due to the variables (gender, number of years of experience, educational qualification, and current job?)

STUDY OBJECTIVES:

The current study aims to:

1. Highlighting the concept and importance of digital transformation in schools.

2. Identifying the degree of fulfillment of digital transformation requirements in schools from the point of view of school principals and educational supervisors.
3. Enriching the field of knowledge related to the field of educational digital transformation, and improving the school environment with digital transformation technology.

STUDY IMPORTANCE:

The importance of the current study stems from the importance of the results of the study on the availability of digital transformation requirements in schools, which are considered one of the most important educational institutions and serve both the teacher, the student and the administration. The importance of the study can be highlighted in the following:

1. Contribute to determining the degree of availability of digital transformation requirements in schools from the point of view of school principals and educational supervisors.
2. This study comes from the perspective of the Ministry of Education's directions towards keeping pace with the technological development in the educational process and improving the educational environment.
3. Assisting school administrations in providing digital infrastructure and digital content to serve the school community.
4. Helping teachers know the importance of digital transformation and benefiting from its technologies to serve the educational process.
5. Helping students benefit from digital transformation services and providing an attractive educational environment that facilitates their education process and helps them to learn on their own.
6. Benefit future decision-makers and draw their attention to the importance of digital transformation and support schools with its requirements, as well as support teachers and students with digital transformation skills.

STUDY LIMITATIONS:

- **TEMPORAL LIMITS:** This study was applied in the second semester of the academic year (2022/2023).
- **SPATIAL LIMITS:** government schools in Kasbah Amman.
- **HUMAN LIMITS**: public school principals and supervisors.
- **OBJECTIVE LIMITS:** This study was limited to the degree of fulfillment of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors.

THEORETICAL FRAMEWORK

Digital content is knowledge available on the Internet or digital technologies such as smartphones, mobile devices, computers, etc., including written, audio, visual, graphics, or programs. in different subjects and disciplines. Digital educational content includes particles that are interrelated with each other and can be placed in different classifications, including: multimedia, written texts, illustrations, graphs, colors, pictures, videos, e-books, animations, audio recordings and explanatory maps. Digital content is also a basic requirement in the education process as it can be used anywhere. And time because it is a cumulative knowledge content that develops with the participation of specialists and educators.

The results of scientific studies varied in determining the requirements for digitalization. Marquette, Pascal (2011) showed that the difficulties that prevent the use of digital information and communication technology in the best possible way in education are technical difficulties related to the poverty of infrastructure, the requirements of digital transformation, and other difficulties related to the method of providing Digital education in education and training for the concerned groups.

DIGITAL SCHOOL CONCEPT

It is a school through which students and teachers can use classrooms supported by digital technologies such as computers, data show, and surveillance cameras to communicate with teachers and interact with electronic curricula. Digital schools also enable the administration to control various administrative activities and operations electronically, such as using systems and technologies for attendance and departure for students and teachers, setting and correcting exams, and communicating With other schools and departments of the Directorate of Education, in addition to communicating with parents.

THE DIGITAL SCHOOL IS BASED ON SEVERAL PRINCIPLES TO ASSIST THE EDUCATIONAL PROCESS AND THE CONCERNED PARTIES INSIDE AND OUTSIDE THE SCHOOL. THESE PRINCIPLES INCLUDE:

1. Providing them with rich knowledge that enables them to understand the surrounding world and know the scientific content that makes students transform from recipients and consumers of knowledge into producers

of it.
2. Arming with unlimited and constant intelligence, which enables students to know how to think to develop their performance and make thinking become a culture that increases their productive capabilities
3. Reaching understanding rather than results so that students realize the correctness of what they are doing and not only
4. Transferring the impact of learning after mastering it to other contexts in their lives and employing what has been learned in other similar situations by means of various digital education technologies.
5. Dealing with developments and future challenges: Since we are living in an accelerated world aggravated by knowledge, which makes learning facts useless because they will change and become outdated, we find that what is required is to teach students how to deal with rapid changes and benefit from them with confidence and without prior directives.
6. The school is a source of knowledge for students and teachers, not just a place for it.

The digital school provides public services such as the ability to enter the school website and create an e-mail for students, teachers and parents, and the possibility of using virtual rooms for dialogue and chatting between users, as well as the possibility of creating special forums for students and teachers and special pages for users on the site, and with regard to administrators, the administration can control all school procedures such as schedules For lessons, trips, meetings, creating a database for students, teachers, and correspondence, in addition to managing school resources. As for teachers, they will be able to work and use computerized curricula through digital technologies, create a question bank for the curriculum, manage classrooms and computer laboratories electronically, as well as send homework to students. As for students, they can enter homework And send their answers electronically and use the digital laboratories during the educational process, and they will also be able to enter and use the question bank prepared by the teachers and use the digital library when needed, and parents can obtain the marks of their children and know the schedule of lessons and the program of tests and various school activities to follow the progress of the educational process for their children and view the children's data And amend it if necessary, and they can also participate in school meetings, send their proposals, and communicate with teachers via digital media to know the children's academic and health status and obtain test results.

ONE OF THE EDUCATIONAL DIGITAL TRANSFORMATION REQUIREMENTS. AL-DAHSHAN AND AL-SAYED (2020) BELIEVE THAT DIGITAL TRANSFORMATION NEEDS HUMAN, TECHNOLOGICAL AND ADMINISTRATIVE REQUIREMENTS, WHICH ARE AS FOLLOWS:

1. Determine the future vision of the educational institution.
2. Work on planning in a way that suits and achieves the desired goals in the future
3. Providing financial, financial, legislative and human cadres support.
4. Finding organizational structures characterized by flexibility, ease and distance from complexity.
5. Analyzing the needs to find out the points of strength and weakness and thus developing the appropriate strategy for the educational institution.
6. Supporting and developing the technological digital infrastructure.
7. Training and developing the skills of teachers and technicians regarding digital transformation.
8. Raising awareness of the importance of digital transformation and acquiring a culture of serving students and teachers

An educational system through which the stakeholders interact with each other and with the study material using the Internet and digital technologies, and by choosing the appropriate place and time, the educational process is at the same time or at a different time (Al-Zahri 2018). Reformulate

BENEFITS OF EDUCATIONAL DIGITAL TRANSFORMATION IN EDUCATION

The educational digital transformation works to make the educational process rich in resources and multimedia that improve and organize the educational environment and change the role of the teacher in a manner commensurate with the requirements of the era, so he became a guide to the educational process instead of being a feeder of information. Teaching strategies that are appropriate for the subject that the teacher wants to teach and are suitable for students, as all this is done using modern digital technologies and their organization that serves the educational process and the interaction in it is creative and attractive to students. The educational digital transformation can benefit the learner more than traditional education because it uses more than one sense, which makes education It happens quickly and directly, in addition to that it enables learners to access knowledge faster, easier, and suitable for all achievement levels of students, in addition to that the learner can acquire many skills that are related to the reality of his daily life and increase his ability to think and work collaboratively, which develops good relations with his peers When interacting and exchanging knowledge with them, this increases the development of higher thinking skills such as analysis, synthesis, and evaluation, and then access to self-education. It also increases the learner's self-confidence and independence in how to obtain

knowledge and at the time he wants (Hamdawi, 2015).

HOW TO SWITCH TO DIGITAL EDUCATION

Ibrahim (2019) believes that it is possible to go to digital transformation by knowing the current digital capacity to determine the work structure of the activities of the educational institution and clearly define the purpose of adopting digital learning so that we can measure it and know the extent of progress, and identify the digital technologies that you need with knowledge of the digital technologies that currently exist and their material cost. It meets the requirements of the educational institution, as well as its method of work, how it will continue and the possibility of improving it in the future, and the focus is on the learner and understanding his needs and desires and the requirements of his educational environment, and thus the transformation of the organizational structure by adopting digital transformation as a culture followed in implementing the work and vision of the educational institution, and supporting it through the educational institution's community, and then is done Planning the digital transformation process with knowledge of what can be encountered.

Future obstacles and how to overcome them by building a plan, and there must be a management that adopts digital transformation

Newby and colleagues (2000: 264) Newby predicted a future for education in which teachers and students participate in educational technology and integrate it to improve teaching and learning, which will mean fundamental changes in the education process.

NEWBY AND COLLEAGUES' PREDICTIONS HAVE ALREADY COME TRUE.

In light of the current changes, the educational process has become characterized by the following:

1. Multiple sources of learning media through information networks will become a central feature of education.
2. Students become active learners who learn collaboratively with each other and with more experienced members of the community to search for information and acquire knowledge.
3. The role of the teacher has changed from "wise" to "guiding the way." Instead of transmitting information, he is required to help his students use new information tools, to search for, analyze and combine information, solve problems, think creatively and build their own knowledge and understanding.
4. Learning has become a lifelong process available to all, and schools have become centers of learning for all members of society.
5. The boundaries separating schools from each other and from society have diminished, as the use of distance education technologies will enable learners to learn from teachers in other locations, and to cooperate with other students in other locations.

THE ROLE OF THE SCHOOL IN SUPPORTING THE DIGITAL TRANSFORMATION OF THE TEACHER AND THE LEARNER

Developing a clear plan by the administration to effectuate the digital transformation in the educational process, motivating the school community to use digital technologies in teaching, displaying modern applications and devices in the school for use by teachers and students, as well as doing continuous and periodic maintenance of the technologies and digital devices in the school, In addition to empowering teachers' digital skills for teachers and students through training courses and workshops, and enabling students to obtain and use digital devices.

GOALS OF DIGITAL TRANSFORMATION IN EDUCATIONAL INSTITUTIONS

Educational institutions must have goals to achieve in the field of digital transformation, and among these goals (spear, 2020):

1. Enhancing students' experiences. This is done through indicators that prove success in general, and focus is placed on improving students' standards such as graduation rates and course success rates.
2. Creating an environment that encourages competition so that educational institutions are distinguished by their ability to use digital methods.
3. Spreading a culture of data-based decision-making so that the digital mentality is relied upon within educational institutions and by all concerned parties
4. Optimizing resource utilization
5. Teachers' professional development by acquiring new trends and skills to provide data and multiple sources
6. Saving time and facilitating the learning process by reducing the burden of teachers, as technology is relied upon in electronic content, tests and corrections.
7. Achieving equality by providing opportunities for everyone to learn, give opinions, discuss and interact with different topics on an equal basis
8. Expanding the scope of quality education because virtual education accommodates the large numbers of learners outside the classrooms.

There are several things that help facilitate the spread of digital transformation in schools, which are: the

low cost of digital transformation requirements such as data preservation and information processing methods, ease of use of information and digital transformation software, and the ability of educational digital transformation to analyze and form data processing and produce written and spoken knowledge that needs Complex skills, the possibility of using micro-electronic elements instead of mechanical and electrical elements, as well as the high international and commercial competitiveness, and the advantages offered by the educational digital transformation, professional services, and tangible gains (Al-Taie, 2020).

PREVIOUS STUDIES

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

The study of Rich et al. (2009) measured the innovative ways provided to the university in the use of new educational tools (such as wiki service) and synchronized (virtual classrooms) at the University of Athens, Alabama, USA. The study sample included a group The study used the descriptive approach and the questionnaire as a tool for applying the study, and the most prominent results of the study were: the existence of a number of difficulties that hindered the application of these techniques well, including the inability of students to communicate with their colleagues and teachers at first, and that the success of this technique in education It is through the success of college teachers in applying it and finding effective ways to practice it.

Hassan and Hammoud (2009) conducted a study entitled Basic Features of the Idea of Transitioning from Traditional Education to E-learning, which aimed to know the educational reality from the technical point of view and to determine what is on the ground in terms of initial requirements so that it gives an impression of the extent of educational institutions' readiness to the process of transition from Traditional education to electronic, as the educational process in Iraq is still taking place within the classroom and depends on the teacher as a source of information, and on paper books and the blackboard, moving away from the use of computers, the Internet and the electronic library in education.

The study of Al-Herash and others (2010), which aimed to reveal the obstacles to using the e-learning system from the viewpoint of secondary school teachers in the Koura district, showed that e-learning needs requirements to overcome the obstacles, as the results showed that the obstacles related to teachers came in the first place, followed by the obstacles related to administration, then the obstacles related to infrastructure and basic equipment, and the obstacles related to students came in the last place, and the researchers recommended reviewing the training courses offered by the Ministry of Education, and providing digital requirements to improve the infrastructure and technical and technological equipment in schools.

And Abdel Salam (2011)'s study, which came under the title "Digital Transformation of Egyptian Universities, Requirements and Mechanisms." It sought to define the concept of digital transformation in universities, present educational digital transformation efforts in Egyptian universities, challenges facing digital transformation in Egyptian universities, and propose mechanisms for implementing digital transformation in Egyptian universities. For the purposes of implementing the study, the researcher used the descriptive approach and concluded with a set of results: suggesting some mechanisms necessary to implement the digital transformation of Egyptian universities, namely: analyzing opportunities and threats in the external environment, including the university's clients, competitors and markets, and evaluating its internal environment; To identify and develop aspects of strength and weakness, define a vision, provide leadership and administrative support, existing organizational structures and a clear strategy for digital transformation, focus on the technological dimension, develop human resources at the university, change the prevailing organizational culture, and provide material and financial capabilities.

To achieve the knowledge society, the researcher adopted the descriptive approach to implement the study, and it was a random sample of (67) from all faculty members from the University of Damanhour, Alexandria, Tanta and Mansoura. The researcher used the questionnaire as a study tool. The results also showed that digital transformation does not begin to include a set of requirements: For digital transformation, spreading the culture of digital transformation, designing educational digital programs, managing and financing it, and providing human, technical, security and legislative requirements for implementing digital transformation.

Ali (2013) study entitled Digital Transformation of Egyptian Universities: Requirements and Mechanisms The study aimed to reach a set of proposed mechanisms to achieve digital transformation of Egyptian universities. A personality for university leaders and all members of the university community that reflects the extent of their faith and commitment to the process of digital transformation and its requirements, in addition to developing additional strategies to build the capacity of leaders, with the aim of supporting and endorsing change and in light of the concepts of integrating information and communication technology in all fields and activities of the university, especially research ones.

Al-Qadri (2017) also conducted a study aimed at investigating the reality of e-learning via the Internet in the scientific colleges at Al al-Bayt University, the degree of availability of its requirements and the statement

of its obstacles, and identifying the proposed solutions for it from the point of view of the teaching staff in the scientific colleges included in the research. To implement the study, a questionnaire consisting of (59) items was developed, after its validity and reliability were confirmed. It was applied to the available study sample, which consisted of (64) faculty members in the scientific colleges at Al al-Bayt University. The study concluded that the reality of the use of e-learning via the Internet in the scientific colleges at Al al-Bayt University is at an average level in general, as the degree of availability of educational software and indirect requirements for it ranged between medium and low, and the degrees of estimating the existence of obstacles to e-learning via the Internet were between high and medium. In addition, the results showed that there are statistically significant differences between the estimates of faculty members of the reality of e-learning via the Internet and in favor of all those with short experience who participated in training courses, while no statistically significant differences appeared in the degrees of estimation of obstacles due to the variables of the level of experience and participation in training courses. Some of the research participants suggested a number of solutions to the e-learning obstacles they face. Among the most prominent recommendations of the study are working to avoid the obstacles facing faculty members in the use of e-learning via the Internet, holding effective training courses in the field of e-learning via the Internet for faculty members at the university, and providing learning process content management software (LCMS).

Al-Haroun and Barakat (2019) conducted a study entitled Digital Transformation Requirements in General Secondary Education Schools in Egypt, which aimed to identify the requirements for digital transformation in general secondary education schools in Egypt, and the two researchers used the descriptive approach to implement the study. Applied to a sample of (32) faculty members and (52) secondary education experts (teachers - mentors - managers of technological development units), and one of the most important results of the study was that the most important requirements are to train students to manage time well when using digital transformation applications. Training teachers and administrators to use new technologies, and making a detailed plan to build missing digital assessment skills.

As for the Adaileh study (2019), it aimed to identify the extent of the use of e-learning in the schools of the Directorate of Education in the Karak region in Jordan. To achieve the objectives of the study, the researcher used the analytical descriptive survey approach and the semi-experimental approach. The study sample consisted of (30) schools chosen by the researcher randomly from the schools of the Directorate of Education in Karak. In order to achieve the goal, four questionnaires were applied, the first was related to the patterns of e-learning, the second questionnaire was related to the reality of the use of e-learning in the schools of the Directorate of Education in the Karak region, and the third questionnaire was specific to the pros and cons of using e-learning in the schools of the Directorate of Education in the Karak region, and the fourth questionnaire concerned Obstacles to e-learning in schools, and then the necessary statistical treatment for this study was done by using statistical software for social sciences SPSS. Among the most prominent results is that e-learning is used in the sample schools to a good degree, and that there are certain learning patterns for e-learning such as self-learning, learning in large groups, learning in small groups, synchronous learning on the Internet and asynchronous learning on the World Wide Web, and that there are advantages to using e-learning in the school to a degree High and the study sample do not agree that there are obstacles that limit the application of e-learning in the school.

The objective of the current study was converged with the study of Moreno and Gortazar (2020), which focused on revealing the readiness of schools for digital learning from the point of view of school principals, using the analytical approach of the International Student Assessment Program and its effects on responding to the Corona virus crisis in (82) educational systems around the world. The study included the evaluation of three variables. They are: the digital divide, the digital usage gap, and the digital school gap. The results of the study revealed that half of the education systems for children at the age of (15) are in a school without an effective online platform to support learning. The results of the study revealed that teachers have the technical and educational skills necessary to integrate devices. Digitalization in teaching with the existence of effective professional resources to learn how to use digital devices for teachers. The study also revealed that there is a positive correlation between the three variables and the student's social and economic status.

Al-Awadi's study (2020) also showed that the educational digital transformation in Yemeni educational institutions faces many challenges in the field of employing digital education technologies in teaching, in addition to the lack of use of technological applications in scientific research processes that do not comply with international standards, and the study recommended the need to involve the private sector And its digital technology institutions and Internet and communications providers to support educational institutions to develop educational services in the field of educational digital transformation and provide its human, infrastructure, material and financial requirements in order to be able to keep pace with the modern era.

Chorosova et al. (2020) conducted a study entitled Towards a Digital Transformation of Education, to identify the methodologies and mechanisms for digitizing school education, and to find out what are the standards of digital competence for teachers, and the professional difficulties they face during the educational

digital transformation process, and what the teachers need, especially in light of the Corona pandemic, And the transition to online education, which revealed a severe shortage of digital skills for teachers, and in order for the study to achieve its goal, the researchers analyzed all the documents related to the different points of view on the digitization of school education and the standards for digital competencies for teachers. The process of digital transformation in education.

Al-Alqamy (2021) conducted a study entitled Digital Requirements Necessary for the Development of Kindergarten Teachers in the Developed Egyptian Education System 2.0 in light of some international experiences, the experiences of Finland and Australia, where the study used the descriptive approach, and the study was applied using a questionnaire to a group of professors of early childhood education faculties in Egyptian universities and experts In research centers and kindergarten teachers in government schools in the governorates of Cairo, Alexandria, Beheira, Suez, Eastern and Western, in addition to a group of parents for kindergarten, the study found a set of digital requirements that must be provided for the development of kindergarten teachers in the developed Egyptian education system 2.0, which were classified as special requirements for training and qualification Kindergarten teachers, requirements for the digital infrastructure in schools, requirements for the role of teachers in the classroom, requirements for curricula, and requirements for cooperation between parents and teachers. Physical play at school

METHOD AND PROCEDURES

The researcher used the descriptive survey approach that fits the purposes of the current study, as it describes the degree of availability of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors.

THE STUDY POPULATION AND ITS SAMPLE

The study population consisted of all (170) principals of Qasaba Amman schools, in addition to the educational supervisors affiliated with it, and their number was (50) for the academic year (2022/2023). The study and Table No. (1) represent the details of the sample according to the variables.

TABLE (1): THE STUDY SAMPLE IS DISTRIBUTED ACCORDING TO ITS VARIABLES

Variables		NO.	Percentage
Gender	Male	73	40.1%
	Female	109	59.9%
Experience	Less than 10 years	12	6.6%
	More than10 years	170	93.4%
	High diploma	98	53.8%
Qualification	Master	45	24.7%
	Doctorate	39	21.4%
	Principal	136	74.7%
Current Job	Supervisor	46	25.3%

STUDY TOOL

After reviewing the theoretical literature and previous studies related to the problem of the study and taking the opinion of specialists, the researcher identified the areas of the questionnaire and formulated the paragraphs that pertain to each field, and then prepared the questionnaire initially to include (27) paragraphs distributed over (6) areas (the requirements of the digital teacher, the requirements of the digital students, and the requirements of Digital management, digital infrastructure requirements, digital content and digital culture)

THE VALIDITY OF THE TOOL

The tool was presented to ten educational arbitrators from university faculty members, specialists and educational supervisors, where they expressed their opinions about the appropriateness of the paragraphs and domains and the extent to which the paragraphs belong to each domain after the merger process, the clarity of its linguistic formulation, and then the questionnaire was produced in its final form. Some paragraphs were modified and some of them were added so that the number of paragraphs of the questionnaire became (50) paragraphs, where each paragraph has a graded weight according to the five-point Likert scale that was adopted to measure the respondents' responses to the questionnaire items, and for the purposes of converting the obtained data into expressive quantitative data, I give: Strongly available (5) scores, available (4), neutral (3), not available (2), and highly unavailable (1), and select the following statistical standard to judge the paragraphs of the questionnaire.

STRUCTURAL VALIDITY OF THE STUDY TOOL

The correlation coefficients of each paragraph with the field to which it belongs, and the total score on the tool as

a whole, were extracted; To extract the indications of the validity of the construction of the tool, and the validity of the internal construction was verified by applying it to a sample consisting of (30) individuals, from within the study community and outside its sample, then the extent of internal consistency was calculated between the paragraphs of the questionnaire from the same field, using the appropriate correlation coefficients, As shown in Table No. (2).

TABLE (2): PEARSON CORRELATION COEFFICIENTS BETWEEN THE PARAGRAPH, THE TOTAL SCORE, AND THE DOMAIN TO WHICH IT BELONGS

Item	Correlation coefficient of the paragraph with the field	Paragraph correlation coefficient with the tool	Item	Correlation coefficient of the paragraph with the field	Paragraph correlation coefficient with the tool
1	.625**0	4**8.60	26	**85.50	.659**0
2	8**0.60	**24.50	25	**09.50	.508**0
3	.515**0	3**86.0	28	.819**0	.655**0
4	3**8.60	.651**0	29	.833**0	**20.40
5	.533**0	.559**0	30	.585**0	.694**0
6	.513**0	.668**0	31	.809**0	.653**0
5	**3.510	5**8.60	32	9**0.50	.650**0
8	.501**0	.653**0	33	.822**0	.505**0
9	.559**0	.668**0	34	.842**0	**24.50
10	.569**0	.695**0	35	**3.580	**058.0
11	**34.50	**36.50	36	**318.0	5**58.0
12	**20.50	**19.50	35	**34.50	**36.50
13	15**6.0	5**2.60	38	**20.50	**19.50
14	**1.550	.620**0	39	15**6.0	5**2.60
15	.825**0	.689**0	40	**1.550	.620**0
16	2**3.80	25**5.0	41	.825**0	.689**0
15	.815**0	.698**0	42	**34.50	**36.50
18	.555**0	**24.50	43	**20.50	**19.50
19	0**6.50	53**8.0	44	**34.50	**36.50
20	5**1.80	**35.50	45	**20.50	**19.50
21	.662**0	**29.50	46	15**6.0	5**2.60
22	.696**0	.515**0	45	**1.550	.620**0
23	.523**0	.668**0	48	.825**0	.689**0
24	.533**0	.695**0	49	**34.50	**36.50
25	**14.50	.684**0	50	**20.50	**19.50

It is noted from Table (2) that the correlation coefficients of the questionnaire paragraphs with the domain to which they belong and with the total score of the questionnaire were positive and statistically significant, and these values are acceptable for the purposes of the study, which indicates the existence of the constructive validity of the questionnaire.

STABILITY OF THE STUDY TOOL

To verify the stability of the tool, it was applied to a sample of (30) individuals from outside the study sample and within its community, and the stability coefficient was extracted according to the Cronbach-Alpha equation; To ensure the internal consistency of the items of the tool, the stability of the stability was verified by the test-retest method, and it was re-applied to the respondents after two weeks, and Table (3) shows that.

TABLE (3): THE INTERNAL CONSISTENCY OF THE TOTAL TOOL AND ITS FIELDS, AND THE STABILITY COEFFICIENT OF RE-APPLICATION OF THE TOTAL TOOL AND ITS FIELDS

Field	Item NO.	Internal consistency	Recurring stability
The first field: the requirements of the digital teacher	10	0.710	0.870
The second field: students' requirements	10	0.833	0.934
The third field: digital content requirements	10	0.844	0.755
Fourth field: Infrastructure requirements	10	0.755	0.783
The fifth field: management requirements	10	0.783	0.885
the tool as a whole	50	0.884	0.945

We notice from Table (3) that the values of the reliability of the repeat are appropriate for the purposes of this study, through the above, it is clear that the study tool has achieved suitable values of stability, which allows the application of the tool to the sample members.

STUDY RESULTS AND DISCUSSION

FIRST: RESULTS OF THE FIRST QUESTION, WHICH READS: "WHAT IS THE DEGREE OF FULFILLMENT OF DIGITAL TRANSFORMATION REQUIREMENTS IN QASABA AMMAN SCHOOLS FROM THE POINT OF VIEW OF SCHOOL PRINCIPALS AND EDUCATIONAL SUPERVISORS?

To answer this question, the arithmetic means, standard deviations, and ranks were extracted for the degree of availability of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors in general, and for each field, and Table (4) illustrates this.

TABLE (4): MEANS AND STANDARD DEVIATIONS FOR THE DEGREE OF AVAILABILITY OF DIGITAL TRANSFORMATION REQUIREMENTS IN QASABA AMMAN SCHOOLS FROM THE POINT OF VIEW OF SCHOOL PRINCIPALS AND EDUCATIONAL SUPERVISORS, IN DESCENDING ORDER

NO.	Field	Arithmetic Mean	Standard Deviation	Rank	Level
4	Fourth area: Infrastructure requirements	3.59	0.99	1	High
5	The fifth field: management requirements	3.16	0.56	2	Average
2	The second field: students' requirements	3.00	0.80	3	Average
1	The first field: the requirements of the digital teacher	2.86	0.56	4	Average
3	The third area: digital content requirements	2.52	0.56	5	Average
	The degree to which digital transformation requirements are met	3.11	0.61		Average

Table (4) shows that the degree of availability of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors in general was medium, as the total arithmetic mean was (3.11) with a standard deviation equal to (0.61). Their arithmetic averages ranged between (3.59-2.52), and the fourth domain came in the first rank: infrastructure requirements, with an arithmetic mean (3.59) and a standard deviation (0.99), with a high degree. (0.56) with a medium degree, and in the penultimate rank came the first field: Digital Teacher Requirements "with an arithmetic mean (2.86) and a standard deviation (0.56) and with a medium degree, and in the last rank came the third field: Digital Content Requirements" with an arithmetic mean (2.52) and a standard deviation (0.56) with a moderate degree. As for the paragraphs of each field, it came as follows:

1- THE FOURTH FIELD: INFRASTRUCTURE REQUIREMENTS

Arithmetic means and standard deviations were calculated and the ranks and degree of the fifth domain: management requirements were determined, and the results were presented in the following table:

TABLE 5: ARITHMETIC MEANS, STANDARD DEVIATIONS, AND THE SCORE OF THE FIFTH DOMAIN: MANAGEMENT REQUIREMENTS IN DESCENDING ORDER

NO.	Field	Arithmetic Mean	Standard Deviation	Rank	Level
5	Software and technologies required for digital learning are provided.	3.90	1.26	1	High
1	A continuous internet network is provided with high quality.	3.85	1.29	2	High
10	An electronic link is provided between the school's parts, facilities and classrooms.	3.85	1.51	2	High
9	The digital school hardware, technologies and software are updated periodically.	3.84	1.36	4	High
8	Digital communication is used among the school community.	3.83	1.13	5	High
4	Data and network protection programs are provided within the school.	3.82	1.28	6	High
2	Computer laboratories equipped with the latest digital technology are provided.	3.58	1.48	5	High
3	A digital library is provided to meet the needs of students and teachers.	3.50	1.51	8	High
6	Technical support is provided to run the digital software.	3.50	1.23	8	High
5	Classrooms are equipped with digital transformation technologies.	3.61	1.52	10	Average
	Fourth field: Infrastructure requirements	**3.59**	**0.99**		Average

Table (5) shows that the degree of availability of the requirements of the fourth domain: infrastructure

requirements in general was high, as the total arithmetic mean for the field was (3.59) with a standard deviation equal to (0.99). - 3.61), and paragraph (5) came in the first rank, which states that “software and technologies necessary for digital learning are provided” with an arithmetic mean (3.90), and a standard deviation equal to (1.26), and with a high degree. Paragraph (1) came in the second rank, which states "A continuous internet network is provided with high quality" with an arithmetic average of (3.85), and a standard deviation equal to (1.29), and with a high degree. Paragraph (6) came in the penultimate rank, which states that "technical support is provided to run digital programs" with an arithmetic average of (3.50), And a standard deviation equal to (1.23), with a high degree, and paragraph (5) came in the last rank, which states that “classrooms are equipped with digital transformation technologies,” with an arithmetic mean (3.61), and a standard deviation equal to (1.52), and a medium degree.

2- THE FIFTH FIELD: MANAGEMENT REQUIREMENTS

Arithmetic means and standard deviations were calculated and the ranks and degree of the fifth domain: management requirements were determined, and the results were presented in the following table:

TABLE (6): ARITHMETIC MEANS, STANDARD DEVIATIONS, AND THE SCORE OF THE FIFTH DOMAIN: MANAGEMENT REQUIREMENTS IN DESCENDING ORDER

NO.	Field	Arithmetic Mean	Standard Deviation	Rank	Level
3	Information and data are exchanged and communicated with the Directorate of Education electronically.	3.56	0.96	1	Average
9	Paper procedures and transactions are being replaced by digital, such as school schedules, publication of official circulars, and others.	3.55	1.05	2	Average
6	Periodic maintenance of digital technologies and computers is done to ensure continuity of work.	3.25	1.09	3	Average
4	The culture of digital transformation is spread in the school community.	3.26	1.02	4	Average
5	The training needs of the school community are determined according to technological developments.	3.23	0.96	5	Average
2	Modern technologies are used during the meetings.	3.12	1.11	6	Average
1	Modern technologies are provided to provide administrative services to the school.	3.10	1.00	5	Average
10	Digital achievement files are activated for all school employees.	2.96	1.05	8	Average
5	A shared digital vision is developed and known to the school community.	2.90	0.91	9	Average
8	Committees and task forces are formed to plan for digital learning.	2.66	1.03	10	Average
	The fifth field: management requirements	**3.16**	**0.56**		Average

Table (6) shows that the degree of availability of the requirements of the fifth domain: management requirements in general was medium, as the total arithmetic mean for the domain was (3.16) with a standard deviation equal to (0.56). And came in the first rank, paragraph (3), which states that “information and data are exchanged and communicated with the Directorate of Education electronically” with an arithmetic mean of (3.56), and a standard deviation equal to (0.96), and with a medium degree, and came in the second rank, paragraph (9), which states "Paper procedures and transactions are replaced by digital ones, such as school schedules, publication of official circulars, and others," with an arithmetic mean (3.55), and a standard deviation equal to (1.05), and with a medium degree. Paragraph (5) came in the penultimate rank, which states, "A common and well-known digital vision is developed The school community "with an arithmetic average of (2.90), and a standard deviation equal to (0.91), and with a medium degree, and came in the last rank, paragraph (8), which states that "committees and work teams are formed to plan for digital learning" with an arithmetic average of (2.66), and a standard deviation It is equal to (1.03), and to a medium degree.

3- THE SECOND FIELD: STUDENTS' REQUIREMENTS

The arithmetic means and standard deviations were calculated and the ranks and degrees of the second field: student requirements were determined, and the results were presented in the following table:

TABLE (7): MEANS, STANDARD DEVIATIONS, AND THE DEGREE OF THE SECOND FIELD: STUDENTS' REQUIREMENTS, ARRANGED IN DESCENDING ORDER

NO.	Field	Arithmetic Mean	Standard Deviation	Rank	Level
8	Students are trained to submit electronic exams through digital platforms and applications.	3.26	1.01	1	Average
5	Students are made aware of the safe use of digital technologies.	3.24	1.05	2	Average
3	Students are made aware of the importance of digital transformation.	3.21	1.04	3	Average
6	Students are trained to use digital educational platforms.	3.20	1.00	4	Average
9	Students are enabled to obtain feedback on their performance in assignments and tests using digital technologies.	3.13	0.95	5	Average
5	Students are assigned to do projects and research of a digital nature.	3.08	1.02	6	Average
2	Students are encouraged to use digital educational applications and platforms in the school.	3.05	1.05	5	Average
4	Online participatory learning environments are being created.	2.93	1.00	8	Average
10	Student clubs and teams are formed that are interested in digital applications and their use.	2.49	0.92	9	Average
1	Students are trained to design electronic educational websites.	2.38	0.99	10	Average
	The second field: students' requirements	**3.00**	**0.80**		Average

Table (7) shows that the degree of fulfillment of the requirements of the second field: students' requirements in general was medium, as the total arithmetic mean for the field was (3.00) with a standard deviation equal to (0.80).), and came in the first rank, paragraph (8), which stipulates that "students shall be trained to submit electronic tests through digital platforms and applications" with an arithmetic mean (3.26), and a standard deviation equal to (1.01), and with an average degree, and came in the second rank, paragraph (5).) which stipulates that "students are made aware of the safe use of digital technologies" with an arithmetic mean of (3.24), and a standard deviation equal to (1.05), and with a medium degree, and came in the penultimate rank Paragraph (10) which states that "student clubs and teams interested in digital applications are formed And use it "with an arithmetic mean (2.49), and a standard deviation equal to (0.92), and with a medium degree, and in the last rank came paragraph (1) that states "Students are trained to design electronic educational websites" with an arithmetic mean (2.38), and a standard deviation equal to (0.99). , to an average degree.

4- THE FIRST FIELD: THE REQUIREMENTS OF THE DIGITAL TEACHER

The arithmetic means and standard deviations were calculated and the ranks and degrees of the second field: student requirements were determined, and the results were presented in the following table:

TABLE (8): ARITHMETIC MEANS, STANDARD DEVIATIONS, AND THE SCORE OF THE FIRST FIELD: DIGITAL TEACHER REQUIREMENTS IN DESCENDING ORDER

NO.	Field	Arithmetic Mean	Standard Deviation	Rank	Level
5	Teachers are motivated in the field of educational digital transformation.	3.21	1.01	1	Average
4	Teachers' skill is developed to use modern digital platforms.	3.11	1.05	2	Average
10	Teachers are trained to monitor and evaluate students' work at home through the Internet.	3.02	1.09	3	Average
6	Teachers are trained to motivate students towards digital learning.	3.01	1.01	4	Average
5	Teachers are empowered to solve simple computer problems.	2.96	1.08	5	Average
1	Teachers are trained in digital teaching strategies.	2.82	1.14	6	Average
3	Teachers are trained to employ digital tools and applications related to digital educational content.	2.82	1.05	6	Average
8	Teachers are trained on how to produce electronic question banks.	2.80	1.11	8	Average
9	Teachers are trained in the methods of preparing digital exams.	2.63	0.99	9	Average
2	Teachers are trained to design digital educational websites.	2.25	0.92	10	Average
	The first field: the requirements of the digital teacher	**2.86**	**0.56**		Average

Table (8) shows that the degree of fulfillment of the requirements of the first field: the requirements of the digital teacher in general was medium, as the total arithmetic mean for the field was (2.86) with a standard deviation equal to (0.56). 2.25), and paragraph (5) came in the first rank, which states that “teachers are motivated in the field of educational digital transformation” with an arithmetic mean (3.21), and a standard deviation equal to (1.01), and with an average degree, and came in the second rank, paragraph (4), which states On "the skill of teachers is being developed to use modern digital platforms" with an arithmetic average of (3.11), and a standard deviation equal to (1.05), and with a medium degree, and in the penultimate rank came Paragraph (9), which states "Teachers are trained on methods of preparing digital tests." With an arithmetic mean (2.63), and a standard deviation equal to (0.99), and with a medium degree, and in the last rank came paragraph (2), which states “Teachers are trained to design digital educational websites,” with an arithmetic mean (2.25), and a standard deviation equal to (0.92), And to an average degree.

5- THE THIRD AREA: DIGITAL CONTENT REQUIREMENTS

Arithmetic means, standard deviations, and ranks were determined for the third domain: digital content requirements. The results were presented in the following table:

TABLE (9): ARITHMETIC MEANS, STANDARD DEVIATIONS, AND SCORE FOR THE THIRD DOMAIN: DIGITAL CONTENT REQUIREMENTS, IN DESCENDING ORDER

NO.	Field	Arithmetic Mean	Standard Deviation	Rank	Level
8	Digital content is designed that includes enrichment activities.	2.90	0.99	1	Average
9	Digital educational content is designed to stimulate students' thinking.	2.83	0.95	2	Average
4	Multiple bookmarks, resources, and links are provided that encourage interaction with the digital content.	2.59	0.95	3	Average
6	Digital educational content is designed taking into account the logical sequence (moving from simple to complex).	2.54	0.95	4	Average
5	Digital educational content is designed that is scientifically accurate and up-to-date.	2.51	0.93	5	Average
3	There is a diversification between the theoretical and practical sides in the design of digital content.	2.50	0.91	6	Average
10	Educational digital repositories (data bank) are provided that help collect and store educational items that can be accessed via the Internet.	2.68	0.96	5	Average
1	Digital content is designed to assist students in self-learning.	2.66	0.95	8	Average
5	Digital educational content is designed that takes into account individual differences among students.	2.63	0.98	9	Average
2	Digital educational content is designed that relates to the reality of students' lives.	2.59	0.92	10	Average
	The third area: digital content requirements	**2.52**	**0.56**		Average

Table (9) shows that the degree of fulfillment of the requirements of the third domain: digital content requirements in general was medium, as the total arithmetic mean for the domain was (2.52) with a standard deviation equal to (0.56). 2.59), and paragraph (8) came in the first rank, which states that “digital content is designed that includes enrichment activities” with an arithmetic mean (2.90), and a standard deviation equal to (0.99), and with an average degree, and paragraph (9) came in the second rank, which states “Digital educational content is designed that raises students’ thinking,” with an arithmetic mean of (2.83), and a standard deviation equal to (0.95), and with a medium degree. Paragraph (5) came in the penultimate rank, which states: “Digital educational content is designed that takes into account individual differences among students. " With an arithmetic mean (2.63), and a standard deviation equal to (0.98), and with a medium degree, paragraph (2) came in the last rank, which states that “a digital educational content is designed that relates to the reality of students’ lives” with an arithmetic mean (2.59), and a standard deviation equal to (0.92). to an average degree.

SECOND: THE RESULTS OF THE SECOND QUESTION, WHICH READS: "ARE THERE ANY STATISTICALLY SIGNIFICANT DIFFERENCES AT THE LEVEL (A = 0.05) IN THE DEGREE OF AVAILABILITY OF DIGITAL TRANSFORMATION REQUIREMENTS IN QASABA AMMAN SCHOOLS FROM THE POINT OF VIEW OF SCHOOL PRINCIPALS AND EDUCATIONAL SUPERVISORS DUE TO THE VARIABLES (GENDER, NUMBER OF YEARS OF EXPERIENCE, AND EDUCATIONAL QUALIFICATION, AND THE CURRENT JOB?

To answer this question, the arithmetic means and standard deviations were extracted for the total score for the degree of fulfillment of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors according to the variables (sex, number of years of experience, educational qualification, and current job). Table (10) shows this:

TABLE (10): ARITHMETIC MEANS AND STANDARD DEVIATIONS OF THE TOTAL SCORE FOR THE DEGREE OF AVAILABILITY OF DIGITAL TRANSFORMATION REQUIREMENTS IN QASABA AMMAN SCHOOLS FROM THE POINT OF VIEW OF SCHOOL PRINCIPALS AND EDUCATIONAL SUPERVISORS ACCORDING TO THE VARIABLES (SEX, NUMBER OF YEARS OF EXPERIENCE, EDUCATIONAL QUALIFICATION, AND CURRENT JOB)

Variable	Category	NO.	Arithmetic Mean	Standard Deviation
Gender	Male	53	3.06	0.64
	Female	109	3.14	0.60
	Total	182	3.11	0.61
Experience	Less than 10 years	12	3.20	0.59
	More than 10 years	150	3.10	0.60
	Total	182	3.11	0.61
Qualification	High Diploma	98	3.10	0.60
	Master	45	3.06	0.66
	Doctorate	39	3.15	0.58
	Total	182	3.11	0.61
Current Job	Principal	136	3.14	0.60
	Supervisor	46	3.01	0.64
	Total	182	3.11	0.61

Table (10) shows that there are apparent differences between the arithmetic averages of the total score for the degree of availability of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors according to the variables (sex, number of years of experience, academic qualification, and current job), and in order to verify the significance of these Differences Four Way ANOVA was applied, and the following table shows the results.

TABLE (11): RESULTS OF ANOVA FOR THE DIFFERENCES BETWEEN THE ARITHMETIC MEANS OF THE TOTAL SCORE FOR THE DEGREE OF AVAILABILITY OF DIGITAL TRANSFORMATION REQUIREMENTS IN QASABA AMMAN SCHOOLS FROM THE POINT OF VIEW OF SCHOOL PRINCIPALS AND EDUCATIONAL SUPERVISORS ACCORDING TO THE VARIABLES (SEX, NUMBER OF YEARS OF EXPERIENCE, EDUCATIONAL QUALIFICATION, AND CURRENT JOB)

Contrast Source	Squares Sum	Freedom Degree	Squares Mean	F Value	SIG
Gender	0.082	1	0.082	0.219	0.640
Years of Experience	0.066	1	0.066	0.155	0.654
Qualification	0.914	2	0.455	1.221	0.295
Current Position	1.244	1	1.244	3.322	0.050
The error	65.895	156	0.354		
Total	65.535	181			

Table (11) shows that there is no statistically significant difference between the two arithmetic averages of the total score for the degree of fulfillment of digital transformation requirements in Qasaba Amman schools from the point of view of school principals and educational supervisors according to the gender variable, based on the calculated P value of (0.219), with a level of significance equal to (0.640).), and the absence of statistically significant differences between the arithmetic averages of the total score according to the variable of years of experience, based on the calculated P-value of (0.155), and with a level of significance equal to (0.654), as well as the absence of statistically significant differences for the total score according to the educational qualification variable, based on the value of The calculated p-value of (1.221), with a level of significance equal to (0.295), as well as the absence of statistically significant differences for the total score

according to the variable of the current job, based on the calculated p-value of (3.322), with a level of significance equal to (0.050).

Arithmetic means and standard deviations were also extracted for the degree of availability of digital transformation requirements for the five domains according to the variables (sex, number of years of experience, educational qualification, and current job). Table (12) shows this:

TABLE (12): ARITHMETIC MEANS AND STANDARD DEVIATIONS FOR THE DEGREE OF AVAILABILITY OF DIGITAL TRANSFORMATION REQUIREMENTS FOR THE FIVE DOMAINS ACCORDING TO THE VARIABLES (GENDER, NUMBER OF YEARS OF EXPERIENCE, EDUCATIONAL QUALIFICATION, AND CURRENT JOB)

Variable	Category		The first field: the requirements of the digital teacher	The second field: students' requirements	The third area: digital content requirements	Fourth area: Infrastructure requirements	The fifth field: management requirements
Gender	Male	Number	53	53	53	53	53
		Arithmetic Mean	2.85	2.93	2.68	3.5	3.14
		Standard Deviation	0.81	0.83	0.55	0.94	0.83
	Female	Number	109	109	109	109	109
		Arithmetic Mean	2.88	3.04	2.55	3.84	3.18
		Standard Deviation	0.52	0.59	0.56	1.03	0.51
Experience	Less than 10 years	Number	12	12	12	12	12
		Arithmetic Mean	3.09	3.25	2.55	3.92	2.95
		Standard Deviation	0.99	0.61	0.82	1.45	0.59
	More than 10 years	Number	150	150	150	150	150
		Arithmetic Mean	2.85	2.98	2.52	3.58	3.18
		Standard Deviation	0.54	0.81	0.56	0.96	0.56
Qualification	High Diploma	Number	98	98	98	98	98
		Arithmetic Mean	2.81	2.93	2.65	3.9	3.21
		Standard Deviation	0.56	0.84	0.54	0.91	0.55
	Master	Number	45	45	45	45	45
		Arithmetic Mean	2.84	2.89	2.65	3.59	3.14
		Standard Deviation	0.81	0.89	0.53	1.18	0.52
	Doctorate	Number	39	39	39	39	39
		Arithmetic Mean	3.03	3.29	2.96	3.5	3.05
		Standard Deviation	0.68	0.49	0.82	0.93	0.83
Current Job	Principal	Number	136	136	136	136	136
		Arithmetic Mean	2.82	2.99	2.5	3.95	3.22
		Standard Deviation	0.55	0.84	0.52	0.91	0.58
	Supervisor	Number	46	46	46	46	46
		Arithmetic Mean	2.98	3.02	2.59	3.25	2.99
		Standard Deviation	0.58	0.50	0.86	1.04	0.69

Table (12) shows that there are apparent differences between the arithmetic averages of the degree of digital transformation requirements for the five fields according to the variables (sex, number of years of experience, educational qualification, and current job). dependent (Four Way MANOVA), and the following table shows the results.

TABLE (13): THE RESULTS OF THE DEPENDENT MULTIVARIATE QUATERNARY ANALYSIS OF VARIANCE (MANOVA) FOR THE DIFFERENCES BETWEEN THE ARITHMETIC AVERAGES OF THE DEGREE OF DIGITAL TRANSFORMATION REQUIREMENTS FOR THE FIVE DOMAINS ACCORDING TO THE VARIABLES (SEX, NUMBER OF YEARS OF EXPERIENCE, EDUCATIONAL QUALIFICATION, AND CURRENT JOB)

Contrast Source	Field	Squares Sum	Freedom Degree	Squares Mean	F value	SIG
Gender	The first field: the requirements of the digital teacher	0.001	1	0.001	0.002	0.962
	The second field: students' requirements	0.050	1	0.050	0.080	0.558
	The third area: digital content requirements	0.016	1	0.016	0.028	0.866
	Fourth area: Infrastructure requirements	0.551	1	0.551	0.629	0.429
	The fifth field: management requirements	0.131	1	0.131	0.225	0.634
Experience	The first field: the requirements of the digital teacher	0.646	1	0.646	1.118	0.292
	The second field: students' requirements	0.590	1	0.590	1.260	0.263
	The third area: digital content requirements	0.001	1	0.001	0.002	0.962
	Fourth area: Infrastructure requirements	0.111	1	0.111	0.122	0.528
	The fifth field: management requirements	0.599	1	0.599	1.035	0.310
Qualification	The first field: the requirements of the digital teacher	0.535	2	0.268	0.463	0.630
	The second field: students' requirements	5.233	2	2.616	4.154	0.015
	The third area: digital content requirements	2.481	2	1.240	2.155	0.119
	Fourth area: Infrastructure requirements	0.055	2	0.029	0.031	0.969
	The fifth field: management requirements	0.009	2	0.004	0.008	0.992
Current Job	The first field: the requirements of the digital teacher	0.142	1	0.142	0.246	0.621
	The second field: students' requirements	1.065	1	1.065	1.699	0.194
	The third area: digital content requirements	0.196	1	0.196	0.341	0.560
	Fourth area: Infrastructure requirements	11.563	1	11.563	12.952	0.000
	The fifth field: management requirements	1.099	1	1.099	1.901	0.150
Error	The first field: the requirements of the digital teacher	101.520	156	0.558		
	The second field: students' requirements	110.318	156	0.625		
	The third area: digital content requirements	101.299	156	0.556		
	Fourth area: Infrastructure requirements	159.842	156	0.908		

Table (13) shows that there is no statistically significant difference between the two arithmetic averages of the degree of availability of the digital transformation requirements for the five domains according to the gender variable, based on the calculated P values of (0.629 - 0.002), with a level of significance equal to (0.429 - 0.962), as well as the absence of a difference Statistically significant between the two arithmetic averages of the degree of fulfillment of digital transformation requirements for the five fields according to the variable number of years of experience, based on the calculated P values of (1.260 - 0.002), with a level of significance equal to (0.263 - 0.962), as well as the absence of statistically significant differences for the degree of fulfillment of the requirements The digital transformation of four domains according to the educational qualification variable, based on the calculated p-values of (0.008-2.155), with a level of significance equal to (0.119-0.992), except for the second domain: students' requirements, in which differences were found based on the calculated p-values of (4.154) with a level of significance (0.015), as well as the absence of a statistically significant difference between the two arithmetic averages for the degree of digital transformation requirements for the five domains according to the variable of the current job, based on the calculated P values of (0.246 - 1.901), with a level of significance equal to (0.150 - 0.621), with the exception of the fourth domain: Infrastructure requirements, differences were found based on the calculated P values of (12.952) with a significance level of (0.000), and the difference was in favor of the manager's

arithmetic mean of (3.95), higher than the supervisor's arithmetic mean of (3.25), as for differences in the field Second: Students' requirements according to the educational qualification variable. In order to know the differences due, the Scheffet test was applied for the post-comparisons, and the following table shows the results. These results are attributed to the fact that the number of years of experience is the primary role in many tasks. Digital transformation, how and the mechanism of dealing with students, as well as the dealings of supervisors with teachers and administrators in educational institutions. It is necessary to look at the current job, as the role lies in the job position occupied by each of the teacher as well as the manager, as well as the supervisor. Each employee deals with digital transformation with a certain percentage and software that suits the workload.

TABLE (14): SCHEFFE TEST FOR POST-COMPARISONS OF THE DIFFERENCES BETWEEN THE ARITHMETIC MEANS OF THE DEGREE OF FULFILLMENT OF DIGITAL TRANSFORMATION REQUIREMENTS IN THE SECOND FIELD: STUDENT REQUIREMENTS ACCORDING TO THE EDUCATIONAL QUALIFICATION VARIABLE.

Qualification	Arithmetic Mean	Doctorate	High diploma	Master
		3.29	2.93	2.89
Doctorate	3.29	-	0.36*	0.40*
High Diploma	2.93	-	-	0.04
Master	2.89	-	-	-

Table (14) shows in favor of the arithmetic mean for PhD holders (3.29) when comparing their average with the average for holders of master's degrees (2.93) and higher diploma (2.89). From the stages and during his studies, he turns into a researcher and a source of knowledge familiar with many skills in the field of information technology and how to use it, which is consistent with many previous studies mentioned above, including (study), and also the degree of higher diploma in education depends on teaching most of its courses on educational software and tools Digital transformation needs and greatly serves the educational process.

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 meet the requirements of digital transformation among school principals and supervisors, such as providing the necessary training and qualification for principals, teachers and supervisors 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. 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.
4. Conducting research studies to examine the relationship between the application of digital leadership, teachers' job performance and excellence, and digital transformation in the institutionalization of educational institutions.
5. Researching the impact of the availability of digital transformation requirements on the quality of education in public and private schools in Jordan.

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