THE ROLE OF SECONDARY SCHOOL PRINCIPALS IN THE UPPER GALILEE REGION IN ACTIVATING THE USE OF EDUCATIONAL TECHNOLOGY TOOLS

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Abstract

The aim of the study was to identify the role of secondary school principals in the Upper Galilee region in activating the use of educational technology tools and to detect variances owing to gender, job title, and years of experience. The descriptive survey method was utilised to fulfil the study's aims. The researcher created a questionnaire with (24) items. The stratified random sampling approach was used to choose the study sample, which consisted of (285) persons from all administrators and teachers of secondary schools in the Upper Galilee region. The findings revealed that secondary school principals in the Upper Galilee region have an important role in activating the usage of technology tools. Education was moderate, and there were no statistically significant differences at the significance level (α=0.05) due to the job title variable, but there were statistically significant differences at the significance level (α=0.05) due to the years of experience variable. In favour of teachers with less than ten years of experience, and the presence of statistically significant gender inequalities in favour of males.

Key words: Educational Technology, School Principals, The Upper Galilee Region.

Introduction

Today's educational institutions in the Upper Galilee region face a multitude of opportunities and problems as a result of technological advancements and the emergence of novel technologies including biotechnology, robotics, sophisticated materials, and artificial intelligence. These technologies have the power to drastically alter many facets of existence. With this opportunity and challenge, the role of effective educational administrations in the Upper Galilee region is to create administrative and educational policies that are in line with scientific and technological advancements by drawing on development experiences and models at the regional and international levels (Nissim, & Simon,2023).

One of the biggest issues affecting organisation management in the twenty-first century is the development of modern technology. These changes include a shift in the abilities and role of the individual, a greater emphasis on teamwork, a change in the character of management, a rise in the use of databases and information systems, and an alteration in the organisational structure (Luna, 2015). According to Luna (2015), these characteristics indicate that, in order to thrive in a dynamic and ever-changing environment, educational institutions must update their tactics and approaches, as well as improve their management practices (Peled, & Perzon, 2022).

In order to accomplish this, school administrators need to be knowledgeable about new technological advancements and have the skills and resources needed to employ contemporary technology. Schools can use these technologies to solve administrative and instructional issues and enhance student performance while taking advantage of cutting-edge innovations from the knowledge society (Sasson, Yehuda, Miedijensky, & Malkinson, 2022). The principal of the school is the primary figure who affects the institution's performance and helps it to accomplish its objectives (Shaked, Benoliel, & Hallinger, 2021). The principal of the school needs to be able to manage and guide the team in order to accomplish the intended results (Shaked, 2022). He needs to be capable of doing this and ready to constantly improving his administrative performance in order to stay up with the changes that are occurring in educational institutions.

The study's problem:

The school serves as the foundational element for future change, serving as both the catalyst and the beginning point for educational reform and progress. Its administrative procedures also serve as the primary means of spearheading change. In light of the development of educational technology tools, it is the duty of the school principal, who is the agent of change, to close the gap between expectations and reality and to attain the highest levels of transparency, productivity, high efficiencies, and ongoing fundamental improvements in instructional strategies, facilities, administrative procedures, and electronic systems utilised.

As a result of the researcher's work in the field of education, in numerous schools and educational institutions, and an analysis of the actual circumstances, the researcher discovered that some public school principals—who are in charge of the administrative process—do not possess the competencies, skills, or use of educational technology tools at the same level as other educators. Additionally, there is instruction offered in managing enterprises and employment, and this instruction is activated in the classroom to support the growth and accomplishment of the educational process' objectives.

The researcher's observations in the field became clear after learning about the findings of earlier studies, and they both understood how crucial it was to investigate the study's problem. As a result, the researcher was motivated to look into how Upper Galilee secondary school principals were able to encourage the use of technology in the classroom.

Study questions

The study offered responses to the following questions:

1- From the perspective of principals and teachers, are secondary school principals in the upper Galilee region Activating the use of educational technology tools?

2- Are there statistically significant differences between the averages of the study participants' responses about Activating the use of educational technology tools among secondary school principals in the upper Galilee region, at the significance level (a = 0.05), due to the variables (sex, job title, and years of experience)?

The significance of study

In the current day, marked by digitization and the expansion of technology systems that have imposed themselves on all sectors and institutions, this study addressed a very relevant problem. In addition, this research may help with administrative planning in Upper Galilee schools by improving the quality of secondary school principals' training and equipping them with the knowledge and abilities needed to manage administrative operations in the context of learning technology and digital transformation.

It is intended that the study will help scholars working in the fields of education and administration and provide opportunities for postgraduate researchers specialising in school administration and educational administration to carry out additional research on the topic.

Objectives of the study

The following objectives were set for this study in order to emphasise The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools:

1. From the perspectives of principals and teachers, determine the role that secondary school principals in the Upper Galilee region play in promoting the use of educational technology tools.

2. Are there statistically significant differences between the average study participants' responses regarding the Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools at the significance level (a = 0.05) in order to obtain a deeper understanding of the variables influencing the sample estimates?

Definitions the terms:

This study adopted the following terms:

Educational Technology Tools: A set of abilities and requirements that the manager needs to enjoy the capacity to work well in the use of technology and digital instruments in a manner that reflects the strength and ability to achieve what is asked of him" (Collis, & Montgomery, 2009). A set of skills, knowledge, and abilities that Secondary School Principals in the Upper Galilee Region possess in the area of Activating the Use of Educational Technology and functions and how the researchers define it. This skill set is measured by the degree attained by school principals through the sample's response to the study instrument's paragraphs.

The limits of the study

This study is determined by the following limits:

- **Objective limitation**: This study was limited to identifying The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools
- **Human Limit**: This study was limited to a sample of principals and teachers of Secondary School Principals in the Upper Galilee Region.
- **Spatial limitation**: This study was limited to Secondary School Principals in the Upper Galilee Region
- **Time limit:** This study was applied during the first semester of the year (2023/2024).

Review of Related Literature:

In this part, the researchers dealt with a presentation of the theoretical literature and previous studies related to the subject of the study of activating the Use of Educational Technology Tools among Secondary School Principals in the Upper Galilee Region

Digital Skills

The concept of digital skills and their importance:

Digital abilities are "a collection of competences and requirements that a manager possesses to be able to function well in the use of technology and digital instruments in a way that reflects strength and capacity to achieve what is asked of him," according to Redecker and Punie, (2017). As per Eshet (2004), possessing digital abilities is not limited to the ability to operate electronic devices properly. They are a collection of mental skills needed for tasks carried out in digital environments, like navigating the web, deciphering user interfaces, handling databases, and participating in online discussion boards.

The ability to manage information and to evaluate, develop, store, and present it in appropriate and essential ways are some of the benefits of possessing digital abilities. Take advantage of the state-of-the-art features of digital technology, help solve its issues, and empower individuals to participate in the twenty-first-century knowledge society (Mahmood, Batool, Rafiq, & Safdar, (2022).

Digital skills support employees in educational institutions by streamlining procedures and facilitating the decision-making process, in addition to enabling departments and leaders to plan effectively and efficiently to take advantage of work requirements and to provide high-quality work in accordance with technical and other high-tech standards that keep pace with the requirements of the times and achieve its purpose (Nissim, & Simon,2023).

Digital proficiency

It enumerates the digital skill patterns for the basic, moderate, and advanced competency levels (Mijares, 2022). There is actually a vast array of digital capabilities. • Basic abilities: These are the skills necessary to do basic tasks and enable an individual to operate at the lowest possible level within the social structure (Sparks, Katz, & Beile, 2016). Both software and hardware are included in these skills, which also include standard online tasks like sending and receiving emails, accessing the internet, and filling out forms, as well as the use of keyboards and touch screens for tasks like word processing, file management on PCs, and privacy settings on mobile devices (McHaney, 2023).

• Intermediate skills: These include the ability to produce content or analyse technology critically. They also enable a person to use digital technologies in more useful and practical ways (Mijares, 2022). These skills are genuinely job-ready since they cover the competencies needed to do tasks relevant to work, such as digital graphic design, desktop publishing, and digital marketing.

• Advanced skills: These are needed by workers in information technology fields including computer programming and network management and are used in the big data, artificial intelligence, cybersecurity, encryption, and Internet of Things sectors (Sano, 2018).

Empirical Literature

Tondeur, Forkosh-Baruch, Prestridge, Albion, and Edirisinghe (2016) found that there is broad consensus that teacher professional development (TPD) is a crucial component of educational reform, particularly when it comes to the more efficient use of technology to improve learning. Numerous successful TPD cases are documented in the scientific literature, however there are still numerous obstacles standing in the way of wider and deeper success across the range of diverse circumstances. During the EDUsummIT 2015 in Bangkok, the TPD theme working group discussed and identified many obstacles to successful TPD. In addition to discussing these difficulties, this paper presents four instances of effective TPD from various settings and develops a model for TPD based on the commonalities found in the cases.

In order to ascertain the significance of technological capabilities among Al-Kharj Governorate education school principals and the most crucial technical competencies needed for general education school principals, Al-Enezi (2018) carried out a study. The results showed that there was a moderate level of actual technological competency among female leaders in Al-Kharj Governorate general education institutions.

The aim of Asio and Bayucca's (Asio, Bayucca, 2020) study was to ascertain the level of digital competency and school readiness among administrators to manage the difficulties associated with remote learning. The study employed a descriptive methodology and employed a questionnaire to gather data. Thirty-six principals made up the study sample. The two most noteworthy discoveries in Polkan, the Philippines, were the inconsistency of school administrators' responses about digital literacy and the lack of school preparation for distance learning.

Al-Khatib completed in 2021. In light of the Corona pandemic and its impact on administrative responsibilities from the viewpoint of teachers, a study was carried out to ascertain the digital preparedness of school administrators in the Northern Jordan Valley. The analytical descriptive technique was employed in this study, and the research tool was a questionnaire. The survey indicated that school principals' overall average level of digital preparedness in managing administrative tasks was high. They were selected at random from among all the public school instructors in the Northern Jordan Valley. The results of this study led to the recommendation that educators take part in training sessions to acquire the skills necessary to use computers and the Internet effectively and efficiently in compliance with the standards and procedures of digital learning.

Karakose and Polat (2021) conducted a study to find out how teachers felt about the technological and digital leadership roles of school principals during the corona virus. The qualitative method based on a case study was used to achieve the study's goals. Maximum Diversity Sampling was one of the purposive sampling techniques employed. The study group consisted of (89) master's degree-holding teachers. The results showed that the use of digital technologies by school principals during the Corona pandemic was appropriate by teachers,

as well as the extent to which principals support digital transformation, professional development, and technology-based professional development. It made sense to aid in the creation of a culture of digital learning.

In a study published in 2022, Peled and Perzon sought to determine the variables influencing Israeli educators who were enrolled in the three-year, national "Laptop for Every Teacher" (LET) project, which included technological integration. We contend that although a variety of factors influence how well a large-scale programme like the LET programme integrates ICT, the mindset of school administrators is crucial to the program's success. The results of the analysis indicate that the differences in attitudes towards technology use can be attributed to a number of factors, including prior technology use, management support, and seniority in the classroom. Two important conclusions were reached: A top-down approach that requires the school administration to participate in a long-term process aimed at changing the school's culture will fail unless it involves the principals in the programme and elevates them to the position of technical leaders. Moreover, when schools do not provide administrative support, educators are more likely to adhere to their tried-and-true methods of instruction.

Al-Hur (2022) undertook a study to investigate the digital competences of Jordan's educational leaders in light of the Internet of Things' requirements. The questionnaire was administered to a deliberate sample of (15) experts in educational administration and leadership from within and outside Jordan, and among the study's most notable findings were: monitoring (49) digital competency for the educational leader spread over five categories.

Meirovitz, Russak and Zur's study (2022) investigates how English as a Foreign Language (EFL) instructors view their use of pedagogical and technological expertise in distance learning during the COVID-19 pandemic. In order to look into teacher practises and attitudes about teaching online during the emergency remote teaching, the study used a mixed-method approach. An online poll was used to recruit 129 participants for the study. Teachers reported using staff tutorials, online school help, colleagues' knowledge, and self-teaching more frequently, according to the survey. The difficulties EFL teachers encounter with distant learning have been linked to the disparity between their understanding and application of digital tools. Pupils were more engaged and motivated when their teachers said they knew roughly the same or more about the tools than while they were using them. Educators with limited experience with digital technologies faced technological challenges that hindered their ability to educate. According to the study, teacher education programmes should raise teachers' awareness of new pedagogical and technological learning strategies, give them opportunities to become digitally competent, and support them in adjusting to new technologies on a personal level within their particular academic contexts.

A study by Masry-Herzallah and Stavissky (2023) examines how Israeli Arab and Jewish teachers' experiences during the Covid-19 crisis were impacted by technological pedagogical content knowledge (TPACK), transformational leadership style (TLS), and online teaching (OT). Using a quantitative approach, the study gathered information from 437

surveys given to Jewish and Israeli Arab instructors seeking master's degrees at three randomly chosen higher education institutions. In order to guarantee thorough representation and reduce common technique variance, the snowball method was employed. The findings indicated that among Israeli teachers, OT, TLS, and TPACK correlated well. But when it came to TPACK, Arab teachers reported more improvement than their Jewish counterparts. The favourable association was mitigated by the interaction between TLS and the Arab/Jewish sector. The result supports previous research on TPACK progress during the epidemic by highlighting the transformative power of online instruction in fostering teachers' TPACK.

Concluding remarks:

A review of several previous research shows that there are differences between them with regard to their samples and goals. They both agreed and disagreed with each other. Regarding the study's goal, the current investigation largely agreed with the research conducted by Karakose & Polat and Al-Khatib (2021). This aimed to clarify the degree of digital proficiency and readiness among school principals and the ways in which these attributes connected to the management of administrative responsibilities and functions. Regarding the study by Masry-Herzallah and Stavissky (2023), which looks at how technological pedagogical content knowledge affected the experiences of Israeli Arab and Jewish teachers, the findings highlight the transformative power of online instruction in fostering teachers' TPACK, which supports earlier research on technological pedagogical content knowledge progress during the epidemic.

In terms of methodology, it differed from the study (Karakose & Polat 2021) since it employed a qualitative strategy to achieve its objectives. In terms of methodology, it was similar to most previous studies that used questionnaires as research tools, but it was not the same as the study (Karakose & Polat 2021) that used a purposeful sample to collect data.

In addition to differentiating itself from earlier research in terms of purpose, sample, setting, and time, the current study focused on the role of secondary school principals in the Upper Galilee region in activating the use of educational technology tools.

Method and procedures

Study Approach

The descriptive survey method was used to reveal the The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools

Study population:

The study population consisted of all teachers and Principals of Secondary School in the Upper Galilee Region, whose number is (830) male and female teachers, and (63) male and female Principals, according to the records of the Directorate of Education of Upper Galilee Region District for the academic year 2023/2024.

The study sample

The researcher chose a stratified random sample from the study community, with a rate of (32%) from Principals' community, and of (32%) from the teacher's community, where the study sample consisted of (265) teachers , and of (20) Principals.

Table No. (1) shows Distribution of the study sample according to personal variables.

Table (1): Distribution of study sample members according to their intermediate variables

Variable	Level	No	Percent
gender	Male	113	39.6
	Female	172	60.4
	Total	285	100
Job title	Manager	58	20.4
	Teacher	227	79.6
	Total	285	100
Experience	Less than Ten years	115	40.4
	10 years and more	170	59.6
	Total	285	100

From Table No. (1) the following appears:

1. The number of males in the study sample was (113), at a rate of (39.6%) of the study sample, while the number of females was (172), at a rate of (60.4%).

2. The percentage of principals in the study sample was (20.4%), while the percentage of teachers was (79.6%).

3. The highest percentage of the study sample distribution according to the years of experience variable was (59.6%) for the experience period (ten years or more), while the lowest percentage was (40.4%) for the experience period (less than ten years).

Study instrument:

After examining the theoretical literature and earlier research on the topic, the researcher created a questionnaire as an instrument for the study to assess The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools.

Instruments Validity and Reliability

Instruments Validity

Validity of the instrument: After creating the questionnaire in its original form, the researcher presented it to a panel of experts with relevant experience—a total of twelve arbitrators from Al-Quds Open University and Yarmouk University—in order to confirm its validity. They were asked to evaluate the questionnaire's paragraphs for clarity and integrity, the degree to which the paragraphs addressed the topic under study, and to add any additional information, changes, or paragraphs that they thought fit. These findings indicate that the questionnaire was created in its completed version. However, by comparing the correlation coefficient (Pearson) between the tool's total score and the questionnaire items, the researcher was able to confirm the validity of the instrument. This revealed that every questionnaire item had statistical significance, indicating the existence of internal consistency between the items, as the following table illustrates:

Instruments Reliability

To verify the stability of the study instruments, reliability coefficients were extracted using Cronbach's alpha method for internal consistency, where the questionnaire was distributed to an exploratory sample from the study population and from outside the original sample in the study, which numbered (30) male and female teachers, and Table No. (2) shows that.

Table No. (2)

Reliability coefficients using Cronbach's alpha method for the dimensions and domains of the study instrument

Cronbach's Alpha	Item No	Domain	axis
0.874	6	Knowledge of Educational Technology Tools	
0.891	6	Knowledge of information and data of Educational Technology	
0.862	6	Create Educational Technology content	The Role of Secondary School Principals in Activating the Use of Educational Technology Tools
0.834	6	Educational Technology tools problem solving	
0.926	24	Availability of Educational Technology Tools skills as a whole	

From Table No. (2), it can be seen that the correlation coefficients for the study's fields and axes fell between (0.834-0.926), which are all high values that are appropriate for application as well as being statistically acceptable for the instrument's use. The majority of studies have shown that a stability coefficient of 0.70 is an appropriate proportion.

The validity of the internal construction of the study instruments

By distributing the questionnaire to the previously mentioned exploratory sample and calculating the correlation coefficients between each paragraph and the domain and axis to which it belongs, the validity of the construction was verified. Table No. (3) provides an explanation of this process.

Table No. (3): Correlation coefficients between each item of the study instrument, the domain to which it belongs, and the total score of the axis

The Role of Secondary School Principals in Activating the Use of Educational Technology Tools															
Educational Technology tools problem solving			ON	Create Educational Technology content			ON	Knowledge of information and data of Educational Technology			ON	Knowledge of Educational Technology Tools			ON
Correlation coefficient :with				Correlation :coefficient with				Correlation coefficient :with				Correlation coefficient :with			
axis as a whole	Domain			axis as a whole	Domain			axis as a whole	Domain			axis as a whole	Domain		
0.53	0.95		19	0.456	0.762		13	0.75	0.76		7	0.56	0.88**		1
0.42	0.39		20	0.640	0.906		14	0.81	0.85		8	0.40	0.50*		2
0.36	0.84		21	0.672	0.812		15	0.84	0.92		9	0.59	0.82**		3
0.62	0.73		22	0.642	0.895		16	0.84	0.93		10	0.65	0.91**		4
0.54	0.85		23	0.717	0.441		17	0.55	0.66		11	0.69	0.85**		5
0.58	0.63		24	0.701	0.796		18	0.66	0.71		12	0.78	0.79**		6

* Statistically significant at the level of significance ($α≤0.05$.)

* Statistically significant at the level of significance ($α≤0.01$).

The findings presented in Table (3) demonstrated that all correlation coefficient values between the study instrument's statements and the field to which they belong, as well as the axis' overall score, were statistically significant. This suggests that the study instrument's statements are legitimate and constructively valid for use with the study participants.

Application, correction and interpretation of the study instrument:

The study relied on the Interval Scales: This scale is based on division into several categories according to importance or degree of approval, often referred to as the Likert scale shown in Figure (1), and we find that these five points make up the scale. At the extreme end of the scale there is strong agreement, and at the other end there is a strong disagreement and between them there are intermediate points, each point on the scale carries a score, and the response that indicates the least degree of agreement is given (1), and the most agreement is given a score (5) and the same for each of the responses the five.

Figure 1: Likert's five-point scale

A very low degree	Low Degree	Moderately	a high degree	Very high degree
1	2	3	4	5

• The first category: if the arithmetic averages range between (1-2.33), the evaluation level is low. (Category height + lowest weight = 1 + 1.33 = 2.33).

• The second category: if the arithmetic averages ranged between (2.34-3.66), an average evaluation level. (2.33 + 1.33 = 3.66).

• The third category: If the arithmetic averages range between (3.66-5.00), the evaluation level is high. (3.67 + 1.33 = 5.00).

Study variables

First: the main variable

- TThe Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools.

Second: secondary variables (intermediate)

- Gender, and it has two categories (male, female).

The job title has two levels (manager, teacher).

- Years of experience and it has two levels (less than 10 years), (10 years and more).

Results

First, the results of the first question: From the perspective of principals and teachers, are secondary school principals in the upper Galilee region Activating the use of educational technology tools?

Table No. (4) displays the arithmetic means and standard deviations of the estimates of the study sample on the domains of the axis of The Role of Secondary School Principals in Activating the Use of Educational Technology Tools and for the total score of the axis.

Table (4) Arithmetic means and standard deviations for the domains of the axis of the availability of The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools, and for the total score of the scale arranged in descending order according to the mean

Rating score	Rank	Standard Deviation	Mean	domain	No
Moderate	1	0.63	3.27	Knowledge of Educational Technology Tools	1
Moderate	2	0.67	3.22	Knowledge of information and data of Educational Technology	3
Moderate	3	0.66	3.12	Create Educational Technology content	2
Moderate	4	0.65	3.05	Educational Technology tools problem solving	4
Moderate	-	0.59	3.17	Availability of Educational Technology Tools skills as a whole	

Table No. (4) displays the arithmetic means and standard deviations for the axis of the degree of The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools, as well as the total score of the scale, where the arithmetic averages ranged between (3.05-3.27) with a medium degree of importance for all fields. According to Table No. (4), the field of " Knowledge of Educational Technology Tools" ranked first with an arithmetic mean (3.27) and a standard deviation (0.63), while the field of "Knowledge of information and data of Educational Technology" ranked second with an arithmetic mean (3.22) and a standard deviation (0.67). The third category is " Create Educational Technology content " which has an arithmetic average of (3.12) and a standard deviation of (0.66). Lastly, with an arithmetic mean of (3.05) and a standard deviation of, the field of " Educational Technology tools problem solving " came in fourth place (0.65).

From the perspective of principals and teachers as a whole, The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools (3.01) with a standard deviation (0.59) and a medium degree of importance. The researcher extracted the arithmetic means and standard deviations of the estimates of the study sample for the expressions of each domain of the axis of The Role of Secondary School Principals in Activating the Use of Educational Technology Tools from the point of view of principals and teachers in detail, and the following are the results:

The first Domain: Knowledge of Educational Technology Tools.

Table (5) the arithmetic means and standard deviations for the expressions in the field of "Knowledge of Educational Technology Tools" arranged in descending order according to the mean

Rating score	Rank	standard deviation	Mean	Item	No
Moderate	1	0.75	3.42	Search engines are accessible to the school's principal.	2
Moderate	2	0.76	3.39	The school's principal is familiar with how to use digital tools for administrative purposes.	1
Moderate	3	0.74	3.36	The principal of the school is knowledgeable about information and data management.	3
Moderate	4	0.68	3.27	The process for analyzing numerical data and information is something the school principal is aware of.	4
Moderate	5	0.77	3.11	Data recovery is a competence that the principal of the school possesses.	5
Moderate	6	0.76	3.05	The school's principal is equipped with the expertise needed to manage cloud computing services.	6
Moderate	-	0.63	3.27	**The Domain of " Knowledge of Educational Technology Tools " as a whole**	

It appears from Table (5) that the arithmetic averages for the phrases in the field of "knowledge of information and data" ranged between (3.05-3.42), the highest of which was for paragraph No. (2), which states "the school principal has the ability to use search engines" with an arithmetic average of (3.42).) and a standard deviation of (0.75), and in the last place came Paragraph No. (6), which states that "the principal of the school has the necessary knowledge to deal with cloud computing services" with an arithmetic mean (3.05) and a standard deviation (0.76), and the arithmetic mean for the field as a whole was (3.27). with a standard deviation (0.63).

• The second domain: Knowledge of information and data of Educational Technology.

Table (6) the arithmetic means and standard deviations for the phrases in the domain of "Knowledge of information and data of Educational Technology" arranged in descending order according to the mean

Rating score	Rank	standard deviation	Mean	Item	No
Moderate	1	0.76	3.36	The principal of the school has experience using the office space (Word, Excel, ...).	1
Moderate	2	0.72	3.21	The school's headmaster has access to digital materials via all gadgets and communication channels.	6

Rating score	Rank	standard deviation	Mean	Item	No
Moderate	3	0.81	3.15	The principal of the school is skilled in repurposing digital material to produce fresh, cutting-edge data.	2
Moderate	4	0.81	3.09	The school's principal is capable of selecting the proper administrative software to carry out the numerous functions.	5
Moderate	5	0.81	2.97	The principal of the school is competent in applying copyright laws and licensing to safeguard intellectual property.	4
Moderate	6	0.83	2.91	The school's principal is capable of developing various applications to produce digital content.	3
Moderate	-	0.66	3.12	The domain of " Knowledge of information and data of Educational Technology " as a whole	

It appears from Table (6) that the arithmetic averages for the phrases in the field of "creating digital content" ranged between (2.91-3.36), the highest of which was for paragraph No. (1), which states: "The school principal has experience in employing the Office suite (Word, Excel, etc.). .)" with an arithmetic mean of (3.36) and a standard deviation of (0.76), and in the last place came Paragraph No. (3), which states that "the principal of the school has the skill to innovate different software to create digital content" with an arithmetic mean of (2.91) and a standard deviation of (0.83), and reached The arithmetic mean for the field as a whole is (3.12) with a standard deviation (0.66).

The third domain: Create Educational Technology content.

Table (7) The arithmetic means and standard deviations of the phrases in the field of " Create Educational Technology content " arranged in descending order according to the arithmetic mean

Rating score	Rank	standard deviation	Mean	Item	No
Moderate	1	0.78	3.41	The school's principal is able to mail letters with attachments and send emails.	1
Moderate	2	0.82	3.29	To engage with the neighborhood and parents, the school principal can set up various accounts.	2
Moderate	3	0.72	3.20	The school's principal possesses digital citizenship skills.	3
Moderate	4	0.69	3.16	The digital identity can be managed by the school's principal.	5
Moderate	5	0.79	3.14	A digital code of conduct can be created by the school's principal.	4
Moderate	6	0.76	3.13	The principal of the school has expertise in leading teams of workers using digital tools.	6
Moderate	-	0.67	3.22	overall " Create Educational Technology content " industry	

It appears from Table (7) that the arithmetic averages for the phrases in the field of "digital communication" ranged between (3.13-3.41), the highest of which was for paragraph No. (1), which states "the school principal has the ability to send e-mails and attach documents in mailings" with an average Arithmetic (3.41) and standard deviation (0.78), and in the last place came Paragraph No. (6), which states that "the principal of the school has experience in managing work teams through digital technologies" with an arithmetic mean (3.13) and a standard deviation (0.76), and the arithmetic mean was (0.76). For the field as a whole (3.22) with a standard deviation (0.67).

The fourth domain: Educational Technology tools problem solving.

Table (8) The arithmetic means and standard deviations for the phrases in the field of "Educational Technology tools problem solving" arranged in descending order according to the mean

Rating score	Rank	standard deviation	Mean	Item	No
Moderate	1	0.82	3.22	The principle is eager to identify opportunities for self-development and to keep up with technological advancements.	4
Moderate	2	0.79	3.19	The principal is eager to assist instructors in identifying digital proficiency gaps.	5
Moderate	3	0.77	3.18	The school principal has the ability to objectively identify the most appropriate digital instrument for his needs.	6
Moderate	4	0.82	2.94	The principal of the school is capable of detecting risks and threats in digital environments such as (false profiles).	2
Moderate	5	0.83	2.91	The principal of the school can use cyber security skills.	1
Moderate	6	0.84	2.88	The principal of the school is capable of resolving technical issues with digital technology.	3
Moderate		0.65	3.05	**The overall domain of " Educational Technology tools problem solving "**	

It appears from Table (8) that the averages for the phrases in the field of "solving digital problems" ranged between (2.88-3.22), the highest of which was for paragraph No. (4), which states: "The school principal is keen to find opportunities for self-development and keeping pace with digital development" with an arithmetic average (3.22) and a standard deviation of (0.82), and in the last place came Paragraph No. (3), which states that "the school principal has the skill to fix technical problems while using digital systems" with an arithmetic mean (2.88) and a standard deviation (0.84), and the arithmetic mean for the field as a whole (3.05) with a standard deviation of (0.65).

Second: The findings to the second query were as follows:

Are there statistically significant differences between the averages of the study participants' responses about Activating the use of educational technology tools among

secondary school principals in the upper Galilee region, at the significance level (a = 0.05), due to the variables (sex, job title, and years of experience)?

According to the factors (gender, job title, and years of experience), the arithmetic means and standard deviations of the sample's scores were retrieved in terms of about activating the use of educational technology tools among secondary school principals in the upper Galilee region, and Table (9) illustrates this.

Table (9) The arithmetic means and standard deviations of the respondents' scores on activating the use of educational technology tools among secondary school principals in the upper Galilee region as a whole is attributed to the variables (gender, job title, and years of experience)

standard deviation	Mean	No	Level	Variable
0.33	2.97	113	male	Gender
0.69	3.29	172	female	
0.41	3.12	58	Manager	Job title
0.63	3.18	227	Teacher	
0.47	3.15	115	less than ten years	Experience
0.67	3.18	170	10 years and more	

It is clear from Table No. (9) that there are apparent differences between the arithmetic means of the scores of the sample of The Role of Secondary School Principals in Activating the Use of Educational Technology Tools. To identify the significance of these differences, a three-way ANOVA was applied to the degree. college, and Table (10) shows the results.

Table (10) Three-way ANOVA The Role of Secondary School Principals in Activating the Use of Educational Technology Tools **as a whole due to the variables (gender, job title, and years of experience)**

statistical significance	F	Mean Square	DF	Sum Squares	variable
0.000*	21.811	7.191	1	7.191	Gender
0.398	0.716	0.236	1	0.236	Job titel
0.516	0.424	0.140	1	0.140	Experience
		0.330	281	92.643	Errors
			285	2955.595	total

*Statistically significant at the level of significance (α=0.05)

It is clear from Table (10) that: 1. There are statistically significant differences at the significance level (α = 0.05) between the averages of the study individuals' responses about The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools due to the variable (sex), where the value of (F) was (21.811), which is the value of Statistically significant, and when reviewing the arithmetic means shown in the previous table, it is clear that the differences are in favor of females with an arithmetic mean of (3.29), while the arithmetic mean for males was (2.97). 2. There are no statistically

significant differences at the significance level ($\alpha = 0.05$) between the averages of the study individuals' responses about The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools due to the two variables (job title and years of experience), where the values of (F) (0.716, 0.424), respectively, which are non-statistically significant values. Arithmetic means and standard deviations of the scores of the sample were also calculated on the sub-domains of the axis of The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools in the light of personal variables. Table (11) illustrates this.

Table (11) The arithmetic means and standard deviations of the scores of the respondents on the sub-domains of the axis The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools in the light of personal variables

Knowledge of Educational Technology Tools	Knowledge of information and data of Educational Technology	Create Educational Technology content	Educational Technology tools problem solving		Level	variable
2.87	3.03	2.92	3.05		Mean	male
0.38	0.39	0.40	0.35	standard deviation		
3.17	3.34	3.24	3.41		Mean	Female
0.77	0.77	0.76	0.73	standard deviation		gender
2.99	3.18	3.08	3.23		Mean	Manager
0.44	0.51	0.45	0.54	standard deviation		
3.07	3.23	3.13	3.28		Mean	Teacher
0.71	0.70	0.71	0.65	standard deviation		Job title
3.08	3.19	3.14	3.20		Mean	less than ten years
0.57	0.52	0.52	0.51	standard deviation		
3.04	3.24	3.10	3.32		Mean	10 years and more
0.72	0.75	0.74	0.70	standard deviation		Experience

Table (11) shows that there are obvious differences between the arithmetic mean scores of the sample members on the sub-domains of the axis of The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools in the light of personal variables, and correlation coefficients have been calculated using the Pearson method to determine which statistical tests should be used.

Table (12) Correlation coefficients using the Pearson method between the sub-domains of the axis of The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools

Knowledge of Educational Technology Tools

Knowledge of information and data of Educational Technology

Create Educational Technology content

Educational Technology tools problem solving

Availability of Educational Technology Tools skills as a whole

Knowledge of Educational Technology Tools	Knowledge of information and data of Educational Technology	Create Educational Technology content	Educational Technology tools problem solving	
			1	**Knowledge of Educational Technology Tools**
		1	0.782**	**Knowledge of information and data of Educational Technology**
	1	0.812**	0.725**	**Create Educational Technology content**
1	0.745**	0.841**	0.66**	**Educational Technology tools problem solving**

**Statistically significant at the level of significance ($\alpha \leq 0.01$)

Table No. (12) shows that there are statistically significant correlation coefficients between the scores of the study sample on the sub-domains of the axis of the Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools, according to personal variables, which justifies the application of the three-way MANOVA. Table No. (13) shows the results.

Table (13) The results of the multiple triple variance analysis of the scores of the sample members on the sub-domains of the axis of the role of secondary school principals in the upper galilee region in activating the use of educational technology tools, according to personal variables

statistical significance	Error DF	F	Multiple test value	The multiple test	effect
0.000	278	6.385	0.092	**Hotelling's Trace**	gender
0.859	278	0.328	0.005	**Hotelling's Trace**	Job title
0.021	278	2.926	0.042	**Hotelling's Trace**	Experience

It is clear from Table (13) that there is a statistically significant effect at the level of significance (α≤0.05) in the sub-domains of the dimention of the Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools, according to the variables (gender, years of experience), while there was no significant effect Statistical significance attributed to the job title variable, and to verify this result, a 3 way MANOVA analysis was applied to the sample members' scores on the sub-domains of the axis of the Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools, according to personal variables, and the table No. (14) explains that.

Table No. (14) The application of the three-way MANOVA analysis on the scores of the sample members on the sub-domains of the axis of the Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools **according to personal variables.**

statistical significance	F	Mean Square	DF	Sum Squares		variable
0.000	24.938*	9.117	1	9.117	Knowledge of Educational Technology Tools	
0.000	16.659*	6.958	1	6.958	Knowledge of information and data of Educational Technology	gender
0.000	15.912*	6.695	1	6.695	Create Educational Technology content	
0.000	14.641*	6.159	1	6.159	Educational Technology tools problem solving	
0.358	0.847	0.310	1	0.310	Knowledge of Educational Technology Tools	
0.569	0.324	0.135	1	0.135	Knowledge of information and data of Educational Technology	
0.453	0.565	0.238	1	0.238	Create Educational Technology content	Job title
0.414	0.669	0.282	1	0.282	Educational Technology tools problem solving	

statistical significance	F	Mean Square	DF	Sum Squares		variable
0.049	3.904*	1.427	1	1.427	Knowledge of Educational Technology Tools	
0.874	0.025	0.010	1	0.010	Knowledge of information and data of Educational Technology	Experience
0.407	0.689	0.290	1	0.290	Create Educational Technology content	
0.835	0.044	0.018	1	0.018	Educational Technology tools problem solving	
		0.366	281	102.731	Knowledge of Educational Technology Tools	Error
		0.418	281	117.361	Knowledge of information and data of Educational Technology	
		0.421	281	118.225	Create Educational Technology content	
		0.421	281	118.206	Educational Technology tools problem solving	
			285	3157.639	Knowledge of Educational Technology Tools	Total
			285	2894.417	Knowledge of information and data of Educational Technology	
			285	3082.167	Create Educational Technology content	
			285	2783.528	Educational Technology tools problem solving	

**Statistically significant at the level of significance ($\alpha \leq 0.01$)

Table (14) shows that:

1. There are statistically significant differences due to the variable (sex), where the values of (F) were statistically significant, between the averages of the study participants' responses on the sub-domains of the measure ofthe role of secondary school principals in the upper galilee region in activating the use of educational technology tools. And it turns out that the differences are in favor of men when looking at the arithmetic averages that were previously displayed.

2. Due to the variable (job title), where the values of (F) are not statistically significant, there are no statistically significant differences between the averages of the study participants' responses about the sub-domains of the scale of the degree of the role of secondary school principals in the upper galilee region in activating the use of educational technology tools.

3. The variable (years of experience), where the value of (F) was (3.904), which is a statistically significant value, and when reviewing the arithmetic averages, resulted in statistically significant differences between the averages of the study participants' responses about the field of Knowledge of Educational Technology Tools. The arithmetic mean for the experience period (less than ten years) was found to be (3.20), whereas the differences were in favor of the experience period (ten years or more), with an arithmetic mean (3.32), and there were no statistically significant differences at the significance level (a = 0.05) between the averages of the study participants' responses about Knowledge of information and data of Educational Technology, Create Educational Technology content and Educational Technology tools problem solving due to the variable (years of experience).

Discuss the results and recommendations:

Discuss the results of the first question, which states: " From the perspective of principals and teachers, are secondary school principals in the upper Galilee region Activating the use of educational technology tools?"

According to principals' and teachers' opinions, secondary school principals in the upper Galilee region are somewhat likely to have access to digital capabilities, according to the responses to this question. "Knowledge of Educational Technology Tools" ranked top, followed by "Knowledge of Information and Data of Educational Technology" in second place, "Create Educational Technology Content" in third place, and "Educational Technology Tools Problem Solving" in fourth place.

Even though this result is just acceptable, the researchers believe it has to be improved. This can be explained by the fact that every secondary school principal in the upper Galilee region holds an internationally recognised credential for digital literacy and information and communication technology, known as the International Computer Driving Licence (ICDL). The principals were able to acquire the required abilities by possessing this certification. Topics addressed include the basics of information and communication technology, file organisation and administration, web navigation and search engine use, online safety, understanding printing and copyright issues, data protection issues, and the ability to solve some basic digital difficulties. However, the substance and level of these courses do not reach higher levels.

This result can also be explained by school administrators realising how important it is to have digital skills and how eager they are to acquire them in order to stay up to date with the rapidly advancing digital technological landscape, succeed in their line of work, successfully complete functional work and tasks, elevate the administrative position, and attempt to create an educational environment that is dependent on digital management. Occasionally, they encounter barriers that keep them from progressing professionally in the digital industry; as a result, the results were inadequate and disappointed.

This result is consistent with research by Al-Shadaifat (2020) showing a medium level of technical administrative competency among government school principals and Al-Enezi (2018) showing a medium level of technological competency among principals of schools in the Al-Kharj Governorate. That was in contrast to studies conducted on Al-Hur (2022), Al-Khatib (2021), and Karakoz and Polat (2020), which all demonstrated strong scores on the tool as a whole.

The field of information and data comprehension ranked highest with a modest degree and the highest arithmetic average (3.27). The school principal, who, according to paragraph six, "has the requisite skills to cope with cloud computing services," received the lowest average (3.42), while (3.05). This can be explained by the fact that one of the essential talents that have become ingrained in the digital cultures of principals and other people is the knowledge of digital information and data. However, operating digital devices, managing data, storing it, and recovering deleted data are just a few of the many skills that are almost always and repeatedly used on these devices—which are mainly used at work and in daily life in general. A channel for the rising technological development that managers must keep up with in order to be aware of everything new in the communications and technical worlds and who demand a fresh availability of skills in informatics and digital knowledge.

It came in second in the field of Knowledge of information and data of Educational Technology with a field-wide arithmetic average of (3.22). My formula (3.41) The director's work involves a lot of incoming and outgoing contact with higher administrative levels, current communication tools, and the distribution of official books created by the Ministry and the Directorates of Education. This is why the researcher attributes this to the nature of the director's work. According to Paragraph No. 6, where I finished last with a 3.13 average, the school administrator has experience managing work teams using digital technologies. The researcher explains that the reason this paragraph is at the bottom of the list is because employees are not excited about using tools for educational technology, the amount of administrative work that is increasing, the change in work methodology that is causing anxiety, and the difficulty of adjusting to the shift towards digital management.

"Create Educational Technology content" was the third-ranked category, with an arithmetic average of (3.12). The average grade for each paragraph in this area was average, with paragraph No. 1 (which entered with an average of 3.36) saying: "The school principal has expertise utilising the office group." The principal of the school "has the skill of building different software to create digital material," according to the third paragraph, which is the last one. This result makes sense given the speed at which software and apps are developed, the need for continual training, and the requirement that principals acquire cutting-edge digital skills.

The problem-solving aspect of educational technology tools came in last and was given a medium degree, as did each of its paragraphs. With an arithmetic mean ranging from (3.22-2.88), paragraph No. 4 ("The school principal is keen to find opportunities for self-development

and keep pace with development") received the highest score. This can be explained by the fact that, despite their commitment to personal development, school administrators are sidetracked by the demands of their educational establishments. As a result, they are unable to accomplish their goals and acquire increasingly complex digital skills, especially those pertaining to problem-solving. the ability to troubleshoot technical problems using digital devices. The researcher believes that this outcome can be explained by the fact that this skill is one of the most sophisticated ones in the digital sphere. In addition to the expensive expense of enrolling in such programmes, it necessitates training sessions with technicians and subject-matter experts, or through specialised professional academies. The results of this investigation concurred with those of Al-Khatib (2021), Al-Shadaifat (2021), and Karakoz and Polat (2021).

Discussing the findings of the second question: "Are there any statistically significant differences at the significance level (= 0.05) between the averages of the study's participants' responses about the degree of availability of the role of secondary school principals in the upper Galilee region in activating the use of educational technology tools due to the variables (sex, job title, and years of experience)?

The study's findings demonstrated that gender disparities were statistically significant in all domains (α= 0.05), favouring men. This outcome can be explained by the positive impulses and desires that male Principals have acquired to attain balance in order to avoid multitasking and failing to complete their responsibilities. They usually want to develop professionally, advance in their careers, and evolve by gaining as many skills as they can, especially those related to technology, in order to satisfy the demands of using educational technology tools.

The way that people view leadership roles is influenced by societal conventions and expectations about the roles that men and women should play. The opportunities that are accessible may be impacted by ingrained notions that associate males with technology expertise or favour men in leadership positions. Differences in educational background and availability to training programs could contribute to variances in preparation for leadership responsibilities, especially in areas related to educational technology. Men may be seen as more qualified for these professions if they have had greater opportunities to receive suitable education and training. Unconscious prejudices in the recruiting process could benefit men over women.

The selection process for leadership roles may be impacted by preconceived notions or stereotypes held by decision-makers regarding gender and technological proficiency. Opportunities for mentorship and networking can be extremely important for job growth. Men may have an advantage in obtaining leadership positions if they have greater access to powerful networks and mentors in the technology and education sectors. It's possible that the organisational culture in schools is discriminatory towards women or that it unintentionally supports it.

The observed differences may be attributed to a lack of awareness or implementation of efforts to address gender bias. Women may experience difficulties juggling job and family obligations, especially in specific cultural circumstances. These issues could influence professional choices and availability for leadership roles. Perceptions of a person's appropriateness for a post may be impacted by stereotypes regarding leadership styles. Whether or if men are viewed as more forceful or tech-savvy may influence the selection of people for leadership positions. It's possible that educational institutions' current rules and practises unintentionally support men or impede women's advancement into leadership positions. One possible reason for discrepancies could be a lack of gender-sensitive policy.

Additionally, the data demonstrated that, for all domains, there were no statistically significant changes in job titles (α = 0.05). Because of the managers' degree of activation of the usage of instructional technology tools, the outcomes matched the managers' assessments of themselves.

Except for the area of information and data understanding, the results indicated that there were no statistically significant changes (0.05) owing to the effect of years of experience. At least ten years separated them in favour. The expansion of knowledge serves as an illustration. The findings of the Shadifat study (2020), which discovered no statistically significant gender-based disparities, and the Kosal study (2011), which discovered gender-based disparities that were biassed in favour of women, were in contradiction to the findings of this study.

Recommendations

Based on the research conducted on "The Role of Secondary School Principals in the Upper Galilee Region in Activating the Use of Educational Technology Tools," several key recommendations emerge to enhance the integration of educational technology in secondary schools.

Professional Development for Principals: As key players in advancing technology in their schools, principals are in charge of these developments. It is suggested that the Upper Galilee Region undertake comprehensive programmes for principals' professional development. Increasing their knowledge of cutting-edge educational technology, comprehending how they could affect learning outcomes, and creating plans for skillfully incorporating these resources into the curriculum should be the main goals of these programmes.

Allocating Resources and Improving the Infrastructure: For implementation to be successful, there must be enough resources and a strong technology infrastructure. It is advised that school administrators set aside enough money for the upkeep and updating of technology. Furthermore, it is imperative to focus on enhancing the schools' entire technology infrastructure in order to guarantee smooth integration and accessibility for teachers and students alike.

Collaborative Learning Communities: Encourage principals to actively engage in the exchange of best practices and experiences pertaining to the integration of educational technology in their communities. Creating forums or workshops that encourage collaboration across schools can help foster a culture of continuous improvement by fostering a shared awareness of effective tactics and obstacles.

Advocacy and Policy Development: Principals must to take a proactive role in creating explicit and encouraging policies pertaining to the use of instructional technology in classrooms. This entails tackling matters like privacy apprehensions, moral applications of technology, and formulating standards for the assessment and choice of suitable teaching instruments. To obtain more funding and support, principals can also speak out on behalf of the value of educational technology at the local, state, and federal levels.

Monitoring and Evaluation methods: To gauge the success of integrating educational technology, put in place systematic monitoring and evaluation methods. Together with educators, principals should set clear performance goals, monitor how technology is affecting student learning outcomes, and make data-driven decisions to enhance implementation tactics.

Parent and Community Involvement: When using instructional technology, principals ought to engage the local community and parents in a proactive manner. Organising workshops, informational sessions, or other events can foster a greater awareness of and support for the use of technology in education. It is important to have open lines of communication with parents so they are aware of the advantages and difficulties of using educational technology.

Through the implementation of these guidelines, administrators of secondary schools in the Upper Galilee Region can effectively stimulate the use of educational technology tools, creating a dynamic and technologically advanced learning environment that benefits both teachers and students.

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