The role of information technology in developing the efficiency of the administrative performance of school leaders

Dr. Mohamad Ahmad Saleem Khasawneh,

Assistant Professor, Special Education Department, King Khalid University, Saudi Arabia, mkhasawneh@kku.edu.sa. https://orcid.org/0000-0002-1390-3765

Received 23-5-2024

Accepted 20-6-2024

publish 20-8-2024

Abstract

The primary aim of this study was to examine the impact of information technology on enhancing the administrative effectiveness of Abha school administrators. Moreover, its objective is to assess the statistical significance of discrepancies in proficiency based on differences in experience and level of qualification. In order to accomplish the objectives of the investigation, the researcher employed a descriptive research design and quantitative technique, using a questionnaire as the primary tool for gathering data. The poll included the participation of 290 male educators in primary schools across the Abha Governorate. The teachers strongly advocated for the use of information technology to enhance the administrative efficiency of Abha school administrators. The findings revealed that demographic characteristics, such as experience and degree of qualification, did not show any link with the conditions for the impact of information technology on enhancing the administrative efficiency of Abha school leaders.

Keyword: information technology, administrative performance, school leaders

Introduction

Currently, humanity is experiencing significant advancements in technology, particularly in the field of information technology. This technology is a crucial catalyst for societal development, both at the individual and collective levels. Information technology plays a vital role in the progress of societies by enhancing knowledge, fostering skill development, and enhancing the effectiveness of individuals and institutions across various domains (Apsorn et al., 2019). Information and communications technology (ICT) has evolved from being solely entertainment tools to becoming essential means of communication. It is no longer limited to a specific field or exclusive to a social elite (Sun & Gao, 2019). In today's global economy, which emphasizes knowledge-based industries and utilizes modern technologies to enhance social well-being, ICT has become a vital tool for survival and progress. It is an indispensable resource in an interconnected world that values competitiveness as a key factor for advancement and prosperity (Bal-Taştan et al., 2018). The significant advancements in information technology and communication have resulted in a swift evolution of the management process across all levels. In the contemporary period, the management process has shifted towards reliance on information systems rather than people judgments or viewpoints (Connolly et al., 2019).

Efficient management is a crucial instrument for constructing civilizations due to its direct impact on transformation and progress. The success and excellence of management depend on its ability to effectively utilize financial, material, human, and information resources. In effective management, a competent leader strategically utilizes information technology to optimize

performance and achieve goals efficiently (Christensen et al., 2018). Information technology's extensive reach across sectors and its advanced facilities and services make it a valuable asset for the administrative sector. Here, the leader strives to fulfill ambitions in order to enhance performance, optimize system efficiency, maximize effectiveness, and cultivate a corporate culture that emphasizes the significance and efficacy of performance (Thannimalai& Raman, 2018). Technology is a contemporary and practical means of efficiently managing resources, including both physical assets and software. The technology has potent components that can enforce a shift in work and management practices within government agencies, enhancing performance effectiveness and reducing resource consumption of time, money, and effort. The current technological advancement also enables direct communication and assistance in the process of making decisions (Karakose et al., 2021).

Nevertheless, the practicality of school administration reveals the presence of technical obstacles that impede the school leader's ability to carry out daily tasks, potentially hindering the attainment of educational objectives. One of the main technological challenges that school leaders face in general education stages is the lack of training courses and inadequate technical qualifications, as well as insufficient infrastructure. The current state of the infrastructure is inadequate for the utilization of information technology (De Nobile, 2018). There is an urgent need for further development and upgrading of computer applications to meet the current requirements of school administration. This is due to deficiencies and shortcomings in the existing applications, as well as a lack of continuous promotion and updating with the latest advancements in the field of school administration (Szymkowiak et al., 2021). The government of the Kingdom of Saudi Arabia has prioritized enhancing the administrative efficiency of its educational institutions. The Ministry of Education has launched a significant technological transformation program to enhance efficiency and effectiveness, while also ensuring that leaders at all educational levels have easy and accessible services (Sharaf & Al-Furaihi, 2019). According to the Saudi Digital Library (2015), the Saudi experience is characterized by a multitude of projects. The Injaz project, the networking project, and the educational map all contribute to the worldwide movement of digital empowerment in education. The Injaz project focuses on distant digital communication and is now in its initial stages. The networking project intends to establish connections between different educational institutions. Lastly, the educational map seeks to identify schools and create a database of their geographical coordinates. The objective is to establish a database for each school and integrate it with the Noor Educational Management System, so enabling technology to serve as a supportive tool in educational and pedagogical endeavors (Sharaf & Al-Furaihi, 2019).

The technological progress that we are experiencing at the present time, and the spread of information and the speed of obtaining it, has necessitated the successful administration to constantly provide distinguished performance, and since the educational system in Saudi Arabia is in a state of continuous renewal and modernization, and this depends on intellectual development and renewed scientific and educational concepts, and this in turn It leads to the introduction of new educational technologies and media, so the Saudi Ministry of Education was interested in employing modern technologies and information and communications technology in all schools in the Kingdom, because information technology is multiple forms of information in its digital form represented by; With images, texts, sounds, and movements, they can be stored, retrieved, and used at the appropriate time, using devices, equipment, and tools designed for that, to provide better performance for competition, excellence, and leadership. Hence, its significance resides in the rapidity of digital computation and result retrieval, facilitating cost-effective communication and connectivity among institutions, enabling convenient storage of vast quantities of data and information in compact storage locations that can be accessed effortlessly

and at any given moment, and enhancing the efficiency and efficacy of individuals' performance in their respective workplaces. Presenting and acquiring information in a comprehensible manner, as well as automating formerly manual procedures and tasks to minimize labor, time, and expenses. Nevertheless, the influence of information technology on enhancing performance is occasionally marked by ambiguity. Research has also indicated that the potential of information technology in enhancing administrative effectiveness is not being fully utilized (Ugur & Koç, 2019). Therefore, this study aims to uncover the impact of information technology on enhancing the administrative efficacy of school administrators in Abha Governorate.

Research Questions

The aim of this study is to examine the questions that were raised in the previous discussion, as outlined below:

- 1. What is the role of information technology in developing the efficiency of the administrative performance of Abha school leaders?
- 2. To what degree do experience, and level of qualification affect the perspective of the study participants on the role of information technology in developing the efficiency of the administrative performance of Abha school leaders?

Literature Review

The school administration plays a crucial role in distributing technology throughout the school, and the progress of education relies on the administration's capacity to stay up with technology and incorporate it into both education and administration. The integration of technology into school administration represents a significant revolution in administrative practices, as it brings about a total transformation in the approach and efficiency of administrative tasks. The current circumstances need to minimize our efforts to accomplish tasks within the shortest timeframe and reach our desired goals (A'mar&Eleyan, 2022)Hence, the school is regarded as a paramount social institution that primarily aids in the holistic development of students' personality, encompassing physical, psychological, mental, spiritual, and social dimensions, while aligning with their individual abilities, aptitudes, inclinations, and tendencies. To fully accomplish its genuine objective, the school must offer both material resources and human expertise. Additionally, there is an administrative body responsible for executing a series of tasks and initiatives aimed at attaining the school's objectives, enhancing educational outcomes, improving the school's productivity, and ensuring the instructors' efficiency and effectiveness (Sterrett & Richardson, 2020).

In order to access global expertise and facilitate instant communication with staff, educational institutions, including those in the field of education, have found it imperative to strive for technological leadership. Technological leadership distinguishes itself from traditional leadership by lacking initial face-to-face engagement. Technological leaders can facilitate remote communication without the necessity of a face-to-face encounter (Dexter & Richardson, 2020). The introduction of technological leadership has brought about significant changes in the way goals are achieved and employees are directed. One of the primary reasons for adopting technological leadership in school administration is to improve performance and streamline processes, thereby reducing time and effort. This is particularly important in situations where time is limited or during crises. Additionally, technological leadership facilitates the collection of valuable feedback and enhances motivation levels (Parveen et al., 2022).

The introduction of technological leadership has brought about significant changes in the way goals are achieved and employees are directed. One of the primary reasons for adopting technological leadership in school administration is to improve performance and streamline processes, thereby reducing time and effort. This is particularly important in situations where time is limited or during crises (Ellis et al., 2021). Additionally, technological leadership

facilitates the collection of valuable feedback and enhances motivation levels. The utilization of contemporary technology, encompassing its various instruments and applications in administrative tasks, has assumed significant importance and accountability for school principals. To efficiently and precisely accomplish administrative tasks (Esplin et al., 2018). Various services facilitate the optimization of technology for the principal's advantage, such as: educating about the significance of contemporary technologies in school administration, enhancing the utilization of modern technologies and tools in school administrative tasks, and integrating computers comprehensively across all aspects of school administration (Durak &Özudogru, 2023). Ensuring the provision of suitable devices, materials, and programs for administrative tasks, training technical staff to proficiently carry out administrative work, closely monitoring all computer-related administrative tasks and ensuring their execution as per the predetermined plan, motivating and incentivizing employees to utilize modern technologies in their school work, and evaluating all performance programs associated with these tools contemporary technology and its practitioners (Richardson & Sterrett, 2018).

The school principal and administrative body must have a strong understanding of digital learning in order to actively engage in technological administrative tasks. Digital culture encompasses a range of essential skills that individuals must not only possess, but also master (Zhang &Koshmanova, 2021). These skills include proficiency in utilizing email to exchange messages, documents, and information using available technological tools. Additionally, individuals must be adept at using chat programs on the Internet to communicate with others at any time and from any location. Proficiency in navigating social networking sites is also crucial, as is the ability to transfer and exchange electronic files. Lastly, individuals must possess the skill to effectively utilize technological tools and applications to efficiently and accurately complete tasks. Therefore, it is imperative for educational leaders to utilize modern technology to ensure the smooth progression of the educational process (Phuc et al., 2021). This approach offers numerous benefits in enhancing the educational process and facilitates the efficient execution of administrative tasks by leaders in schools. The availability of modern technological tools has resulted in increased flexibility and ease of use, enabling leaders to adapt to various circumstances. The technology offers a wide range of applications that cater to various educational needs. It excels in facilitating wireless communication and connectivity. Additionally, it can simulate educational settings and effectively support data processing, storage, and application integration across different devices and specifications (Borel et al., 2019).

Leadership is a crucial element in school activities. As schools grow and their capacity increases, there is a pressing need for leadership to bring about necessary changes that ensure its distinctiveness. This can only be accomplished through competent administrative leadership, which requires a range of diverse skills that should be reflected positively in the approach to administrative work (Crompton et al., 2021). According to ALharahsheh and Al-Dhiabat (2019), leadership is characterized by a distinct set of behaviors or activities exhibited by an individual, with the purpose of fostering employee cooperation towards the attainment of work-related objectives. The significance of leadership lies in guaranteeing the cultivation of camaraderie among employees, through the practice of consulting and involving them. When making decisions, it is important to be unbiased and objective when evaluating the circumstances involving employees. Additionally, it is crucial to support and encourage employees to collaborate and find solutions to issues. Educational leadership plays a crucial and central function in educational institutions, aiming to enhance the quality of work and its progress (Al-Nuaimi &Hatamleh, 2023). Simultaneously, it serves as a reliable measure for determining the performance of these institutions. The purpose of its duty is to establish a conducive environment

where harmonious relationships thrive. Furthermore, it mandates that every member inside the firm must comply with educational regulations and principles. Consequently, this significantly enhances employee morale and boosts their willingness to expend greater effort in order to achieve productive outcomes (Sharaf & Al-Furaihi, 2019).

Embracing technology leadership as a new and effective management strategy is a necessary prerequisite to enhance the level of administration. Therefore, the higher the level of positive in this interaction involving several variables, the more it presents a difficulty for the school principal. The successful completion of this challenge requires the principal to demonstrate their readiness to embrace change and depart from traditional leadership methods, while also keeping themselves informed about the current developments in the field of school administration (Al-Qawabaa, 2022). Engaging proactively has a positive impact on both the educational process and the teaching personnel. The importance of technological leadership lies in its ability to effectively and quickly use current technological resources to carry out school transactions and promptly store them, with the capability to retrieve them at any time, while protecting them from potential attacks or natural disasters (Al-Nawaji, 2020). This is accomplished by creating a database or backup copy that is stored in remote locations. By harnessing the computer's ability to process large amounts of data, implementing digital systems can enhance administrative and educational processes, improve their quality, and streamline paper transactions. This, in turn, reduces the challenges and difficulties faced by employees, saves time and effort in decisionmaking, and empowers school principals to have confidence in their teachers' abilities and creativity, ultimately elevating the school to new levels (Al-Shorman &Kattab, 2018).

The requirements for technology leadership have been categorized into:

- Administrative requirements: These tasks involve formulating plans and strategies to address technological leadership and the necessary tools and techniques within the school's capabilities and environment (Saadeh, 2022). This includes establishing a conducive work environment, providing data and information about the school and its staff, adapting to and facilitating the transition from traditional to technological leadership, fostering a technological culture, and developing legislation, principles, and laws that align with the new technological landscape(Apsorn et al., 2019).
- Material and technical requirements: These services encompass financial assistance for procuring the requisite equipment and tools for creating school-related websites, developing and implementing programs that streamline administrative and teaching tasks, ensuring a high-speed internet network for efficient and prompt task completion, and safeguarding data against potential breaches or theft(Sun & Gao, 2019).

Technological leadership seeks to deliver cohesive and structured efforts to get superior administrative services, while also maximizing the utilization of the organization's resources. Bal-Taştan et al. (2018-) outlined several objectives, such as overseeing and monitoring the organization's several divisions as a cohesive entity, consolidating data from its primary sources into a unified format, and minimizing impediments. The benefits of decision making include the provision and integration of data, cost reduction in monitoring multiple management processes, immediate provision of data and information to beneficiaries, ongoing learning and knowledge development, and enhanced connectivity between employees and senior management.

Leaders of educational institutions must possess leadership proficiency in educational technologies to adequately develop skilled teachers, considering the anticipation of continual technological advancements. Consequently, school leaders, also known as principals, must possess the skills and knowledge to effectively lead in an educational setting that incorporates technology, just as they are required to do in a setting that does not rely on technology(Connolly

et al., 2019). The rapid advancements in our modern era, driven by the Internet and communication technology, have resulted in the daily emergence of numerous websites and networks. These platforms experience constant growth, innovation, and widespread usage by individuals and institutions due to the benefits and services they offer. The educational process has greatly benefited from advanced technological features in the current era. These features have provided users with numerous educational technological applications and programs that utilize multimedia to stimulate and encourage the exchange of information and experiences. This is achieved through the presentation of various technological techniques and tools (Christensen et al., 2018).

The global educational and administrative process is currently undergoing an unprecedented period of change as it moves towards a society that relies on the rapid flow of information with minimal effort. The magnitude, compactness, and impact of worldwide networks compel numerous nations to reassess schooling and its interplay with other facets, prompting the need to establish a novel milieu and frameworks. It enhances the learning experience for individuals and prepares them to become future leaders(Thannimalai& Raman, 2018). Hence, the abrupt and swift adoption of technological methods and implementation of distance education by school administrators and staff has resulted in a state of perplexity within the educational systems, as they were inadequately equipped to establish the required infrastructure and deliver computerized curricula in a manner that facilitates students' engagement in the educational process. Consequently, they are encountering numerous challenges in utilizing technology for learning purposes(Karakose et al., 2021).

Previous Studies

The study conducted by Al-Sharman and Khattab (2018) aimed to determine the extent to which secondary school principals engage in technical leadership and its correlation with the level of change leadership in their schools, as perceived by teachers in the capital city of Amman. The study employed a descriptive and correlational methodology, with a sample size of 370 teachers comprising both males and females. The participants were chosen using a stratified sampling technique, which involved selecting individuals from both public and private secondary schools in the capital city of Amman. The findings revealed that secondary school principals demonstrated a modest level of technology leadership in their schools, although their level of change leadership was high. The findings also demonstrated the presence of a correlational association. The level of technical leadership practiced by secondary school principals is directly correlated with the level of change leadership.

Sharaf and Al-Furaihy (2019) examined the impact of information technology on the administrative performance of middle school leaders in the Al-Qassim Region. They considered variables such as years of experience, academic qualification, and training courses, and assessed how information technology contributes to enhancing administrative efficiency. In addition to identifying barriers that hinder their contribution to the enhancement of effective administrative performance. In order to accomplish the study's goals, the sample for the study was selected using a basic random sampling method. The study sample comprised 183 female school leaders from the Qassim region. The researcher employed a questionnaire as the data gathering instrument. The study yielded multiple findings, with the most significant being that information technology enhances the efficacy of administrative performance. However, there are various hindrances that impede its effectiveness, primarily financial barriers, followed by technical constraints, and lastly personal impediments. The study provided multiple recommendations at various levels regarding the prerequisites for assuming the position of information technology. Keywords: IT, efficacy, administrative effectiveness, educational administrators.

In a study conducted by Al-Nawaji (2020), the objective was to assess the extent to which public school principals in the Ain Al-Basha District in Jordan engage in technology leadership and its correlation with the quality of administrative communication as seen by teachers. The study employed a descriptive, correlational methodology, utilizing a questionnaire as the primary instrument for data collection. The sample comprised 300 teachers. I am a teacher employed by the government schools associated with the Ain Al-Basha District. The findings indicated that public school administrators in the Ain Al-Basha District demonstrated a moderate level of technological leadership as perceived by the teachers. Additionally, the level of administrative communication was also found to be moderate. The findings indicated that there were no statistically significant disparities in the estimates of the individuals within the sample based on the variables. Factors influencing an individual's characteristics include gender, level of experience, and educational qualifications.

Al-Harahsheh and Al-Diabat (2021) examined the impact of information technology on enhancing the administrative effectiveness of school principals in the schools of the Ramtha District Education Directorate. They also investigated how variables such as gender, educational qualification, educational stage, and administrative experience influence this effect. The sample comprised 70 headmasters and headmistresses. In order to accomplish the study's goals, a tool was created to assess the study's factors. The text comprised 53 paragraphs, which were categorized into four sections: the instructor, the student, the school environment, and the local community. The descriptive methodology was also employed. The study's findings indicated a significant impact of information technology on enhancing the administrative performance of school administrators in the schools of Ramtha District. The fields were ranked in descending order as follows: student, teacher, community, and school environment. The community exhibits exceptional academic performance, whereas the educational environment demonstrates a moderate level of academic achievement. The findings indicated that there were no statistically significant disparities attributed to gender, scientific expertise, educational level, and managerial background across all domains.

Sa'adeh (2021) investigated the extent to which primary school principals in the Amman governorate have implemented technology leadership (TL) during the Corona pandemic, as seen by teachers. In order to achieve the objectives of the study, the researcher employed a descriptive survey methodology. The sample comprises 406 teachers, both female and male, who were selected using a random process. A survey consisting of 40 questions was created to gather data. The subject matter is categorized into five distinct domains: leadership and vision, fostering a culture of learning in the digital era, achieving excellence in professional practices, continuous development and improvement, and addressing ethical, legal, and social concerns. The results indicated that primary school principals demonstrated a high level of proficiency in using the target language (TL) across all domains, as well as in the overall average. There are notable disparities in the extent to which TL is practiced based on gender, with females showing a higher inclination. Additionally, individuals with a BA degree exhibit a greater tendency to engage in TL. No substantial disparities were detected as a result of experience. The report suggests providing training to principals on emerging management concepts, such as Transformational Leadership (TL).

Methodology

The current study applied a descriptive research technique and incorporated quantitative methodologies to ensure a full, accurate, and structured portrayal of the characteristics and data related to the population being investigated. Saunders et al. (2016) argue that the main goal of descriptive quantitative research is to clearly define and explain the many characteristics of the subject or scenario being studied. Afterwards, the collected data is analyzed and then presented.

Population and Sample

A research study was conducted during the second semester of the academic year 2023, including a group of 1851 male instructors who were employed in primary schools in the Abha Governorate. Based on the statistical conclusions presented by Krejcie and Morgan (1970), a sample size of 320 is considered sufficient for accurately representing the total population. The primary objective of the study was to carry out an extensive survey of male educators to guarantee that the sample accurately represented the entire community. Furthermore, the main aim of the study was to collect a significant volume of data from the participants, while simultaneously implementing strategies to reduce any potential biases in the results (Blumberg et al., 2014). As a result, a digital distribution system was put in place to make it easier to share the survey with all educators and ensure that everyone could participate. A total of 330 inquiries were identified. As per Hair et al. (2010), 40 surveys from the original sample of 330 were not included in the analysis since they had more than 50% unanswered questions. The investigation yielded 290 questionnaires that demonstrated both reliability and validity.

Research Instrument

To achieve the research objectives, the researcher referred to prior studies conducted by Sharaf and Al-Furaihy (2019) and Al-Harahsheh and Al-Diabat (2021) to guide the development of the questionnaire, which served as the main research instrument. The survey was partitioned into two distinct sections. The initial segment of the survey gathers information about the participants' "years of experience" and "educational level." Section 2 had a series of 15 items specifically designed to assess the impact of information technology on enhancing the administrative efficiency of school administrators.

Instrument Validity

A group of 10 educational administration experts from Saudi universities, who possess specialized expertise in language formulation, scientific accuracy, and clarity, undertook an assessment of the research tool to establish its validity. According to assessments carried out by specialists, it has been concluded that all elements have been considered satisfactory, albeit with minor linguistic adjustments.

Instrument Reliability

One approach used to test the reliability of measurement entails evaluating the consistency of results by using the same samples and instruments while keeping all other variables constant. The evaluation of response consistency was performed using Cronbach's alpha. Based on the research conducted by Saunders et al. (2016), the reliability of a survey can be determined by its level of trustworthiness, which is regarded to be achieved when it meets a threshold of 60% or higher. The given data demonstrate that the measurements made in the study show a substantial level of consistency. Furthermore, the questionnaire yielded a Cronbach's alpha coefficient of 0.817, surpassing the minimum requirement of 0.60, indicating a significant degree of reliability. Consequently, there were no detected inconsistencies across the different elements of the research tool.

Data Analysis

To thoroughly investigate the research questions, statistical analyses were performed using the SPSS software. The methodology utilized in this study involved the application of one-way analysis of variance (ANOVA) and the calculation of means. Cuevas et al. (2004) argue that using the ANOVA One-Way test is more beneficial than the independent sample t-test for comparing means among three or more groups. In the following section, a detailed explanation of the findings is provided, using several approaches to accurately characterize them. The item's quality is deemed substandard as the average score is 2.33 or lower. The item's grade is

categorized as moderate, with the average score ranging from 2.34 to 3.67. The item demonstrates a notable level of quality, as indicated by a mean score that is 3.68 or above.

Findings and Discussion

The researchers employed descriptive analysis to provide a comprehensive depiction of the participants' attributes, with particular emphasis on their years of experience and educational qualifications. Based on the data, 42.8% of the participants were instructors with professional experience of 6 to 10 years. Moreover, a significant percentage of the participants, precisely 27.9%, were educators with professional experience ranging from one to five years. In addition, 19.0% of the participants reported having less than one year of experience, while 10.3% of the respondents indicated that they had more than ten years of teaching experience. According to the data presented in Table 2, it is clear that most of the participants, particularly 57.9%, have a bachelor's degree, while 30.0% have a master's degree. In addition, a specific group of participants, specifically 9.3%, has a higher diploma. The percentage of individuals with a PhD degree was 2.8%.

Table 1: The respondents profile

Variable	Category	N	%
	Less than 1 years	55	19.0
Years of experience	1-5 years	81	27.9
<u>-</u>	6-10 years	124	42.8
	More than 10	30	10.3
Educational qualification	Bachelor's	168	57.9
_	Higher diploma	27	9.3
	Master	87	30.0
	Ph.d	8	2.8

The main study question was investigated by calculating the means and standard deviations for all variables about the impact of information technology on enhancing the administrative performance efficiency of Abha school leaders.

Table 2: Mean scores and standard deviation

N	Item	Mea	St.de	Resul
		n	V	t
1	Using information technology in school administration saves time and effort	3.87	0.68	Н
2	The information technology used contributes to completing most of the school administration work	3.75	0.70	Н
3	Information technology makes it easier for the administrative staff to perform their administrative tasks	4.25	0.60	Н
4	Information technology contributes to raising the level of work efficiency of school leadership	3.95	0.82	Н
5	Information technology provides quick access to administrative data when needed	3.90	0.63	Н
6	Information technology helps to maintain administrative data efficiently	4.00	0.70	Н
7	Information technology provides a comprehensive database that helps school leaders make future plans	3.93	0.73	Н

8	Information technology helps the school leader detect errors quickly	3.78	0.73	Н
9	Information technology enables leaders to make sound business	3.89	0.71	Н
	decisions			
1	Information technology helps facilitate admission and registration	3.83	0.72	H
0	procedures			
1	Information technology contributes to completing administrative work	4.10	0.65	Н
_1	accurately			
1	Information technology reduces routine procedures that hinder the	3.80	0.71	Н
2	completion of administrative work			
1	Information technology contributes to activating the relationship	3.70	0.68	Н
3	between school and society			
1	Information technology helps school leadership achieve its goals	3.81	0.76	Н
4				
1	Information technology strengthens the relationship between the	4.05	0.67	Н
5	elements of the school's administrative system			
	Total	3.91	0.49	Н

The data from Table 2 reveals that the average score for the impact of information technology on enhancing the administrative performance of school leaders, as reported by primary school teachers in the Abha Governorate, is 3.91. This score is accompanied by a standard deviation of 0.49. The educators in the Abha Governorate exemplify the significant impact of information technology on enhancing the efficiency of school leaders' administrative performance. The item with the highest mean value is item 3, which relates to "Information technology makes it easier for the administrative staff to perform their administrative tasks". The specific item received a rating of 4.25. Item 11, which asserts that "Information technology contributes to completing administrative work accurately," stands out with a significantly high mean value of 4.10. The item labeled as Item 15, which asserts that "Information technology strengthens the relationship between the elements of the school's administrative system," achieved an average score of 4.05 among all the items. Furthermore, the data depicted in Table 2 illustrates that item 2, which asserts "The information technology used contributes to completing most of the school administration work," reveals a low average value of 3.75. Item 13, which asserts that "Information technology contributes to activating the relationship between school and society," had the lowest average score (3.70) out of all the items.

This outcome can be attributed to the fact that information technology facilitates efficient connection with society via electronic communication channels. This is due to the fact that technology enables and simplifies self-communication by creating a unified interactive environment and offering direct access through means such as email, the school website, or direct telephone calls to the administrator. Alternatively, communication can occur via text messages or various social media platforms, facilitating the exchange of information between the school and the community. This fosters a stronger relationship between the two entities, and instills confidence in the community regarding the administration's commitment to effective communication. This outcome may also be attributed to the enhancement of performance and acceleration brought about by information technology. This, in turn, aids school leadership in attaining their objectives by establishing a compelling and appealing educational environment that is supported by a comprehensive electronic services system. As per the National Transformation Program document (2030), the state aims to attain the objective of enhancing. The performance of services offered to residents was measured by determining the percentage of

services provided electronically. Additionally, it seeks to enhance the overall functioning of the school system by increasing operational efficiency, minimizing unnecessary expenses, and optimizing the utilization of human capital, resources, and equipment. This is accomplished by implementing contemporary supportive technology within the educational workflow. Furthermore, this outcome can be attributed to the fact that information technology facilitates enhanced communication and collaboration in the workplace, while also minimizing conflicts in work organization. This can minimize the repetition of tasks and boredom, so allowing more time to be allocated to social interactions. Additionally, the educational management system (Nour) enhances comprehension of school responsibilities. By assigning distinct responsibilities to each administrator or official, a congenial work atmosphere is fostered among colleagues. This approach also facilitates effective communication and coordination between different departments, thereby strengthening the interconnections within the school's administrative system. Furthermore, the utilization of technology enables easy access to members of the administrative system at any given time and location. This finding aligns with the research conducted by Al-Sharman and Khattab (2018), Sharaf and Al-Furaihy (2019), Al-Nawaji (2020), Al-Harahsheh and Al-Diabat (2021), and Sa'adeh (2021).

The second research question was investigated using a one-way analysis of variance (ANOVA) to see if there were any statistically significant differences in the effect of information technology on improving the administrative performance efficiency of Abha school leaders. This study investigated the possible consequences of educational attainment and years of professional experience on the variables being analyzed.

Table 3. ANOVA

Variable	Gropus	Sum Squares	of	df	Mean Square	<u>)</u>	F	Sig
Years of experience	Between groups	.600		3	0.200		0.825	0.193
_	Within groups	314.600		286	1.100			
	Total	315.200		289				
Education al	Between groups	.750		3		0.250	0.840	0.190
qualificati on	Within groups	314.750		286	1.101			
	Total	315.200		289				

The data reported in Table 3 shows that there were no observed differences among groups in terms of years of experience and degrees of education. The p-values for years of experience and educational qualification, denoted as (0.193) and (0.190) respectively, suggest that there is no statistically significant relationship between these variables and the impact of information technology on enhancing the administrative performance efficiency of Abha school leaders, as determined by experience and level of qualification.

Conclusion

The main objective of this study was to investigate the influence of information technology on improving the administrative efficiency of Abha school leaders. The study's findings revealed that information technology has a significant impact on improving the administrative performance efficiency of Abha school administrators. According to the research findings, it is a reality that information technology enables efficient communication with society through

electronic channels. The reason for this is because technology facilitates and streamlines self-communication by establishing a cohesive interactive setting and providing direct accessibility through channels like email, the school website, or direct phone calls to the administrator. Alternatively, communication can take place through text messaging or different social media platforms, enabling the transfer of information between the school and the community. This promotes a more robust relationship between the two parties and inspires trust in the community regarding the administration's dedication to efficient communication. This result can also be ascribed to the improvement of performance and speed facilitated by information technology. This facilitates school leadership in achieving their goals by creating a compelling and attractive teaching environment that is backed by a complete electronic services infrastructure.

Acknowledgments

The authors extend their appreciation to the Deanship of Scientific Research at King Khalid University for funding this work through Small Research Groups under grant number (RGP.2 /429 /45).

References

- ALharahsheh, M., & Al-Dhiabat, A. (2019). The role of information technology in improving the administrative performance of the principals of Ramtha Education Directorate. *An-Najah University Journal for Research-B (Humanities)*, 35(4), 509-534.
- Al-Nawaji, L. (2020). The degree to which public school principals in Jordan practice technological leadership and its relationship to the level of administrative communication from the point of view of teachers, (unpublished master's thesis), Amman Arab University, Amman, Jordan.
- Al-Nuaimi, A. A., &Hatamleh, H. (2023). Digital Leadership and its Role in Developing the Performance of Teachers in Bani Ubaid Directorate of Education Schools. *Jordan Journal of Educational Sciences*, 19(1), 165-180.
- Al-Qawabaa, W. (2022). The Degree of Practicing of Public-School Principals to Technological Leadership in Aqaba Governorate in Light of the Corona Pandemic from Teachers' Point of View for the Academic year 2020-2021. *Journal of Educational and Psychological Sciences*, 6(48), 123-139.
- Al-Shorman, A., &Kattab, E. (2018). The degree to which secondary school principals practice technological leadership and its relationship to the degree of change leadership in their schools from the point of view of teachers in the capital, Amman. *Dirasat: Educational Sciences*, 45(4).
- A'mar, F., &Eleyan, D. (2022). Effect of Principal's Technology Leadership on Teacher's Technology Integration. *International Journal of Instruction*, 15(1), 781-798.
- Apsorn, A., Sisan, B., & Tungkunanan, P. (2019). Information and Communication Technology Leadership of School Administrators in Thailand. *International Journal of Instruction*, 12(2), 639-650.
- Bal-Taştan, S., Davoudi, S. M. M., Masalimova, A. R., Bersanov, A. S., Kurbanov, R. A., Boiarchuk, A. V., &Pavlushin, A. A. (2018). The impacts of teacher's efficacy and motivation on student's academic achievement in science education among secondary and high school students. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(6), 2353-2366.

- Borel, D. A., Young, J. K., Martin, G. E., Nicks, R. E., Mason, D. D., & Thibodeaux, T. N. (2019). School Principal Interns' Perceived Level of Preparedness for Technology Leadership. *Education Leadership Review*, 20(1), 101-118.
- Christensen, R., Eichhorn, K., Prestridge, S., Petko, D., Sligte, H., Baker, R., ... & Knezek, G. (2018). Supporting learning leaders for the effective integration of technology into schools. *Technology, Knowledge and Learning*, 23, 457-472.
- Connolly, M., James, C., & Fertig, M. (2019). The difference between educational management and educational leadership and the importance of educational responsibility. *Educational Management Administration & Leadership*, 47(4), 504-519.
- Crompton, H., Burke, D., Jordan, K., & Wilson, S. W. (2021). Learning with technology during emergencies: A systematic review of K-12 education. *British Journal of Educational Technology*, 52(4), 1554-1575.
- De Nobile, J. (2018). Towards a theoretical model of middle leadership in schools. *School Leadership & Management*, 38(4), 395-416.
- Dexter, S., & Richardson, J. W. (2020). What does technology integration research tell us about the leadership of technology? *Journal of Research on Technology in Education*, 52(1), 17-36.
- DURAK, D., & ÖZÜDOĞRU, G. (2023). School Principals' Technological Leadership Self-Efficacies and 21 st Century Teacher Skills. *Ahmet KeleşoğluEğitimFakültesiDergisi*, 5(2), 330-342.
- Ellis, M. L., Lu, Y. H., & Fine-Cole, B. (2021). Digital learning for North Carolina educational leaders. *TechTrends*, 65(5), 696-712.
- Esplin, N. L., Stewart, C., & Thurston, T. N. (2018). Technology leadership perceptions of Utah elementary school principals. *Journal of Research on Technology in Education*, 50(4), 305-317.
- Karakose, T., Polat, H., & Papadakis, S. (2021). Examining teachers' perspectives on school principals' digital leadership roles and technology capabilities during the COVID-19 pandemic. *Sustainability*, 13(23), 13448.
- Parveen, K., Tran, P. Q. B., Alghamdi, A. A., Namaziandost, E., Aslam, S., & Xiaowei, T. (2022). Identifying the Leadership Challenges of K-12 Public Schools During COVID-19 disruption: a systematic literature review. *Frontiers in Psychology*, *13*, 875646.
- Phuc, T. Q. B., Nguyen, L. D., Parveen, K., & Wang, M. (2020). Developing a theoretical model to examine factors affecting school leadership effectiveness. *Journal of Social Sciences Advancement*, 1(1), 16-29.
- Richardson, J. W., & Sterrett, W. L. (2018). District technology leadership then and now: A comparative study of district technology leadership from 2001 to 2014. *Educational Administration Quarterly*, 54(4), 589-616.
- Saadeh, N. (2022). The degree of technological leadership practice among basic school principals in the Amman Kasbah district in light of the Corona pandemic from the teachers' point of view. (unpublished master's thesis), Middle East University, Amman, Jordan.
- Sharaf, A., & Al-Furaihi, S. (2019). The role of information technology in developing the efficiency of administrative performance for middle school leaders in the Qassim region from their point of view. *International Journal of Educational Psychological Studies (EPS)*, 5(3).
- Sterrett, W., & Richardson, J. W. (2020). Supporting professional development through digital principal leadership. *Journal of Organizational & Educational Leadership*, 5(2), 4.

- Sun, Y., & Gao, F. (2019). Exploring the roles of school leaders and teachers in a school-wide adoption of flipped classroom: School dynamics and institutional cultures. *British Journal of Educational Technology*, 50(3), 1241-1259.
- Szymkowiak, A., Melović, B., Dabić, M., Jeganathan, K., & Kundi, G. S. (2021). Information technology and Gen Z: The role of teachers, the internet, and technology in the education of young people. *Technology in Society*, 65, 101565.
- Thannimalai, R., & Raman, A. (2018). The Influence of Principals' Technology Leadership and Professional Development on Teachers' Technology Integration in Secondary Schools. *Malaysian Journal of learning and Instruction*, 15(1), 201-226.
- Ugur, N. G., & Koç, T. (2019). Leading and Teaching with Technology: School Principals' Perspective. *International Journal of Educational Leadership and Management*, 7(1), 42-71.
- Zhang, W., &Koshmanova, T. (2021). Exploring Chinese school principal experiences and leadership practice in building a professional learning community for student achievement. *International Journal of Organizational Leadership*, 10(4), 331-347.