

The Relation of Artificial Intelligence Technology Application with Administrative Performance: A Case Study of Staff in Directorates of Education in the Hebron Governorate in Palestine

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Abstract – The aim of this study is to elucidate the concept of artificial intelligence, identify obstacles to its implementation, and explore the relationship between the application of artificial intelligence technology and the administrative performance of employees in the directorate of education in Hebron, Palestine. Additionally, the study aims to propose effective strategies for overcoming these identified obstacles. The research adopts an explanatory sequential design methodology. To construct the questionnaire questions, unstructured interviews were conducted, while structured interviews were employed to interpret the results. The questionnaire was administered to 120 male and female employees. The study's findings revealed that the application of artificial intelligence technology among employees and the level of administrative performance both fall within the average range. Moreover, a positive correlation was observed between the application of artificial intelligence technology in its various dimensions and administrative performance.

This suggests that increased utilization of artificial intelligence technology correlates with enhanced administrative performance among employees and vice versa. In light of these results, the researchers recommend a focus on enhancing infrastructure efficiency and providing adequate proper resources to facilitate the integration of artificial intelligence technology applications.

Keywords – Artificial intelligence, administrative performance, the directorate of education in Hebron in Palestine.

1. Introduction

In recent years, the world has witnessed an advanced technological revolution, with technology and innovation becoming integral to our daily lives. Artificial intelligence technology, in particular, has assumed a central role, emerging as a critical technological tool that profoundly impacts various facets of our daily existence. The applications of artificial intelligence have permeated numerous administrative and educational domains, involving graphic analyses, intelligent automation, and machine learning. This underscores their significant relevance in the realms of management and leadership. In a world marked by rapid changes and intense competition, comprehending the correlation between artificial intelligence technology and managerial performance is paramount. Leaders and managers in institutions and organizations encounter escalating challenges in resource management and strategic decision-making. Artificial intelligence technology offers tools and solutions that can empower them, enhancing their performance in navigating these challenges.

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1.1. Background and Problem of the Study

A profound transformation has unfolded in human society through the revolution in information and communications technology. Innovative technologies play a pivotal role in enhancing the performance of diverse sectors, with artificial intelligence technology occupying a prominent position among them. The rapid advancements in this field stand out as both significant challenges and opportunities confronting contemporary management.

The COVID-19 pandemic signifies a transformative juncture in the annals of global educational institutions in addressing crises. The pandemic brought to light deficiencies and unpreparedness among numerous countries and organizations tasked with managing such crises. In the aftermath of the lessons gleaned from this pandemic, there exists a prospect to enhance and advance global capabilities in alignment with a comprehensive strategy. This strategy extends beyond the health system, encompassing all facets of life, with a particular emphasis on education, technical applications, and other domains, to effectively navigate and manage similar crises in the future [1].

Furnishing accurate data plays a pivotal role in aiding organizational leadership to make informed and sound decisions. Recognizing that the decision-making process is a cornerstone of successful management, being the focal point of administrative operations, numerous institutions in developed nations prioritize the integration of artificial intelligence into their daily functions. Expert systems within these institutions effectively address challenges, providing problem-solving capabilities and decision-making prowess comparable to, or even exceeding, human experts in certain specializations. Nevertheless, the adoption of these technologies comes with its set of challenges, particularly pertaining to the established procedures for upskilling the workforce to accommodate novel systems [2].

Artificial intelligence stands out as a groundbreaking innovation in the realm of technology, marking one of the most significant inventions of our era. Several studies conducted across various universities in the United States have shed light on the impact of increasing reliance on artificial intelligence and robots within companies and institutions. These studies indicate a potential reduction in employment opportunities for individuals engaged in tasks that adhere to traditional methodologies and do not necessitate ongoing training and development [3]. Conversely, contrasting viewpoints argue that the integration of artificial intelligence may open up new job prospects [4].

Despite artificial intelligence not reaching its full developmental potential, it has made substantial inroads across diverse sectors. This ranges from electronic applications executing tasks automatically and efficiently to artificially intelligent robots, and even computers utilizing the same system for data entry and file management [5].

Undoubtedly, artificial intelligence plays a crucial role in facilitating the exchange of experiences, skills, and data, thereby enhancing the level of competitiveness in the era of globalization. It supports both routine tasks and expedites processes, contributing to the availability of accurate and reliable information. This information can be effectively leveraged in strategic planning, ultimately fostering transparency within institutions. The incorporation of artificial intelligence poses a significant challenge to institutional management systems. It necessitates adaptability to new circumstances and opportunities. This adaptability is a fundamental factor contributing to the success of institutions, ensuring their ability to achieve optimal and effective performance [6].

The Oxford Dictionary defines artificial intelligence as the theory and advancement of computer systems capable of executing tasks that traditionally necessitate human intelligence. These tasks encompass visual perception, speech recognition, decision-making, and language translation [7]. Artificial intelligence can also be defined as a branch of computer science that aims to develop intelligent machines capable of performing tasks that require human intelligence [8]. Artificial Intelligence is also defined as the study of how to make computers perform current tasks better than humans [9]. The procedures of this technology contribute to managing tasks and operations with mechanisms that are more intelligent and advanced than the human who invented it, including knowledge and sensory components, which helps it to learn automatically and self-development [10]. The researchers characterize artificial intelligence as a computer system endowed with the capability to gather and process data, this system utilizes the processed data to provide recommendations, make decisions, and select the optimal course of action to accomplish a specific goal.

Educational institutions aim to realize their objectives by appointing administrative leaders capable of performing tasks with high efficiency. Enhancing administrative performance of these leaders is crucial for the process of administrative improvement. Their success hinges on their ability to instigate organizational changes in structure, policies, and cultures, while also enhancing the performance of both employees and leaders.

Administrative enhancement has garnered the attention of administrators and experts. Traditional administrative management is no longer adept at keeping pace with the continuous innovation characteristic of new scientific progress [12].

Administrative performance is defined as those purposeful efforts by various institutions to plan, organize and direct individual and group performance, and to set clear and acceptable standards and standards as a goal that everyone seeks to reach [13]. Administrative performance is also defined as the manager's ability to carry out job tasks, responsibilities and duties as required, in accordance with specific planning, laws, legislation, regulations and standards [14]. Administrative Performance is organizing and directing the efforts of working teams towards achieving the organization's goals at the lowest cost and with the highest possible efficiency and effectiveness [15]. The researchers define administrative performance as the actions that articulate both the objectives and the means essential for their attainment, along with evaluating the employee's efficiency in reaching the prescribed level and the intended goal.

By extrapolating literature review related to the research topic, including, but not limited to:

- Hassan's Study (2023), [16]: Aimed to identify the importance of the competitiveness of universities, its standards, and the most important approaches to achieving it at the international and local levels, and to identify the role of artificial intelligence applications in raising the competitiveness of universities, as well as the most prominent applications of artificial intelligence used in university education, and the advantages of using artificial intelligence applications at the University of the New Valley. Identifying the difficulties of achieving the competitive ability of New Valley University, and the requirements for achieving the competitive ability of New Valley University using artificial intelligence by activating the mechanisms of entrances to the competitive ability of universities. The researcher also proposed a vision to achieve the requirements of competitive ability of New Valley University using artificial intelligence applications [16].

- Al- Muraikhi's Study (2023), [17]: Aimed to determine the reality of the administrative performance of secondary school principals in Hafr Al-Batin Governorate in light of the requirements of artificial intelligence, and to reveal the effect of variables (specialization, qualification, type of school, experience) on the administrators' answers, and the impact of artificial intelligence in improving the performance of the administrators.

The researcher recommended developing a system flexible incentive for excellence in artificial intelligence, and equipping the infrastructure in schools to employ artificial intelligence programs and provide them with specialists, in addition to proposals for complementary studies on the subject [17].

- Iwadi's Study (2022), [18]: Investigated the relationship between electronic management implementation and the administrative performance of employees within the education directorates of Hebron Governorate. Employing a mixed-methods approach (quantitative and qualitative), unstructured interviews informed the development of a structured questionnaire. The questionnaire was then administered to a sample of 200 employees (both male and female). The findings revealed a range of moderate to high scores for both the application of electronic management and employee administrative performance. Additionally, the results indicated a strong positive correlation between these two variables [18].

- Al- Masri's Study (2022), [19]: Aimed to reveal the role of artificial intelligence techniques in improving the quality of services provided to students at the University of Jordan from their point of view. The descriptive and analytical approach was used, and the results of the study concluded that the use of artificial intelligence techniques at the University of Jordan from the point of view of its students came to a moderate degree, as well as The quality of services provided to its students was moderate, and the results indicated that there were no differences attributable to the variables of gender and academic program, with differences attributable to the academic degree and in favor of the higher diploma and master's degree [19].

- Al- Dhahouri's Study (2022), [20]: Examined the influence of artificial intelligence (AI) on university performance, focusing on theoretical and applied colleges within Ain Shams University (ASU). A descriptive-analytical approach was employed, targeting faculty members from various roles in the Faculty of Arts, Faculty of Commerce (theoretical colleges), Faculty of Medicine, and Faculty of Engineering (applied colleges) at ASU. An intentional sampling method recruited 120 participants. The findings revealed a significant positive correlation between AI implementation (administrative and academic functions) and performance enhancement across ASU faculties. Additionally, the study confirmed that ASU leverages AI to establish systems and programs facilitating seamless connectivity between university units. This fosters information and data sharing, while the adoption of cutting-edge smart applications further advances university operations [20].

- Al- Mansoori and Al- Tahitah Study (2021): Building upon the researcher's broader investigation of the UAE's Artificial Intelligence (AI) strategy, this paper focuses on its potential to transform government service delivery mechanisms, aiming for complete data analysis by 2031. The analysis considers the latest advancements in AI technologies and their applications across various work sectors. While acknowledging potential challenges, such as the "filter bubble" phenomenon associated with smart devices and its impact on system rigidity, the paper emphasizes the UAE's strategic approach to AI adoption in decision-making processes. Employing a descriptive-analytical approach, the study explores the strategy through two thematic areas. The discussions reveal that the UAE's AI strategy targets several critical sectors within the country [2].

- Lin, Chen and Chen Study (2020): The aim of this study is to evaluate the impact of artificial intelligence on education. The scope of the study was limited to the application and effects of artificial intelligence in management, teaching and learning. A qualitative research approach was used. The study confirmed that artificial intelligence has been widely adopted and used in education, especially by educational institutions, in various forms. Artificial intelligence initially took the form of computers and computer-related technologies, then moved to web-based and online intelligent learning systems, and eventually using embedded computer systems, combined with other technologies, and the use of humanoid robots and web-based chatbots to perform tasks. Using these platforms, teachers were able to perform various administrative functions. On the other hand, because the systems leverage machine learning and adaptability, curriculum and content are personalized in line with students' needs, enhancing comprehension and retention, thus improving learners' experience and overall quality of learning [21].

The literature review has yielded numerous findings and recommendations across diverse fields, emphasizing the correlation between the application of artificial intelligence technology and administrative performance. It has also shed light on various challenges and impediments encountered in the implementation of artificial intelligence technology and its impact on administrative performance. This comprehensive exploration has significantly contributed to the researchers' study by informing their understanding of the problem, elucidating its significance, and guiding the formulation and design of the questionnaire. The literature review exhibits a diversity of approaches in addressing the study's subject matter. Each researcher has applied their unique perspective, with previous studies originating from distinct central issues.

This diversity proves advantageous as it has provided the researchers with a wealth of knowledge and diverse ideas, thereby enriching the theoretical foundation of the study.

During onsite visits to the administrative departments of the Directorate of Education in Hebron, the researchers observed a tendency among many employees to overlook the significance of artificial intelligence and its potential impact on enhancing administrative performance. It was also evident that the Directorate of Education is equipped with advanced technical tools and modern software, yet these resources remain underutilized. Recognizing the researchers' awareness of the pivotal role of artificial intelligence technology in advancing administrative performance, this study aimed to explore the concept of artificial intelligence, identify potential obstacles hindering its implementation, and examine the correlation between the application of artificial intelligence technology and the administrative performance of employees in the Directorate of Education in Hebron. Furthermore, the study sought to propose effective strategies for overcoming these identified obstacles. In essence, the researchers aim to investigate the relationship between the utilization of artificial intelligence technology and the administrative performance of employees in the Directorate of Education in Hebron, posing the central question: What is the nature of the relationship between the application of artificial intelligence technology and the administrative performance of employees in the Directorate of Education in Hebron, Palestine? What obstacles exist, and how can these obstacles be addressed?

1.2. Significance of the Study

The significance of this study is manifested in the following:

- Practical Significance: The practical significance of this study is accentuated by the diverse expertise of the researchers. One researcher, with a bachelor's degree in computer systems engineering, serves as an information technology teacher in the Directorate of Education in Hebron, Palestine. Holding a master's degree in business administration, this researcher brings valuable administrative knowledge. The other researchers hold PhD. degrees in management and serve as academics at institutions like Lincoln University and Hebron University. They possess considerable academic experience in the administrative field and hold administrative positions. The researchers emphasize the practical importance of this study, particularly given one researcher's extensive background in information technology and administrative expertise.

The study is particularly pertinent in the current digital landscape, where artificial intelligence has become an urgent requirement amid rapid digital and information developments. Considering the significance of the digital reality in which organizations operate, the study underscores the importance of applying artificial intelligence technology to enhance the quality of administrative performance among employees in the Directorate of Education in Hebron, Palestine.

- Scientific Significance: Its significance is underscored by its ability to gauge the magnitude of the influence exerted by the implementation of artificial intelligence technology on the administrative performance of employees within the Directorate of Education in Hebron. Additionally, it sheds light on the potential opportunities for development arising from this application, which can contribute significantly to the organizational advancement of the Directorate of Education in Hebron, Palestine. This encompasses the enhancement of human resources, improvement of educational conditions, and the strategic utilization of resources to yield more favorable outcomes.

1.3. Study Questions

1- To what extent is artificial intelligence technology applied by employees within the Directorate of Education in Hebron, Palestine?

2- To what extent does administrative performance vary among employees within the Directorate of Education in Hebron, Palestine?

3- Is there a correlation between the application of artificial intelligence technology and the administrative performance of employees in the Directorate of Education in Hebron in Palestine?

2. Methodology

In this study, the researchers used the Explanatory Sequential Approach (Explanatory Sequential Design, Cresswel, 2016). Unstructured interviews were used as a qualitative tool to explore variables related to the subject of the study, especially with regard to artificial intelligence and its application in the Directorate of Education in Hebron in Palestine.

2.1. Study Population and Sample

The study population comprises all male and female employees in the offices of the Directorate of Education in Hebron, Palestine, totaling (141) individuals, according to the statistics provided by the Palestinian Ministry of Education.

A survey sample was simple random chosen from this population during the year 2023. The sample included (120) valid questionnaires selected for analysis, resulting in a recovery rate of (85%) from the study population.

Table 1. Distribution of sample members according to demographic variables

Variable	Category	The Number	Percentage
sex	Male	96	%80.0
	Female	24	%20.0
	Total	120	100.0
The Age	Less than 35 years	58	%48.3
	Between 35-50 years	40	%33.3
	More than 50 years	22	%18.4
	Total	120	100.0
Years of Experience	Less than 5 years	0	%0.0
	Between 5-10 years	22	%18.3
	More than 10 years	98	%81.7
	Total	120	100.0
Qualification	Master's degree or higher	22	%18.3
	Bachelor's	98	%81.7
	Diploma	0	%0.0
	Total	120	100.0
Specialization	Scientific	44	%36.7
	Literary	76	%63.3
	Total	120	100.0
Number of training courses in the field of artificial intelligence	Nothing	72	%60.0
	One or more	48	%40.0
	Total	120	100.0

2.2. Study Instruments

To achieve the objectives of the study, the researchers conducted unstructured interviews in order to be used in preparing the questionnaire. The researchers prepared a questionnaire that was built and developed using unstructured interviews, theoretical literature, and literature review. The questionnaire consisted of (35) items distributed along the following dimensions (artificial intelligence, administrative performance) Artificial intelligence was divided into the following areas (supporting infrastructure, hardware and software, necessary work team, database management, operational systems and activities).

The researchers conducted structured interviews in order to interpret the results.

2.3. Peer Review

The study instruments were submitted to six expert reviewers, and subsequent modifications, additions, and deletions were implemented based on the feedback received from the reviewers. Additionally, the statistical validity of the tool was assessed by calculating the Pearson correlation coefficient for each study item in relation to its total score, as illustrated in the table below:

Table 2. Results of the Pearson correlation coefficient between each item of the study and the total score

Item Number	Correlation coefficient (R)	Statistical significance	Item Number	Correlation coefficient (R)	Statistical significance
Artificial Intelligence					
1	0.794**	0.00	12	0.710**	0.00
2	0.712**	0.00	13	0.702**	0.00
3	0.788**	0.00	14	0.767*	0.00
4	0.735**	0.00	15	0.823**	0.00
5	0.767**	0.00	16	0.831**	0.00
6	0.725**	0.00	17	0.782**	0.00
7	0.797**	0.00	18	0.825**	0.00
8	0.754**	0.00	19	0.793**	0.00
9	0.694**	0.00	20	0.781**	0.00
10	0.743**	0.00	21	0.714**	0.00
11	0.694**	0.00	22	0.676**	0.00
			23	0.713**	0.00
Administrative Performance					
1	0.793**	0.00	7	0.471**	0.00
2	0.782**	0.00	8	0.810**	0.00
3	0.729**	0.00	9	0.799**	0.00
4	0.736**	0.00	10	0.711**	0.00
5	0.822**	0.00	11	0.746**	0.00
6	0.760**	0.00	12	0.719**	0.00

** Statistically significant at (0.01 ≥ α)

The findings presented in Table 2 demonstrate that all correlation matrix values between the domain items and the overall domain score are statistically significant.

This signifies the robust internal consistency of the scale items, providing evidence for the validity of the tool in accurately measuring the intended constructs.

2.4. Consistency Stability

The data illustrated in Table 3 reveals that the Cronbach’s alpha reliability coefficient values for all dimensions of the scale and the overall scale score were notably high. Specifically, the Cronbach’s reliability coefficient values for the artificial intelligence dimension ranged from (0.850), while for the administrative performance dimension, it reached (0.868). Moreover, the Cronbach’s reliability coefficient for the total scale score was (0.882). These findings underscore the scale's high level of reliability, affirming its suitability for application and its effectiveness in fulfilling the study's objectives.

Table 3. Cronbach alpha reliability coefficients

Variables	Item Numbers	Cronbach alpha
		Reliability Coefficients
Artificial Intelligence	23	0.850
Administrative Performance	12	0.868
Total Degree	35	0.882

2.5. Statistical Method

The analysis of the study data was conducted following the application of tools to the sample members. Statistical analyses were performed using the Statistical Software Package for the Social Sciences (SPSS). The data were processed through the extraction of frequencies, relative weights, arithmetic means, standard deviations, Cronbach's alpha test, Pearson correlation coefficient, t-test, and one-way analysis test.

3. Results and Discussion

The first question is framed as follows: To what extent is artificial intelligence technology applied by employees within the Directorate of Education in Hebron, Palestine?

To address the first question, mean values, standard deviations, and relative weights were computed to assess the extent of artificial intelligence technology application among employees in the Directorate of Education in Hebron, Palestine. These statistical measures are detailed in Table 4.

Table 4. Summary of mean scores, standard deviations, and relative weights reflecting the application of artificial intelligence technology among employees in the directorate of education in Hebron, Palestine. rankings presented in descending order. (n=120)

The Dimension	Paragraph	Mean	Standard Deviation
Supporting infrastructure	The directorate's plan contributes to developing employees' artificial intelligence skills.	3.71	0.63
	There is a declared plan for digital transformation in the directorate.	3.10	0.83
	There is a strong and supportive infrastructure (networks, software, the internet).	2.70	0.90
	The directorate uses artificial intelligence to hold meetings.	1.90	0.54
	Composite Score for the Domain	2.85	0.37
Hardware and software	Current software provides sufficient information to employees and beneficiaries.	3.13	1.26
	AI software fits the work requirements.	2.88	0.62
	The available devices keep pace with technological development.	2.88	0.62
	The available software is flexible and predicts problems.	2.23	0.95
	Existing hardware and software present information in graphical and mathematical forms.	2.02	1.08
Composite Score for the Domain	2.62	0.5	
The necessary work team	Human capital is relied upon through the development of knowledge pillars.	2.81	1.01
	There is a qualified work team and an assistant trainer for artificial intelligence.	2.33	1.09
	Personnel prepared to develop artificial intelligence technology are supported.	2.14	0.57
	Specific programs are available to prepare employees in the field of artificial intelligence.	1.75	0.58
	An information technology center is supported by specialized competencies.	1.65	0.48
	Composite Score for the Domain	2.13	0.34
Database management	New ways of extracting information are being found.	2.60	1.20
	An electronic link is available for each department that explains the directorate's achievements and goals.	2.57	1.07
	Data quality is managed and errors are dealt with when they are discovered.	2.49	0.87
	Methods are developed to construct, create and maintain information.	2.30	1.01
	There is an information systems and artificial intelligence unit with a clear working mechanism.	1.94	0.90
	Composite Score for the Domain	2.38	0.56
	Operational systems and activities	Information technology projects are managed and implemented in all administrative units.	3.34
A special system is available for managing, archiving and preserving electronic documents.		3.27	1.11
More effective technological methods are being implemented and shared between businesses.		2.59	1.15
Work processes are being re-engineered and digitalized.		2.43	1.12
	Composite Score for the Domain	2.9	0.58
	Total Scores	2.58	0.27

The data presented in Table 4 reveal that the application of artificial intelligence technology among employees in the Directorate of Education in Hebron exhibited an average level, as indicated by an arithmetic mean of (2.58) with a corresponding relative weight of (51.6%).

Examination of Table 4 further illustrates that operational systems and activities secured the top position, boasting an arithmetic mean of (2.90) and a relative weight of (58.0%). Following closely, the supporting infrastructure domain claimed the second spot with an arithmetic mean of (2.85) and a relative weight of (57.0%). The hardware and software domain attained the third position with an arithmetic mean of (2.62) and a relative weight of (52.4%). In fourth place, the database management domain registered an arithmetic mean of (2.38) and a percentage of (47.6%). Lastly, the domain of database management ranked fifth with an arithmetic mean of (2.13) and a relative weight of (42.6%).

The interviews conducted revealed that all employees possess advanced computer skills; however, there is a noticeable deficiency in their proficiency with artificial intelligence techniques. One respondent from the sample articulated, "Financial constraints limit our capabilities, and the administrative staff lacks training in utilizing artificial intelligence techniques." Another respondent expressed, "The Directorate of Education's primary focus is on integrating administrative software to streamline communication and archiving, without delving further."

Moreover, the interviews underscored that a significant proportion of employees are proactively engaging in self-directed learning through online courses. This initiative aims to keep abreast of technological advancements in the realm of artificial intelligence and recognize its significance in enhancing and evolving the educational and administrative processes.

These findings align with the outcomes of studies conducted by Hassan [16], Al-Masri [19], and Lin, Chen, and Chen [21]. However, they diverge from the findings of Al-Mansoori and Al-Tahitah [2], where the level of interest of the Directorate of Education in integrating artificial intelligence technology into administrative and educational processes was reported to be below.

The second question is as follows: To what extent does administrative performance vary among employees within the Directorate of Education in Hebron, Palestine?

To address the second question, mean values, standard deviations, and relative weights were calculated to assess the level of administrative performance among employees in the Directorate of Education in Hebron, as presented in Table 5.

Table 5. Summary of mean scores, standard deviations, and relative weights reflecting the administrative performance level among employees in the directorate of education in Hebron. rankings presented in descending order. (n=120)

Paragraph	Mean	Standard Deviation
Technology has helped me adapt when emergencies occur at work.	3.43	1.11
Technology helped me to be creative and develop my work.	3.42	1.10
Technology has helped me get things done right at the right time.	3.38	1.05
Technology has helped me increase my ability to make important decisions.	3.31	1.14
Technology helped me commit to quality performance.	3.13	1.06
Technology helped me circulate and discuss instructions and materials received from responsible authorities.	3.10	1.01
Technology helped me coordinate between my colleagues to get work done.	3.02	0.96
Technology has helped me reduce the burden of daily work.	2.97	1.06
Technology helped me make annual plans according to scientific principles.	2.63	0.94
Technology helped me distribute administrative tasks according to ability and efficiency.	2.57	0.91
Technology has helped me make preventive and therapeutic arrangements for health and social problems.	2.54	1.10
Decisions are based on information collected by technology.	2.33	1.02
Total Scores	2.98	0.37

The data presented in Table 5 illustrates that the administrative performance level among employees in the Directorate of Education in Hebron, Palestine is characterized as average, with the arithmetic mean of the total score reaching (2.98) and a corresponding relative weight of (59.6%).

Analyzing Table 5 further reveals that the highest-rated administrative performance aspect is captured in the statement "Technology helped me adapt when emergency situations occur at work," attaining an arithmetic mean of (3.43) and a relative weight of (68.5%). Following closely is the statement "Technology helped me to innovate and develop work," with an arithmetic mean of (3.42) and a relative weight of (68.3%). Additionally, the statement "Technology helped me complete work in a correct manner at the right time" secured a mean of (3.38) with a relative weight of (67.5%).

These findings align with the results of the studies conducted by Hassan [16] and Lin, Chen, and Chen [21], but differ from the findings of Iwadi [18].

The third question is framed as follows: Is there a correlation between the utilization of artificial intelligence technology and the administrative performance of employees in the Directorate of Education in Hebron, Palestine?

To address the third question, the Pearson Correlation Coefficient was employed to ascertain the connection between the application of artificial intelligence technology and the administrative performance of employees in the Directorate of Education in Hebron, Palestine as depicted in Table 6.

Table 6. Displays the outcomes of the Pearson correlation coefficient examining the association between the utilization of artificial intelligence technology and the administrative performance of employees in the directorate of education in Hebron, Palestine.

Relations		Correlation coefficient	Statistical significance
Administrative Performance	Supporting Infrastructure	*0.262	0.047
	Hardware and Software	**0.335	0.000
	The Necessary Work Team	*0.225	0.013
	Database Management	*0.277	0.043
	Operational Systems and Activities	**0.314	0.000
	Artificial Intelligence	**0.423	0.000

** Statistically significant at a significance level of ($\alpha \leq 0.01$), * Statistically significant at a significance level of ($\alpha \leq 0.05$).

The findings depicted in Table 6 reveal a favorable correlation between the dimensions of artificial intelligence technology application and administrative performance among employees in the Directorate of Education in Hebron, Palestine. The correlation coefficient for this relationship stands at (0.423) with a statistically significant of (0.000), affirming its statistical significance. This signifies that an escalation in the application of artificial intelligence technology corresponds to an enhancement in the administrative performance of the employees in the Directorate of Education in Hebron, Palestine, and vice versa. These results align with the outcomes of the studies conducted by Al-Mansoori and Al-Tahitah [2], Al-Dhahouri [20] and Lin, Chen, and Chen [21].

4. Conclusion

This study investigation delved into the correlation between the implementation of artificial intelligence technology and administrative performance, with a specific focus on employees within the Directorate of Education in Hebron, Palestine. The primary objective of the study was to scrutinize how the integration of artificial intelligence impacts the overall efficiency and effectiveness of various administrative tasks. The research methodology employed a meticulous examination of the experiences and perspectives of employees who had been exposed to artificial intelligence technology in their managerial capacities. The study explored diverse aspects, including the level of artificial intelligence adoption, the specific tasks influenced by artificial intelligence, and the perceived impact on employee performance.

The study illuminated the degrees of artificial intelligence adoption: It assessed the extent to which artificial intelligence technology had been adopted in the Directorate of Education in Hebron, Palestine. This encompassed the identification of specific artificial intelligence applications and tools utilized in administrative processes. The research delved into metrics of administrative performance: The study scrutinized the influence of artificial intelligence on crucial administrative performance metrics such as efficiency, accuracy, and time management. It sought to determine whether the implementation of artificial intelligence resulted in enhancements in these areas. Additionally, it considered employees' perspectives: The study incorporated employees' viewpoints regarding the introduction of artificial intelligence into their work environment, encompassing their attitudes, interests, and experiences related to working alongside artificial intelligence technologies.

The study addressed challenges and opportunities: It underscored any challenges encountered during the implementation of artificial intelligence and explored potential opportunities for further enhancement. Furthermore, it examined the implications for educational administration: The study delved into the broader repercussions of artificial intelligence integration on educational administration in Hebron, exploring how these findings could contribute to more effective decision-making and resource allocation within the Education Directorate. By scrutinizing the relationship between artificial intelligence technology and administrative performance, this research yielded valuable insights into the evolving landscape of management within the Hebron Education Directorate in Palestine, set against the backdrop of emerging technologies. The outcomes of this study may inform future strategies for the adoption of artificial intelligence in administrative processes within educational offices in Palestine.

5. Recommendations

In light of the preceding findings, the researchers propose the following recommendations:

- 1- Enhancing the infrastructure efficiency to align with the swift technological advancements in artificial intelligence applications.
- 2- Allocating adequate budgets for the implementation of artificial intelligence applications in employee training, aiming to enhance and cultivate administrative performance.
- 3- Developing effective training plans for employees within the Directorate of Education in Hebron, Palestine, focusing on emerging technological innovations in general and the specific applications of artificial intelligence technology.

References:

- [1]. Meabed, A. (2020). Future Strategies for Managing Risks of Epidemics and Health Disasters in Light of the Novel Coronavirus Crisis. *Arab Journal for Security Studies*, 36(2), 292-309.
- [2]. Almansoori, S. S., & Al-tahitah, A. N. A. (2021). The Role of Artificial Intelligence in The Decision-Making Process at The Ministry of Interior in The United Arab Emirates. *Almaarif University College*.
- [3]. Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data—evolution, challenges and research agenda. *International journal of information management*, 48, 63-71.
- [4]. Javaid, M., Haleem, A., Singh, R. P., & Suman, R. (2022). Artificial intelligence applications for industry 4.0: A literature-based study. *Journal of Industrial Integration and Management*, 7(01), 83-111.
- [5]. Al-Muqiti, S. A. (2021). *The reality of employing artificial intelligence and its relationship to the quality of performance of Jordanian universities from the point of view of faculty members*. [Unpublished Masters Thesis, Middle East University].
- [6]. UNESCO, M. (2022). *al-Dhaka'a al-Istisna'iyi wa al-Ta'lim: Irshadat Li Wadi'iyi al Siyasiyyat, al-Ta'lim 2030*. France: UNESCO.
- [7]. Daqar, M. A. A., & Smoudy, A. K. (2019). The role of artificial intelligence on enhancing customer experience. *International Review of Management and Marketing*, 9(4), 22.
- [8]. Rajkhowa, B., & Das, A. (2020). Impact of artificial intelligence on customer experience. *International Journal Of Recent Technology And Engineering*, 9.
- [9]. Bilgeri, N. (2020). *Artificial intelligence improving CRM, sales and customer experience: An analysis of an international B2B company* [Doctoral dissertation, FH Vorarlberg (Fachhochschule Vorarlberg)].
- [10]. Gawanmeh, A., Raml, A., Jalil, A., & Alawneh, M. (2023). The impact of artificial intelligence systems on improving the quality of banking services in Jordanian Islamic banks. *International journal of specialized islamic studies (sis)*, 8(2), 79-90.
- [11]. Sayed Ahmed, A. K., Omaima Kleib, Khalil, Nabil Saad, Fayed & Abdel Sattar Mahrous. (2023). Improving the administrative performance of administrative leaders at Fayoum University in light of the Gemba Kaizen model. *Fayoum University Journal of Educational and Psychological Sciences*, 17(12), 146-199.
- [12]. Medhat, M. (2017). *The Japanese Kaizen strategy is a new vision in total quality management*. Egypt, Cairo: Egyptian Book House.
- [13]. Harbi, N. (2015). *Introductions to job performance management in the Kingdom of Saudi Arabia*. Saudi Arabia: King Fahd Library.
- [14]. Makhloof, S. (2017). The effectiveness of a proposed training program to improve the administrative performance of special education school principals. *Education (Al-Azhar): A peer-reviewed scientific journal for educational, psychological, and social research* , 36(172), 437-485.
- [15]. Robbins, S., & Coulter, M. (2021). *MANAGEMENT 15E*. India: Pearson India.
- [16]. Hassan, M. M. S., & Manal Musa Saeed. (2023). A proposed vision to achieve the competitiveness requirements of New Valley University using artificial intelligence applications. *Journal of the Faculty of Education at Menoufia University*, 519-584.
- [17]. Al-Muraikhi, M. (2023). Improving the administrative performance of secondary school principals in. *Journal of Arabian Peninsula Centre* 2(17), 66-95.

- [18]. Iwadi, I. (2022). *The Relation of E-management Application with Administrative Performance: A Case Study of Staff in the Directorates of Education in the Hebron Governorate*. Hebron, Palestine: Hebron University.
- [19]. Al- Masri, N. (2022). The role of artificial intelligence technologies in improving the quality of services provided to University of Jordan students from their point of view. *Journal of the College of Education (Assiut)*,38, 265-290.
- [20]. Al Dhahouri, N. S. H. M. (2022). The Impact Of Artificial Intelligence On The Performance Of Universities: Field Study On Theoretical And Applied Colleges At Ain Shams University. *Perdana: International Journal of Academic Research*, 14(1), 39-64.
- [21]. Chen, L., Chen, P., & Lin, Z. (2020). Artificial intelligence in education: A review. *Ieee Access*, 8, 75264-75278.