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The Administrative Performance of Arab Preparatory School Principals within the Green Line in Light of the Requirements of Artificial Intelligence

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Abstract

The study aimed to demonstrate the reality of administrative performance in Arab preparatory schools within the Green Line in light of the requirements of artificial intelligence. The study relied on the descriptive, correlational approach, and the research population was represented by all principals of Arab preparatory schools within the Green Line. The study sample consisted of (187) school principals. Arabic preparatory schools were selected by a simple random method, and a questionnaire was prepared to collect data from the study members. The results of the study showed that the level of administrative performance of the study members was at an average level, and that the degree of availability of artificial intelligence requirements in Arab preparatory schools was at a moderate degree, and it was shown that there is a correlation between the availability of Artificial intelligence requirements and improving the level of administrative performance. The results of the study also showed that there were no statistically significant differences in the responses of the study sample members in the field of administrative performance due to the variable (gender, academic qualification, years of experience), while there were statistically significant differences at the level of significance. (0.05) in the study members' responses to the field of artificial intelligence requirements is attributed to gender in favor of females, to academic qualification in favor of postgraduate studies, and to the years of experience variable in favor of those with 4 years of experience or less.

Keywords: *Administrative Performance, The Green Line, Artificial Intelligence, Arab Preparatory Schools.*

INTRODUCTION

The world is currently experiencing significant advancements in the scientific and technological field. These advancements have a direct and indirect impact on individuals' lives. The development has resulted in the creation of numerous applications and technologies. One of the most notable trends in this development is artificial intelligence, which aims to discover faster, more efficient, and more accurate methods. Various sectors, including practical, military, medical, industrial, commercial, and economic disciplines, have encountered the application of artificial intelligence in their operations.

Artificial intelligence is significant due to its recognized applications, including neural networks, expert systems, genetic algorithms, and intelligent agents. It has demonstrated its efficacy in decision-making processes. The human mind is incapable of retaining large amounts of information when it is necessary to make a choice, particularly as it expands. The amount of knowledge is expanding, and artificial intelligence applications enable the storage, categorization, and indexing of information based on structured technological standards, making it easier to retrieve when necessary (Al-Tuwaijri, 2023).

The incorporation of artificial intelligence into educational processes and administrative tasks has presented a challenge. It is necessary to enhance administrative performance in order to keep up with the advancements of the industrial revolution and the resulting progress in various aspects of life. Consequently, there is a growing demand for the integration of artificial intelligence (AI) applications in education to improve and enhance the administrative performance of school principals. This integration should align with the specific needs and requirements of the school and society. AI can assist in automating routine tasks and cognitive processes (Pedro et al., 2019).

These developments have placed new responsibilities and tasks on the workforce in all educational sectors, particularly school principals. School principals play an essential role in advancing the work of the school and enhancing its activities. To ensure they can adapt to global developments and changes in the system, it is

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important to provide them with the necessary skills and knowledge. providing the principal with essential skills is crucial for the school's educational development, growth, and ability to adapt to current environmental factors. The principal's influence and ability to shape the organizational culture, as well as their flexibility in handling events, play a significant role in achieving this (Al-Adwan, 2023).

Throughout generations, the management of educational institutions has heavily depended on human discernment and the judgments and viewpoints of its employees. Advancements in artificial intelligence technology have enabled the performance of intricate tasks that demand cognitive capabilities, such as making implicit assessments and perceiving emotions. Consequently, intelligence systems are increasingly carrying out a greater variety of functions independently. Uncontrolled artificial intelligence has revealed and exposed the biases and cognitive flaws inherent in the administrative machinery. Machine learning has the capacity to enhance the intelligence, fairness, and efficiency of administration. Nevertheless, this potential cannot be fully utilized unless administrative law specifically deals with underlying normative decisions. Several techniques have been employed in the development of machine learning algorithms, including counterfactual reasoning, the principle of proportionality, error weighting, and decision-making in the context of intricate limitations (Wischmeyer & Rademacher, 2020).

Statement of the Problem

Educational institutions serve as reservoirs of knowledge and intellectual centers in societies, and the vitality of societies has to do with the competence of its administrative and academic leaders. Given the advancements in technology and human thinking, artificial intelligence serves as an attractive incentive for advancing academic procedures and improving the educational process in schools.

Asiri (2019) emphasized the significance of creating training programs for managers to enhance their performance. It is also crucial to have supervisors who specialize in administrative programs. Managers should be encouraged to embrace the principle of participation in training initiatives, and they should be provided with comprehensive courses to enhance their administrative skills. Halawa (2019) emphasized the importance of utilizing artificial intelligence for achieving leadership and excellence. The author emphasized the need for creating a technological environment that enables the use of artificial intelligence, along with ensuring the existence of regulatory, strategic, legislative, human, and security measures within institutions. Therefore, this study aims to examine the actual administrative performance of principals in Arab preparatory schools located within the Green Line, taking into consideration the demands of artificial intelligence.

Questions of the Study

The main question: What is the reality of the administrative performance of principals of Arab preparatory schools within the Green Line in light of the requirements of artificial intelligence?

The following questions arise from it

Q1: What is the level of administrative performance of principals of Arab preparatory schools within the Green Line?

Q2 what is the level of availability of artificial intelligence requirements in Arab preparatory schools within the Green Line?

Q3: Are there statistically significant differences at the level of significance ($0.05 \geq \alpha$) between the responses of study individuals to the reality of administrative performance in light of artificial intelligence requirements due to the variables (gender, educational qualification, years of experience)?

Q4: What is the impact of the availability of artificial intelligence requirements on improving the administrative performance of Arab school principals within the Green Line?

Objectives of the Study

The study sought to accomplish the following objectives:

Assessment of the administrative proficiency of principals at Arab preparatory schools located within the Green Line.

Assessment of the extent to which Arab preparatory schools within the Green Line have implemented artificial intelligence requirements.

Determining statistically significant differences, with a significance level (α) of 0.05 or less, in the responses of study participants regarding the reality of administrative performance in relation to the requirements of artificial intelligence, considering variables such as gender, educational qualification, and years of experience.

Analyzing the influence of the accessibility of artificial intelligence prerequisites on enhancing the managerial effectiveness of Arab school principals located within the Green Line.

Significance of the Study

The significance of this study lies in the crucial role of administrative performance, as effective administrative work plays a pivotal role in attaining the objectives of the educational process. It achieves this by influencing employees, fostering their compliance, guiding them, and valuing their contributions in executing assigned tasks and responsibilities. The researcher anticipates that this study, focusing on a contemporary subject, will yield the following benefits:

Theoretical Significance: Theoretical significance was demonstrated by the qualitative contribution to the educational research library, highlighting its role in increasing school principals' understanding of the importance of their performance in relation to the utilization of artificial intelligence.

Practical Significance: This study aims to offer decision-makers and educational planners' specific recommendations for enhancing the administrative effectiveness of school leaders in response to the demands of artificial intelligence. The study aims to enhance the administrative performance of school principals by proposing measures that align with the requirements of artificial intelligence, with the objective of contributing to overall improvement.

Terminology of Study

Administrative Performance: it refers to various institutions' intentional attempts to plan, coordinate, and direct individual and group performance, as well as to establish clear and acceptable criteria as a goal that everyone strives to achieve (Al-Muraikhi, 2023). Procedurally: a set of methods implemented by the school administration to arrange educational activity in the classroom, develop linkages between educational process parts, and engage in decision-making.

Artificial Intelligence: is defined as "the use of software algorithms and techniques to simulate human cognition and decision-making processes in order to successfully complete tasks" (Murphy, 2019, 2). Procedurally: A collection of computer devices and programs that imitate the characteristics of the human mind, including the ability to act, make decisions, and solve problems in order to use and benefit from them in the educational process to reach specific educational goals.

Artificial Intelligence Requirements: all that is essential and required to be provided in terms of material and technical resources, regulations, and decisions that can be made so that, once available, administrative performance may be developed (Mohamed et al., 2021). Procedurally, these are the requirements for using artificial intelligence applications in the educational process. These conditions encompass characteristics such as organizational, human, technical, and ethical.

Study Limitations

Objective Limits: limited to administrative performance in light of artificial intelligence requirements.

Human Limits: Arab preparatory school principals.

Time Limits: It was implemented in the field during the first semester of the year 2023/2024 AD.

Spatial Boundaries: applied in arab preparatory schools within the green line.

Theoretical Framework

This section includes a presentation of the theoretical literature on which this research was based, as well as a statement of the concepts on which this study is based, which are: administrative performance, artificial intelligence, and their characteristics and importance in the field of education.

Administrative Performance

Attention to the human element in contemporary institutions is one of the most important factors for their success, as it is linked to the institutions' survival and continuation in the face of global competition, and performance is regarded as one of the most important policies used by global organizations.

Performance refers to the impact of an individual's efforts, which starts with talents and awareness of tasks and duties, and refers to the degree to which the individual achieves and completes the tasks that comprise his or her employment (Al-Kharusi et al., 2022). Administrative performance is defined as the efficiency and effectiveness with which an individual completes the tasks entrusted to him. It is also known as one of the management methods centered on direct contact between the manager and subordinates, and it comprises the following elements: Understanding and creating goals, as well as conducting a continual review procedure to assess performance (Mohamed et al., 2021).

The Significance of Improving Administrative Effectiveness

The importance of improving the administrative performance of human elements in institutions in general, and educational institutions in particular, stems from its role in increasing the employer's efficiency and assisting him in overcoming challenges and completing the work quickly and effectively. The most important thing that may result from developing administrative performance is the accurate identification of the reality of performance and the statement of the most important problems and challenges that it faces and the solutions proposed to reduce it, and develop the performance of workers in a way that enables them to keep pace with changes in the internal and external environment, make optimal use of modern systems in work management, and achieve goals. Achieving organizational goals (Mohamed et al., 2021).

Administrative Performance Functions

Administration of all types works to implement specific functions that affect employee job performance, either positively or badly, depending on the level of quality of implementation. The administration is keen on executing administrative responsibilities efficiently and effectively, and one of the most significant functions is Al-Kharusi (2022) describes the administrative practice as follows:

Planning

The importance of planning is highlighted in its future expectations, particularly in terms of achieving goals, clarifying them to employees, facilitating their execution, and monitoring the material and human resources required by the organization to implement them. It also helps to achieve harmony among employees and departments, lowers the likelihood of job duplication, and aids in the implementation of internal control. And externally, by increasing the advantage of material and people resources.

Organization

Administrative organization and administrative regulations help achieve the goals of the institution, and their importance is highlighted in: their contribution to creating a response among employees when any change appears in the work environment, and it also helps in the correct scientific distribution of available jobs, and in increasing the efficiency of employees in the institution and managing them easily and smoothly, and it takes two types of organization formal and

Guidelines

Administrative guidance is important because it directs and guides staff to achieve the institution's goals. The more precise and transparent the guiding process, the easier it will be to implement for those in charge. Guidance is a tool for implementing planning and organizing processes, as well as increasing the efficiency of work performance, through direct follow-up by the institution's director or heads of departments, and utilizing their competence and experience in raising the level of performance, skills, and functional capabilities through work performance evaluation.

Censorship

It is regarded as one of the fundamental activities of management, in which the essential information is gathered to measure actual performance and compare it to planned performance. It relates to monitoring work and measuring actual performance and attainment against what is anticipated using supervisory standards. Control can take numerous forms, including continuous directed control, local control, and post-implementation oversight.

Artificial Intelligence

As science and technology have advanced, people have increasingly relied on machines to help them execute tasks accurately and flexibly. As a result, robots are continually being improved, as they are no longer limited to executing mundane jobs, but have begun to acquire intelligence in order to replicate humans' unique mental capacities.

At the same time as work was being done to develop the theoretical underpinnings for computers, the concept of artificial intelligence emerged. The first references to artificial intelligence may be traced back to 1950, when Turing released his famous paper about whether a machine can think, and he included a definition in which he drew a design that qualifies the machine to be intelligent. His project was called the simulation game, and it was based on human-machine dialogue (Zaher, 2022).

Artificial intelligence is also one of the pillars of today's technological sector. It is a term made up of two words: intelligence, which is defined as an individual's ability to understand and perceive novel conditions and situations. The opposite term, artificial, refers to something that is not genuine or unnatural and is applied to actual objects. Indeed, without human interference, and on this premise, artificial intelligence is defined as the intelligence that a person generates in a machine or computer, therefore artificial intelligence is the study of modern machines (Atoum, 2023).

Artificial Intelligence and Education

Artificial intelligence is a discipline of informatics that assists in making judgments in the face of fresh data. Artificial intelligence is characterized by its use of a method that is somewhat similar to the human method in solving complex problems accurately, quickly, and efficiently, as well as by immortalizing human expertise and providing alternatives that allow dispensing with and compensating for some expertise, thereby From relying on human energies, instead of artificial intelligence's ability to operate autonomously and carry out complicated tasks, acquire knowledge and apply it to ambiguous situations in the lack of information, and its ability to learn from prior experiences and apply them in new situations (Al Marikhi, 2023).

The preceding confirms the need of using artificial intelligence in educational institutions and working with its educational and administrative applications, as it has become an urgent necessity in a world undergoing numerous technological upheavals. Karsenti (2019) identified a number of favorable consequences of artificial intelligence on education, including tailored learning for teachers and students. According to their requirements, automatic correction of academic work types freed up time for teachers to undertake other jobs, and continuous evaluation for teachers was conducted by quickly tracking learners' experiences throughout the learning route to properly quantify skill acquisition over time. It also sought to develop smart educational platforms for learning about dimensions, increase mobile technology, offer new ways to connect with information, and broaden options for learners and academic content.

Requirements for using artificial intelligence in educational institutions.

Al-Ajlan (2022) identified a list of conditions for implementing artificial intelligence applications at scientific institutions, which include: Spreading an artificial intelligence-friendly culture at educational institutions, assisting senior leadership in developing procedures for implementing artificial intelligence, and incorporating educational institutions' plans for achieving artificial intelligence goals. Providing a procedural guide for the operations associated with the application of artificial intelligence, providing policies that support cybersecurity, preparing the necessary infrastructure of equipment and communication networks, providing the necessary budget to support the activation of artificial intelligence applications, and allocating a budget, attracting competencies specialized in artificial intelligence in educational institutions, and managing Humanity's focus on artificial intelligence applications, as well as the formation of collaborations between educational institutions, the local community, and the relevant bodies.

PREVIOUS STUDIES

Al-Muraikhi (2023) aimed to explain the reality of the administrative performance of secondary school principals in Hafar Al-Batin Governorate in light of the requirements of artificial intelligence, and the study relied on the descriptive survey method, and the results the study sample consisted of 49 principals. A questionnaire was created to collect data. The results of the study showed that the level of reality of administrative performance among secondary school principals was at a high level, and the level of requirements was artificial intelligence to a moderate degree. It was found that there were no statistically significant differences at the level (0.05) between the answers of the study members due to the variables (specialization, qualification, experience) and the administrative performance dimension

Al-Tuwaijri (2023) sought to clarify the requirements for employing artificial intelligence applications in decision-making in the Ministry of Education. The study relied on the descriptive survey approach, and the research community was represented by all male and female employees of the Planning and Development Agency in the Ministry of Education. The size of the study sample reached (261) individuals, and the results of the study showed The level of employment of artificial intelligence requirements was high, and it was found that the most prominent requirements of artificial intelligence in decision-making were the physical requirements, followed by administrative and then human requirements. The results of the study showed that there were no statistically significant differences in the responses of the study individuals towards the requirements of artificial intelligence due to the gender variable. The educational qualification, scientific specialization, years of experience, or nature of the work he performs.

Atoum (2023) aimed to explain the requirements for employing artificial intelligence applications in higher education and its challenges. The study was based on the descriptive survey approach (content analysis), and the study sample represented documents and information related to artificial intelligence and its requirements. The results of the study revealed the existence of a number of requirements for artificial intelligence applications. The most prominent of which is spreading a culture that supports artificial intelligence, and preparing the necessary infrastructure of equipment and communication networks. It has also been shown that the most prominent applications of artificial intelligence in higher education are represented by smart teaching systems, adaptive learning environments, educational robots and expert systems. It has also been shown that the most prominent challenges of employing artificial intelligence applications are the lack of availability of specialists and experts, and the high cost of implementing artificial intelligence applications in higher education.

Wang (2021) sought to elucidate the function of artificial intelligence in educational leadership. The study applied a content analytical method to the literature on artificial intelligence, decision-making, and educational leadership. The study's findings revealed that artificial intelligence provides analytical efficiency to assist educational leaders in making judgments based on... Data-driven, AI-assisted decision-making may conflict with value-based ethical decision-making, and it turns out that data-driven, evidence-informed decision-making and value-based decision-making work best together.

Fernandez et al. (2019) aimed to demonstrate the impact of artificial intelligence in higher education. The study used a descriptive and analytical methodology. The study's findings revealed that forms based on

artificial intelligence result in significant improvements in schooling at all levels. They have also been able to merge various types of human interaction with ICT, resulting in exceptional quality improvement and exact specialization for students' learning according to their needs.

Commenting on Studies

Based on this review of some previous studies related to the subject of the study, we find in most of them that there are requirements for the application of artificial intelligence in the educational sectors, and that it has an impact on the decision-making process and the professional performance of the workforce. What distinguishes this current research is its application to a research community that differs from previous communities. It is limited to explaining the reality of the administrative performance of Arab preparatory school principals within the Green Line in light of the requirements of artificial intelligence.

Procedures

The method and procedures cover a description of the study's approach, population, and sample, the tools that were used, the implications of their validity and reliability, and the identification of the study variables and the statistical treatments that were used to answer its questions.

METHODOLOGY

The descriptive, correlational approach was used to demonstrate the reality of the administrative performance of principals of Arab preparatory schools within the Green Line in light of the requirements of artificial intelligence, due to its suitability to the nature and objectives of the study.

Population

The study population consisted of all principals of Arab preparatory schools within the Green Line, who numbered (377) male and female principals, according to data from the Central Department of Statistics (2023). (187) principals of Arab preparatory schools were selected by a simple random method, and Table (1) shows the distribution of sample individuals. The study according to the variables (gender, educational qualification, years of experience).

Percentage	Frequency	Categories	Study Variables
%41.2	77	male	Gender
%58.8	110	feminine	
%34.8	65	diploma	Qualification
%44.9	84	Bachelor's	
%20.3	38	Postgraduate	
%37.4	70	4 years and less	Years of Experience
%53.5	100	5 – 10 years	
%9.1	17	11 years and over	
%100	**187**	**TOTAL**	

Study Tool

In order to address the research question and achieve the desired objectives, a questionnaire instrument was created to gather data from the participants of the study. This was done after conducting a thorough examination of the relevant theoretical literature and prior studies pertaining to the subject matter of the research. The questionnaire comprised two sections, namely artificial intelligence requirements and administrative performance. The former included 26 items across four dimensions: legislative, material, technical, and human requirements. The latter consisted of 20 paragraphs distributed across three dimensions: communication and communication, planning and organization, and direction and control. Additionally, the questionnaire included a separate section. The primary data, consisting of gender, educational qualification,

and years of experience, is currently in its preliminary version. Evaluation of the reliability and validity of the assessment instrument

Face Validity: In order to establish the face validity of the study instrument, the researcher presented the questionnaire in its original form to a group of experienced arbitrators in the field of educational administration. These arbitrators were asked to provide their opinions on the clarity of the questions and their general linguistic integrity. The suggested amendments were carefully considered, with 80% of the arbitrators agreeing on the changes. Consequently, the questionnaire was enhanced by removing two paragraphs that were repetitive and rephrasing three paragraphs. The final version of the instrument comprised 44 items that were divided among the study variables, namely administrative performance and artificial intelligence requirements.

Construct Validity: was assessed by applying the scale to a sample of 30 male and female managers who were not part of the primary study group. Construct validity indicators were then obtained using the Pearson correlation coefficient. The correlation coefficients between the items and the total score for the field of requirements for artificial intelligence ranged from 0.73 to 0.21, while for the field of administrative performance, the range was from 0.82 to 0.23. All of these correlation values were statistically significant at a significance level of 0.05. The correlation coefficient between the items and the total score on the field exceeded 0.20, which is considered an acceptable value for retaining the items within the scale, as stated by Odeh (2010). Consequently, all items of the scale were deemed acceptable, resulting in a final form of the scale consisting of 44 paragraphs across the fields of artificial intelligence and administrative performance.

Tool Stability

To estimate the internal consistency reliability of the scale; Cronbach's Alpha equation was used on the data of the first application of the survey sample of (30) male and female managers from outside the study sample. The internal consistency reliability value for the field of artificial intelligence was (0.88), and (0.89) for the field of administrative performance, which are percentages Acceptable for performing the search.

Study Variables

Independent Variable: artificial intelligence requirements

Dependent Variable: administrative performance

Statistical Processing

The statistical processing of the data was done using the Statistical Package for the Social Sciences (SPSS). The arithmetic means and standard deviations were calculated for the study members' response to the tool's items. One-way analysis of variance (ANOVA) and independent samples analysis (T-test) were also used. To study the impact of the study variables (gender, academic qualification, years of experience) on the reality of administrative performance in light of artificial intelligence requirements, a linear regression test was also applied to demonstrate the impact of artificial intelligence requirements on the administrative performance of Arab preparatory school principals.

DISCUSSION AND RESULTS

Results of the first question: What is the level of administrative performance of principals of Arab preparatory schools within the Green Line?

To answer the first study question: The arithmetic means and standard deviations were calculated for the responses of the study sample members to the items of the dimensions of the field of administrative performance requirements, as shown in Table (3).

Table (2) Arithmetic means and standard deviations for items of administrative performance requirements from the point of view of middle school principals within the green line, arranged in descending order according to their arithmetic means.

level	standard deviation	arithmetic mean	Items	Rank
			ORGANIZATION AND PLANNING	
High	0.95	4.03	School timetables are prepared according to artificial intelligence applications.	**1**
High	1.16	3.85	School meetings are held in light of the school administration's use of artificial intelligence.	**2**
Medium	1.23	3.58	Teachers are involved in training courses on artificial intelligence skills.	**3**
Medium	1.17	3.50	The school administration seeks to employ artificial intelligence in the field of planning and organization.	**4**
Medium	1.19	3.33	There is a stated plan for digital transformation in the school.	**5**
Medium	1.18	3.31	The school's plan for community well-being is prepared based on artificial intelligence.	**6**
Medium	1.19	3.21	The school's plan contributes to developing students' artificial intelligence skills.	**7**
Medium	**1.00**	**3.27**	**The Total**	
Guidance and Control				
High	0.92	4.18	The school administration applies educational legislation related to artificial intelligence.	**8**
High	0.92	3.92	The school administration supports teachers technically to enable them to achieve educational goals.	**9**
High	1.03	3.87	The administration works to provide support to teachers to confront technical problems.	**10**
High	1.01	3.84	The directorate administration prepares periodic electronic reports on performance evaluation.	**11**
Medium	1.26	3.18	School administration relies on artificial intelligence applications to implement tests.	**12**
Medium	1.26	2.77	The school administration uses artificial intelligence-based standards for guidance and control.	**13**
Medium	**0.91**	**3.30**	**The Total**	
COMUNICATION				
High	1.15	3.89	Messages from school employees are responded to immediately.	**14**
Medium	1.24	3.46	The school relies on training programs to develop teachers' skills on electronic technologies.	**15**
Medium	1.23	3.45	The school has effective electronic communication between the school's administrative levels.	**16**
Medium	1.21	3.18	The school administration provides continuous feedback to improve electronic communication processes inside and outside the school.	**17**
Medium	1.24	3.10	The school administration uses modern electronic means of communication to communicate with external beneficiaries.	**18**

Medium	1.29	2.92	The school administration constantly seeks to develop electronic communication systems.	**19**
Medium	1.32	2.90	The school administration provides electronic means of communication with the school without complications.	**20**
Medium	**0.97**	**3.28**	**Total marks**	
Medium	**0.88**	**3.34**	**Overall score for administrative performance**	

The data presented in Table (2) indicates that the administrative performance of principals in Arab preparatory schools within the Green Line is moderately rated, with an arithmetic average of (3.34). The different dimensions of the field are ranked based on their arithmetic averages. The dimension of guidance and control obtained the highest average score of (3.30), followed by... The component of communication and communication had a mean score of 3.28, while the factor of planning and organization ranked last with a mean score of 3.27. The achievement can be attributed to the Arab preparatory school principals' cognizance of their professional role and administrative educational responsibilities, as well as their dedication to enhancing and elevating their performance. The findings of Al-Muraikhi's (2023) study contrast with this conclusion, since it demonstrated a significant level of administrative proficiency among female secondary school principals.

Regarding the field of planning and organization, sample (1) that mentioned "School schedules are prepared according to artificial intelligence applications" achieved the highest arithmetic mean of (4.03), while sample (7) that stated "The school plan contributes to the development of artificial intelligence skills among students" had the lowest arithmetic average (3.21). This outcome can be attributed to the educational policies implemented in schools within the Green Line. These policies restrict the planning and organization of the educational process to the Ministry of Education, which assumes primary responsibility for decision-making and formulating plans based on specific systematic pedagogical procedures.

Sample (8) had the highest arithmetic mean of (4.18) and indicated that "The school administration enforces educational laws regarding artificial intelligence." Sample (13) had the lowest arithmetic mean of (2.77) and indicated that the school administration utilizes standards based on artificial intelligence. Regarding guiding and control. This is relevant to the domain of guiding and control. The researcher ascribes this outcome to the recognition and understanding of the headmasters of Arab preparatory schools located within the Green Line, regarding the significance of possessing the attributes of contemporary educational leadership. This leadership is founded on principles of collaboration, involvement, and engagement with all components of the school, such as teachers, students, parents, and diverse local community organizations.

In the field of communication, the sample (14) that mentioned "Messages from company employees are responded to immediately" had the highest average of (3.89), while the sample (20) that mentioned "The school administration provides electronic means of communication at the school without complications." The user's text is empty.The arithmetic average was calculated to be 2.90, which is the lowest value. The result can be ascribed to the principals' consciousness and their efforts to establish straightforward and unambiguous means of communication, recognizing the significance of this procedure and its role in facilitating the unhindered execution of the educational process.

Results Of The Second Question: What Is The Level Of Availability Of Artificial Intelligence Requirements In Arab Preparatory Schools Within The Green Line?

To answer the second study question: The arithmetic means and standard deviations were calculated for the responses of the study sample members to the items of the dimensions of the field of artificial intelligence requirements, as shown in Table (3).

Table (3) Arithmetic means and standard deviations for the artificial intelligence requirements items from the point of view of middle school principals within the green line, arranged in descending order according to their arithmetic means

The level	standard Deviation	SMA	Paragraph	Rank
			Human Requirement	
Medium	1.12	3.32	Developing school employees' awareness of their roles under artificial intelligence.	**1**
Medium	1.09	3.30	Developing community members' awareness of how to benefit from artificial intelligence.	**2**
Medium	1.09	3.25	Determine the training needs necessary for teachers to apply artificial intelligence.	**3**
Medium	1.10	3.20	Training teachers on artificial intelligence skills.	**4**
Medium	1.07	3.17	Building administrative leadership to implement artificial intelligence in schools.	**5**
Medium	1.18	3.16	Developing artificial intelligence ethics among teachers.	**6**
Medium	**1.04**	**3.23**	**TOTAL**	
			Financial Requirements	
Medium	1.09	3.10	Providing the necessary infrastructure for applying artificial intelligence.	**7**
Medium	1.17	3.06	Developing the school's communication system according to modern developments.	**8**
Medium	1.16	2.96	Create a detailed database and make it available on the school's website.	**9**
Medium	1.16	2.91	Preparing training centers for school employees on dealing with artificial intelligence.	**10**
Medium	1.13	2.82	Providing the necessary financial support to implement artificial intelligence in schools.	**11**
Medium	**1.07**	**2.94**	**TOTAL**	
			Technical Requirements	
Medium	1.08	2.99	Develop an emergency plan in the event of loss of computerized data or breakdown of accounts.	**12**
Medium	1.12	2.98	Focusing teaching and learning processes on artificial intelligence.	**13**
Medium	1.12	2.89	Providing a database that includes everything related to the educational process that is dealt with inside and outside the school.	**14**
Medium	1.12	2.88	Providing an internal network through which expanded meetings can be held.	**15**
Medium	1.12	2.86	Support the spread of the asynchronous model of hybrid teaching and learning.	**16**
Medium	1.14	2.87	Providing digital libraries that can be accessed from inside and outside the school.	**17**
Medium	**1.01**	**2.93**	**TOTAL**	
			Legislative Requirements	
Medium	1.14	3.32	Taking procedural measures to maintain school information security.	**18**
Medium	1.17	3.20	Establishing regulations to ensure teachers' participation in management in light of the application of artificial intelligence.	**19**
Medium	1.05	3.17	Activating decisions issued by higher authorities in the field of artificial intelligence.	**20**

Medium	1.14	3.13	Supporting legislation that allows the transition from hierarchical organization to network organization.	**21**
Medium	1.21	3.10	Determine regulations for measuring teachers' performance based on their achievements, regardless of the hours they are in school.	**22**
Medium	1.19	3.07	Issuing laws and regulations that encourage work under artificial intelligence.	**23**
	1.14	2.79	Establishing laws that allow verification of identity in electronic transactions and preserve privacy.	**24**
Medium	**0.99**	**2.96**	Total marks	
Medium	**1.06**	**3.15**	Overall degree requirements for artificial intelligence	

Table (3) clearly indicates that the availability of artificial intelligence requirements in Arab preparatory schools within the Green Line has an arithmetic average of (3.15), indicating a moderate level. The dimensions of the field are as follows: The human requirements dimension takes the leading position with an arithmetic average of 3.23, followed by the requirements dimension. The legislative requirements dimension had a mean score of 2.96, followed by the physical requirements dimension with a mean score of 2.94. The technical requirements component had the lowest mean score of 2.93. This outcome demonstrates the Ministry of Education's recognition of the significance of fulfilling the needs of artificial intelligence in order to stay abreast of the latest advancements in cognitive and technical advances, with the aim of enhancing the educational process. This finding aligned with the research conducted by Al-Muraikhi (2023), which suggested that the degree of artificial intelligence was modest. It contradicted the findings of Al-Tuwaijri's study (2023), which suggested that there was a considerable need for artificial intelligence skills in the job market.

In terms of the dimension of human requirements, Paragraph (1), which emphasizes the need to enhance school personnel's understanding of their responsibilities in relation to artificial intelligence, had an average score of 3.32. Similarly, Paragraph (6), which focuses on the importance of cultivating ethical considerations regarding artificial intelligence among teachers, had an average score of 3.16.

In relation to the dimension of material requirements, paragraph (7) stated the need to establish the required infrastructure for implementing artificial intelligence, with a mean score of (3.10). Paragraph (11) emphasized the importance of providing financial support for the implementation of artificial intelligence in schools, with a mean score of (2.82).

In relation to the technical need's aspect, Paragraph (12) states the need for creating an emergency plan in case of computerized data loss or account breakdown. This paragraph had the highest arithmetic mean, assessed at (2.99). Paragraph 16 states that the goal is to create digital libraries that may be used both in and out of school, with an average rating of 2.87.

Paragraph 17, which requires the implementation of measures to ensure the security of school information, received an average score of 3.32. Paragraph 24, which requires the establishment of laws allowing identity verification in electronic transactions and privacy protection, received an average score of 2.79.

The results can be attributed to the managers' recognition of the significance of the human factor and its primary contribution to the success of the educational process. This recognition motivates them to prioritize the enhancement of the skills and capacities of this factor. It also signifies the limited financial resources in the school setting for building and establishing the school environment, as well as the necessity for schools to possess proficient technical talents to effectively resolve technical issues. Additionally, it is ascribed to the examination of legislative mandates as mechanisms that regulate administrative conduct in response to advancements in technology and cognition within the educational domain.

The third question is whether there are statistically significant differences, at a significance level of 0.05 or greater, in the responses of study participants regarding the reality of administrative performance in relation

to the requirements of artificial intelligence, based on variables such as gender, educational qualification, and years of experience.

In order to address the third question, we computed the arithmetic means and standard deviations for the domains of administrative performance in relation to the demands of artificial intelligence. This analysis was conducted based on the variables of gender, educational qualification, and years of experience, as presented in Table (4).

Administrative Performance	Artificial intelligence Requirements	Statistician	Category	variable
3.45	2.79	SMA	male	**Gender**
0.86	1.28	standard deviation		
3.26	3.39	SMA	feminine	
0.88	0.79	standard deviation		
3.23	3.39	SMA	diploma	**Qualification**
0.96	0.89	standard deviation		
3.34	2.67	SMA	Bachelor's	
0.81	1.11	standard deviation		
3.34	3.78	SMA	Postgraduate	
0.89	0.70	standard deviation		
3.14	3.56	SMA	4 years and less	**Years of Experience**
0.83	0.69	standard deviation		
3.47	2.90	SMA	5 – 10 years	
0.89	1.20	standard deviation		
3.35	2.85	SMA	11 years and over	
0.88	0.89	standard deviation		

It is noted from Table (4) that there are apparent differences between the averages for artificial intelligence requirements and administrative performance, from the point of view of Arab school principals themselves, according to the variables (gender, educational qualification, years of experience). In order to verify the significance of the apparent differences, a multiple binary analysis of variance was used (2-way MANOVA, and using Independent-Samples T test, as in Tables (5) and (6).

Sig	DF	T	The Field
0.00	185	3.978	**Artificial Intelligence Requirements**
0.147	185	1.456	**Administrative Performance**

Table (5) indicates that there are no statistically significant differences in administrative performance based on gender, since the T value exceeded the significance level of 0.05. This finding suggests that male and female school principals have equal administrative and organizational authority as a result of their employment in comparable administrative roles within the Ministry of Education. These findings aligned with the results of Al-Tuwaijri's study (2023), which showed that there were no statistically significant changes related to the gender variable.

Statistically significant differences were observed based on gender and the requirements of artificial intelligence. The T value was 3.97, indicating a significant difference at a statistical significance level of 0.05. The female category had a higher arithmetic mean of 3.39. This outcome is ascribed to the inclination of females towards innovation and their eagerness to adopt and implement all novel advancements in a world abundant with educational and pedagogical progress and inventions. The findings of this study diverged from the research conducted by Al-Tuwaijri (2023), which concluded that there were no statistically significant differences attributed to the gender variable.

statistical significance	computed F value,	mean sum of squares	degree of freedom	Sum of squares	Dependent variable	variable
0.00	20.331	18.932	2	37.864	Artificial intelligence requirements	Qualification

0.99	0.012	0.010	2	0.019	Administrative performance	
0.00	9.465	9.758	2	19.515	Artificial intelligence requirements	Years of Experience
0.06	2.933	2.206	2	4.412	Administrative performance	

Table (6) indicates that there are no statistically significant differences, at a significance level of 0.05, in the arithmetic averages of administrative performance as seen by school administrators, based on the variables of academic qualification and years of experience. This can be due to the efforts of Arab preparatory school principals who operate under similar professional conditions. As a result, they exhibit a consistent level of administrative competence, regardless of their educational backgrounds or years of experience. The findings align with Al-Muraikhi's (2023) study, which showed that there were no statistically significant variations in the responses of the participants based on their educational qualifications and years of experience. The table indicated statistically significant variations, at a significance level of 0.05, in the artificial intelligence needs as perceived by principals of Arab preparatory schools. These variations were observed in relation to the variables of academic qualification and years of experience. To determine these differences, the Scheffe test was utilized, and table (7) displays the results.

Table (7) Ssheffe test results for artificial intelligence requirements according to the variable of educational qualification and years of experience

Postgraduate	**Bachelor's**	**diploma**	**Category**
0.15	0.00	-	diploma
0.00	-	-	Bachelor's
-	-	-	Postgraduate
11 years and over	5 – 10 years	4 years and less	
0.04	0.00	-	4 years and less
0.98	-	-	5- 10 years
-	-	-	11 years and over

The data shown in Table (7) clearly indicates that there are statistically significant variations based on the academic qualification and the demands of artificial intelligence. The disparities were seen between the diploma and postgraduate studies category, as well as between the bachelor's and postgraduate studies category. These differences favored the postgraduate studies category, with an arithmetic average of 3.78. Statistically significant differences were observed based on the variable of years of experience and the requirements of artificial intelligence. These differences were found between the category of 4 years or less and the category of 5-10 years, as well as between the category of 4 years or less and the category of 11 years and above. Individuals with 4 years of experience or less had an advantage in these comparisons. The high level of motivation exhibited by new teachers is responsible for their commitment to staying updated with the latest advancements in order to enhance the school environment in a manner that aligns with the technical and cognitive progress observed in the field of education. In contrast to Al-Muraikhi's (2023) study, our findings demonstrate statistically significant differences in the replies of the study sample members based on their academic qualification and years of experience.

Question Four: What is the impact of the availability of artificial intelligence requirements on improving the administrative performance of Arab school principals within the Green Line?

To answer this question, linear regression was used to determine the impact of the availability of artificial intelligence requirements on improving the administrative performance of principals of Arab preparatory schools within the Green Line from their point of view, and Table (5) shows this.

Sig	**B**	**F**	**R^2**	**R**	The dimension
0.00	0.417	49.527	0.211	0.460	Human requirements

0.00	0.786	190.417	0.507	0.712	Physical requirements
0.01	0.226	11.474	0.058	0.242	Technical requirements
0.01	0.206	7.524	0.390	0.198	Legislative requirements
0.00	0.249	12.643	0.064	0.253	Artificial intelligence requirements as a whole

Table (8) clearly shows that there is a statistically significant effect at the significance level (0.05) of the degree of availability of artificial intelligence requirements in improving the administrative performance of principals of Arab preparatory schools within the Green Line, where the correlation coefficients ranged between (0.198-712), the determination coefficients ranged between (0.058-507), and the degree of influence ranged between (0.206-0.786). This association has F values that are statistically significant (0.05) for all dimensions of AI requirements.

The researcher attributes this result to the importance of artificial intelligence in all aspects of life, as it has become an essential and indispensable pillar for developing individuals' professional performance, improving planning and decision-making processes, and improving the quality and efficiency of work in accordance with technological innovations in a way that meets educational objectives. Stipulated. This finding was congruent with that of Al-Muraikhi (2023), who found that artificial intelligence requirements can help improve administrative performance.

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