

## Article

# The Impact of Digital Transformation on Improving Human Resource Management Performance: The Mediating Role of Strategic Decision Quality – an Analytical Study in the Ministry of Education / Al-Karkh II Directorate

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**Abstract:** In this research, an effort will be made to investigate the impact of digital transformation on the performance of human resource management (HRM) performance, through the mediation of the quality of strategic decision making in the Ministry of Education, the Directorate of Al-Karkh II. Digital Transformation is assumed as an independent variable, whose dimensions include digital skills, digital technology adoption and digital working environment. Strategic decision quality acts as the mediator, which has dimensions such as decision relevance, decision acceptance and decision quality. The dependent variable in the research is HRM performance, which includes dimensions of task performance, administrative performance and capability performance. The descriptive analytical approach was used in this study. For data collection, questionnaires were distributed among the random samples of 286 employees and administrative executives of the Directorate of the Second Karkh. Data were analyzed using SPSS v26 and AMOS v24 software and through using appropriate statistical tools such as multiple linear regression and structural equation modeling. From the findings, it is clear that there is a significant positive influence of digital transformation on HRM performance and significant influence of digital transformation on strategic decision quality. Moreover, there is significant influence of strategic decision quality on HRM performance. It has been found that there is partial mediation of strategic decision quality in the relationship between digital transformation and HRM performance. Therefore, the importance of using digital technologies in the process of administrative and strategic decision to improve the performance of organization should be noted. Based on the findings of the study, some recommendations can be given to increase the effectiveness of digital transformation initiatives, develop employees' digital skills, provide integrated digital working environment and use modern digital technologies to support the quality of strategic decisions.

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**Keywords:** Digital Transformation, Human Resource Management Performance, Quality of Strategic Decisions, Digital Skills, Technological Adaptation, Ministry of Education.

## 1. Introduction

The current global environment is marked by the quick growth of digital innovations, which force companies, in particular governmental entities, to adopt digital transformation as their orientation. It assists in improving the administrative operations and increasing the effectiveness of institutional performance. Digital transformation serves as an essential factor behind the implementation of new technologies for boosting the communication, streamlining processes, improving the services provided, which influences the performance of Human Resources Management department, one of the departments affected most by technological advances.

In this regard, the quality of strategic decisions has become the main factor affecting the ability of an entity to reach its goals successfully. It is reached through the use of accurate information and reliable analysis, which help to make proper choices and solve organizational issues. The digital transformation improves the quality of strategic decisions through the provision of advanced database and digital tools for assisting managers in making precise and flexible decisions.

In light of the above-mentioned considerations, the present study will try to evaluate the effect of digital transformation on the performance of Human Resources Management, as well as the mediating effect of strategic decision quality in the relationship, in the Ministry of Education / Al-Karkh Second Directorate. In order to reach the study goals, it will be divided into four parts: the first one will be devoted to methodology, the second part will provide the theoretical framework, the third part – to the practical and analytical part, and the last one – to the conclusions and recommendations.

### **Research Problem**

Due to the growing concern about digital transformation in government institutions, human resources management (HRM) faces issues of improving the effectiveness of administration, service quality, and capacity to make informed strategic decisions. Therefore, it becomes necessary to diagnose the effect of digital transformation on the performance of HRM and to explain the role played by strategic decision quality in this context within the Ministry of Education / Al-Karkh Second Directorate. Thus, the major research problem is the following: What is the effect of digital transformation on the performance of HRM via the mediation of strategic decision quality in the Ministry of Education / Al-Karkh Second Directorate? The following questions emerge:

1. What is the degree of the application of digital transformation in the Ministry of Education / Al-Karkh Second Directorate?
2. Is there any effect of digital transformation on the quality of strategic decisions and HRM performance?
3. Is there any mediation role of the quality of strategic decisions in the effect of digital transformation on HRM performance?

### **Research Objectives**

1. To prove the effect of digital transformation on the performance of HRM within the Ministry of Education / Al-Karkh Second Directorate.
2. To find out the way the effect of digital transformation occurs on the quality of strategic decisions in the studied institution.
4. To determine the degree of the impact of the quality of strategic decisions on the performance of HRM.
5. To reveal the mediation role of the quality of strategic decisions in the effect of digital transformation on HRM performance.

### **Research Importance**

The importance of this research lies in the importance of the variables under investigation—digital transformation, HRM performance, and strategic decision quality—as topical administrative concepts leading to the improvement of the efficiency of governments and organizations. The contribution of the research to the academic knowledge base can be shown through the development of the theoretical and analytical framework of the interrelation of these variables, especially the mediation role of the quality of strategic decisions in the interrelation of digital transformation and HRM performance. The practical importance of the study lies in providing some advantages for the Ministry of Education / Al-Karkh Second Directorate with regard to advancing the process of digital transformation, the improvement of the quality of administrative decisions, and increasing HRM performance due to the requirements of the modern digital age.

### Hypothetical Research Model

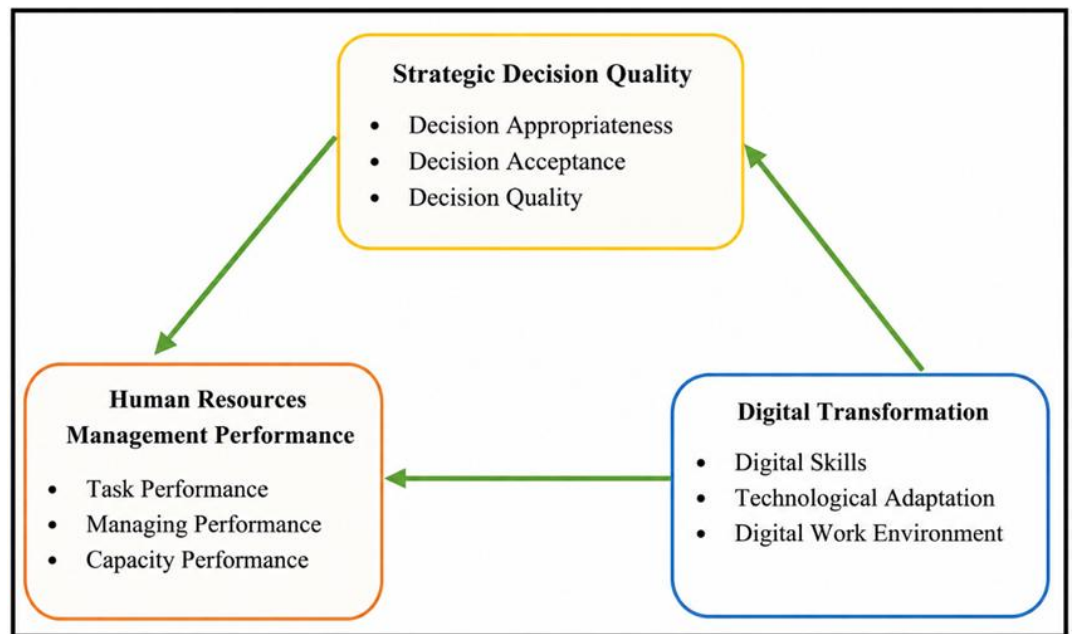
The hypothetical model reveals the directional relations between the variables under investigation. Digital transformation is regarded as the independent variable with the direct effect on HRM performance and the indirect one via strategic decision quality influencing HRM performance as well. The purpose of such a framework is to reveal the paths between variables and their dimensions.

The table below shows the scale of the variables under investigation, their dimensions, and the sources used for developing the theoretical framework and the instrument of the research.

**Table 1.** The Scale of the Research Variables.

Variable	Dimensions	Source
<b>Digital Transformation</b>	Digital Skills Technological Adaptation Digital Work Environment	Digital Transformation and Its Impact on Career Sustainability, 2024 Zhang and Li, 2011
<b>Hrm Performance</b>	Task Performance Managing Performance Capacity Performance	Hussain et al., 2024
<b>Strategic Decision Quality – Sdq</b>	Decision Appropriateness Decision Acceptance Decision Quality	

Source: Prepared by the researcher based on the literature.



**Figure 1.** The Hypothetical Research Model.

### Research Hypotheses

These hypotheses are based on the directional relationships among the variables of the study which are: digital transformation, HRM performance, and strategic decision quality. These hypotheses are stated as follows:

Main Hypothesis One: Digital transformation affects the HRM performance of the Ministry of Education / Al-Karkh Second Directorate with a statistical significance.

Main Hypothesis Two: Digital transformation affects the strategic decision quality of the Ministry of Education / Al-Karkh Second Directorate with a statistical significance.

Main Hypothesis Three: Strategic decision quality affects the HRM performance of the Ministry of Education / Al-Karkh Second Directorate with a statistical significance.

Main Hypothesis Four: Strategic decision quality plays a role of a statistically significant mediator in the relationship between digital transformation and HRM performance in the Ministry of Education / Al-Karkh Second Directorate.

### **Research Population and Sample**

The population is comprised of the employees of the Ministry of Education / Al-Karkh Second Directorate and amounts to about 1,100 people. This governmental institution seeks to adapt to the demands of digital transformation and increase its performance at an administrative and organizational levels especially at the levels of HRM and strategic decision quality. The sample size amounts to a total of 286 random people chosen among the staff and administrative leaders of the Al-Karkh Second Directorate in order to obtain reliable data about the realities of the study variables.

## **2. Research Methodology**

The current study followed a descriptive-analytical research method which was chosen due to the suitability to the research context as well as its popularity among administrative and organizational studies aiming at describing the phenomenon, examining inter-variable relationships and interpreting them scientifically. Data were mainly gathered using the questionnaire distributed to the sample of 286 people. Statistical analysis was performed using the software of SPSS Version 26 and AMOS Version 24. These tools helped to perform descriptive analysis, examine the correlations and influence relationships, conduct structural equation modeling, and evaluate the mediating role of the variables.

### **Research Limits**

Geographical limit is set to the Ministry of Education / Al-Karkh Second Directorate. As for time limits, data gathering and practical part took place in 2026. The human limit is set to the employees and administrative leaders in the directorate. As for the subject matter limit, the study focuses on the impact of digital transformation and its aspects—digital skills, adaptation to technology, and the digital work environment on the HRM performance and its aspects—task performance, managing performance, and capacity performance through the mediating role of strategic decision quality and its aspects: decision appropriateness, decision acceptance, and decision quality.

### **Previous Studies**

**Study by (Harney and Jordan, 2008), entitled: “Unlocking the Black Box: Line Managers and HRM-Performance in a Call Centre Context”**

The purpose of the current study is to investigate the effect of HRM on organizational performance by paying close attention to the role of line managers and quality of administrative decisions in a call center. Descriptive-analytical methodology was adopted in the study, and data were collected through structured questionnaire from employees and managers. Correlation analysis, regression analysis, and organizational performance analysis were used to analyze the relations among variables. According to the findings, quality of administrative decisions and quality of organizational practices improve job satisfaction, organizational commitment, and HRM performance in the organization.

The study conducted by Zhang and Li entitled "HRM Performance Evaluation Based on Grey Theory and TOPSIS Methodology for Scientific Material Company" was conducted to evaluate the performance of HRM in terms of task performance, administrative performance, and capacity performance using modern methodologies of organizational performance evaluation. Analytical methodology was used in the study, and data were collected through questionnaire from 45 scientific material companies in

China. Grey Correlation Analysis and the TOPSIS methodology were used to analyze the data and measure performance level. As a result, it was found out that quality of administrative and organizational decisions improves HRM performance efficiency and employees' organizational and administrative capabilities.

The study conducted by Mahasumran et al. entitled "The Factors of Digital Human Resource Management in Thai Automotive Parts Manufacturers" was aimed at identifying factors that affect the performance of digital HRM in Thai automotive parts manufacturing companies through digital technologies, workforce analytics, and digital performance management [1]. Descriptive-analytical methodology was used in the study, and a questionnaire was used to collect data from employees and managers in the selected Thai automotive parts manufacturing firms. The statistics used in the study include Cronbach's alpha, Exploratory Factor Analysis (EFA), the Kaiser–Meyer–Olkin (KMO) test, correlation analysis, and regression analysis. According to the results, the application of digital systems and data analytics considerably improve quality of HR services, accelerate processes and improve quality of administrative and organizational performance.

The study conducted by Hussain et al. entitled "Interactive Role of Strategic Clarity in the Relationship Between Organizational Conflict Management and Strategic Decision Quality" was aimed at analyzing the strategic decision quality in terms of decision appropriateness, decision acceptance, and decision quality as well as the impact of strategic vision clarity on organizational decision-making [2]. Descriptive-analytical methodology was used in the study; data were collected through questionnaires from employees and organizational management. Correlation analysis, regression analysis, and path analysis by means of Structural Equation Modeling (SEM) were used. The results showed that availability of digital systems and information accuracy directly lead to the improvement of strategic decision quality and performance efficiency.

Study "Digital Transformation and Its Impact on Career Sustainability" was aimed at proving the impact of digital transformation on sustainability of job performance and HRM efficiency through digital skills, technological adaptation, and digital work environment [3]. Descriptive-analytical methodology was used in the study; questionnaire was used as a primary data collecting instrument from employees in institutions that have adopted digital transformation. Arithmetic mean, standard deviation, correlation analysis, and regression analysis were used as statistical techniques to test relations among variables. The results show that digital transformation positively affects HRM performance because it leads to HRM efficiency increase, improves quality of administrative performance and acceleration of job performance.

Study "Human Resource Management Performance Evaluation System" by Pererva and Chen was aimed at constructing the system for HRM performance evaluation in a digital environment highlighting the role of digital transformation in supporting the quality of administrative and strategic decisions in organizations [4]. Analytical methodology was used in the study; data collected from the organization and questionnaire were used as primary sources. Descriptive analysis, performance analysis, and digital indicators were used to assess the efficiency of administrative performance. The study results show that digital systems allow managing to make more accurate and flexible strategic decisions increasing administrative performance efficiency and quality of organizational services.

### **Similarities and Differences Between the Current Study and Previous Studies**

The current study is similar to the previous studies because it focuses on modern administrative variables such as digital transformation, HRM performance, and strategic decision quality. Moreover, the study is similar to previous researches in its methodology as it uses descriptive-analytical method and questionnaire as a primary data collecting instrument along with the modern statistical techniques for hypothesis testing such as correlation and regression analysis.

As for the differences between the current study and previous researches, first of all, the current study is distinctive in integration of three mentioned variables into one research model; this helps to fill the gap left by previous researches as they usually did not test the mediating role of strategic decision quality in the relation between digital transformation and HRM performance. Moreover, the current study is distinctive in that it was conducted in an Iraqi governmental organization (Ministry of Education / Al-Karkh Second Directorate).

## **Section Two: The Theoretical Aspect**

### **The Concept of Digital Transformation**

Digital transformation is characterized as a holistic strategic process which involves integrating digital technologies in various organizational processes and business models, leading to significant changes in work mechanisms, value creation, organizational efficiency, and performance of organizations [5]. This concept can also be defined as a comprehensive transformation of institutions that include changes in their operational processes, production models, and ways of delivering services due to adaptation to the conditions of the digital era through the reengineering of organizational processes according to contemporary environmental and technological changes [6], [7]. The concept of digital transformation is more than just technology adoption, as it is currently seen as a modern philosophy of management based on integration of technology, human resources, and organizational processes in order to achieve flexibility, sustainability, and competitiveness in contemporary organizations [8].

### **Importance of Digital Transformation**

The importance of digital transformation is associated with its nature of being one of the main drivers of economic growth and development of institutions, helping to ensure increased competitiveness, improved efficiency of processes, higher service quality, and institutional innovation that allows keeping pace with digital changes [9]. It also became the necessity of modern times due to its impact on the experience of beneficiaries, decision-making process, acceleration of organizational processes, and increasing the level of flexibility and responsiveness to environmental and technological changes [10]. Moreover, modern digital institutions operate on the basis of data and advanced analytics and use technologies like artificial intelligence, cloud computing, and digital automation to make informed decisions, be efficient, and sustain themselves [5].

### **Objectives of Digital Transformation**

The objectives of digital transformation include reengineering of organizational processes, development of business and production models, increase in the level of value creation of institutions, stimulation of innovation, and increasing institutions' adaptability to the digital environment of the current era [11]. The objective of digital transformation also includes improving the level of organizational performance, developing digital services, increasing the efficiency of institutional performance, accelerating and improving the decision-making process, and achieving digital integration in various organizational processes with the purpose of gaining competitive advantage and sustainability [12], [10]. The existing literature proves that success of digital transformation requires advanced digital infrastructure, supportive leadership, and flexible organizational culture capable of absorbing changes, continuous learning, and openness to innovations and contemporary technologies [13].

### **Dimensions of Digital Transformation**

#### **1. Digital Skills**

Digital skills include the array of competencies and knowledge required for the efficient use of digital tools and technologies to accomplish tasks, contribute to collaboration, be involved in organizational processes and adapt to contemporary digital environment [14]. Employees' digital skills have been revealed as one of the key factors

impacting modern technology adoption as well as organizational performance and innovation within companies [15].

## **2. Technological Adaptation**

By technological adaptation it is meant the ability of the organization and its employees to adapt to advanced digital tools and technologies used in accordance with the dynamics of the digital environment. This happens through the application of advanced digital technologies such as artificial intelligence, data analytics and digital automation in order to develop organizational processes, improve performance and support decision-making [12]. Also, technological adaptation in relation to digital changes and advancements impacts organizational flexibility and helps to achieve digital integration and organizational performance efficiency [5].

## **3. Digital Work Environment**

The concept of the digital work environment implies the organizational environment where digital technologies and systems are applied to perform organizational work and facilitate information exchange and communication. Such a work environment contributes to the innovation and continuous learning and openness to modern technologies. The digital work environment includes the organizational structure and culture facilitating the digital transformation and interaction of employees with the digital systems and adaptation to the requirements of contemporary work [16]. Digital leadership makes its significant contribution to the improvement of the digital work environment through the promotion of innovation, formation of a clear vision of digital transition and fostering the employees' adaptation to digital changes [17], [13].

### **The Concept of Strategic Decision Quality**

Strategic decision quality is considered to be one of the contemporary administrative concepts associated with the ability of the top management of the organization to make decisions that contribute to the achievement of organizational goals and increase the capability of survival and adaptation in dynamic environments. According to Marinos and Rosnim [18], the quality of strategic decision making is a critical factor influencing the organization's survival and adaptation to changing business environment, while Tabesh and Vera define strategic decision quality as reflected in the decisions of top management that set the overall direction, vision and strategic goals of the organization [19]. Also, Karlsson and Sumar state that strategic decision-making is the field that combines management science and leadership art [20]. Danach et al. note that high-quality decisions are those supported by accurate information, made at appropriate time, consistent with the organizational strategy and supported by proper accountability mechanisms [21].

### **The Importance of Strategic Decision Quality**

The importance of strategic decision quality is associated with its key role in guiding organizational performance and increasing the organization's capability to adapt to rapid changes in the environment and technology. Ma states that strategic decision quality is a crucial element in maintaining the competitiveness and achieving long-term development of the organization [22]. According to Sedky, the quality of decisions impacts the alignment of strategies, operational flexibility and achievement of the results [23]. Effendy et al. reveal that poor decision quality increases the risk and undermines organizational credibility [24], while Moshood et al. prove that decision quality becomes a critical difference maker between organizations that only survive and those that enjoy sustainable success [25]. The research reveals that decision quality depends mostly on the quality of available information and data, which contributes to better planning and supports organizational and administrative performance [26].

### **Objectives of Strategic Decision Quality**

The goal of strategic decision quality is to increase the organization's ability to make efficient decisions that support organizational performance and strategic objectives. Prior

research has been carried out in order to evaluate the impact of big data and information quality on strategic decision quality improvement [26], and measure the role of leadership and knowledge management in improving decision-making quality [27]. Also, the objective of strategic decision quality is to provide practical frameworks that would help administrations to build up the decision-making environment and improve organizational performance efficiency.

### **Dimensions of Strategic Decision Quality**

#### **1. Decision Appropriateness**

The dimension of decision appropriateness means the extent to which the strategic decision matches the goals of the organization as well as the conditions that exist internally and externally, along with the accuracy of the information and rational analysis that help in making the best choice. Danach et al. argue that high-quality decisions are based on precise information and match strategic goals [21], while Elbanna and Child argue that the rationality of the decision-making process is expressed in gathering of the right information and conducting an analysis before making any strategic decision [28]. Schermerhorn proves that the quality of the decision is also demonstrated in the ability to provide alternative choices that will help to achieve the goals of the organization effectively [29].

#### **2. Decision Acceptance**

Decision acceptance is about the level at which employees and administrations agree on the decision and are ready to support its realization. According to McGraw, the fairness of decision-making process affects individuals' acceptance of decisions made by the organization [30], while Parayitam and Dooley state that procedural justice is an important basis for improving decision acceptance in the organization [31]. In Abu Al-Ghanem, commitment is described as loyalty and discipline to decisions that help in their successful realization and achievement of the organizational goals [32].

#### **3. Decision Quality**

Decision quality is the ability of the decision to result in successful outcomes and improve the performance of the organization, based on precise information, rational analysis, and strategic vision. Kuria and Mose define decision quality as the cognitive process of selection of the most appropriate alternative among several [33], while Rahim and Al-Atawi confirm that good decisions will help the organization to compete successfully in the future [34]. Sedky claims that decision quality is a strategic competence that helps to achieve the success in the long term and increases organizational and operational flexibility [23].

### **The Concept of Human Resources Management Performance**

Human resources management performance is a significant administrative concept concerning the organization's ability to manage its human resources in such a way that helps to achieve organizational goals and improve the performance of the institution. Safdar states that the relation between human resources management and organizational performance became the main theme in the current administrative research because human resources practices are able to increase employees' efficiency and provide competitive advantage to the company [35]. According to Harel and Tzafirir also explained that human resources management practices directly and indirectly affect the organizational and market performance of the organization by improving employees' skills, motivating them, and enhancing their participation [36]. Wood explains that human resources management performance is linked to the ability of the human systems and practices to combine the skills, motivations, and opportunities for the participation of employees, affecting the performance of the institution [37].

## **The Importance of Human Resources Management Performance**

The importance of human resources management performance is determined by its significant contribution to the increase of organizational efficiency, adaptability to changes in the environment and technologies, and sustainable performance. Harel and Tzafrir claim that human resources are the strategic assets that help to achieve sustainable competitive success [36]. In their turn, Sels et al. believe that the use of high-performance human resources practices increases the productivity and financial performance despite the growth of some costs [38]. As indicated by Malik et al., high-performance human resources practices help to stimulate knowledge sharing and innovation and improve the solutions in the current digital environment [39]. As shown by Pererva and Chen, the digital transformation increased the importance of human resources management in building digital competences and adaptation to the demands of the modern work environment [4].

## **Objectives of Human Resources Management Performance**

The goal of human resources management is to develop employees' competences and improve their performance so that the goals of the organization would be achieved and competitiveness would be enhanced. Current researches tried to show the impact of human resources practices on the improvement of organizational performance, increase of the efficiency of employees, and integration of technology and human resources [1]. Moreover, the relation between human resources practices and the performance of the institution is examined as well as the influence of training, motivation, and career development on the organizational outcomes [36]. Furthermore, human resources management aims to support the digital transformation and develop the competences of professionals and improve organizational flexibility according to the requirements of the current digital environment [40].

## **Performance of Human Resources Management Dimensions**

### **1. Task Performance**

Task performance refers to the ability of employees to accomplish assigned tasks efficiently and effectively according to the organization's predefined plans. According to Zhang and Li, the task performance can be viewed as an area that includes compliance with planned activities, minimizing errors, and increasing operational efficiency in the organization. Besides, the empirical studies reveal that the increase in the level of employees' skills and adequate training positively affect task performance and efficient accomplishment of the organizational goals [36].

### **2. Managing Performance**

The managing performance is an ability of human resources management to organize activities, control employees, and solve organizational problems in such a way that helps to ensure employment stability and improve organizational performance. In particular, Zhang and Li emphasize that the managing performance implies reduction of complaints, resignations, violations of job behavior, as well as improving employees' job satisfaction. Moreover, Harney and Jordan note that HR management contributes to the motivation of employees, development of positive behavior, and improvement of the organizational work environment [41].

### **3. Capacity Performance**

The capacity performance is related to competencies and skills of employees that allow them to perform tasks, make decisions, communicate, and adjust to organizational and technological changes. Zhang and Li note that this performance includes implementation, leadership, planning, communication, innovation, and using special skills. It has been recently revealed that the development of digital and technological skills of employees plays a key role in increasing performance of HR during digital

transformation [4]. Besides, high-performance human resources help to increase innovation, knowledge sharing, and flexibility of the organization [39].

### 3. Results and Discussion

#### Section Three: Practical Aspects

The current section examines collected data based on the research questionnaire used for surveying 286 people, who were chosen as the research sample including employees and administrative heads of the Ministry of Education, Al-Karkh Second Directorate. The aim of this section is to test the research hypotheses, examine nature of relations between variables of the study, and provide scientific interpretation of the obtained results concerning digital transformation, human resources management performance, and quality of strategic decision-making.

#### Personal Characteristics of the Research Sample

Table 1 represents personal and professional characteristics of 286 respondents depending on demographic variables such as gender, age, education, and job position. The purpose of this characterization is to understand the nature and general characteristics of the research sample.

**Table 1.** Personal Information of the Research Sample.

Attribute	Category	Frequency	Percentage
Gender	Male	132	46%
Gender	Female	154	54%
Gender	Total	286	100%
Age	25 years or less	38	13%
Age	26–35 years	104	36%
Age	36–45 years	89	31%
Age	46–55 years	39	14%
Age	56 years or more	16	6%
Age	Total	286	100%

**Source:** Prepared by the researcher based on SPSS results.

Table (1) highlights the personal features of the research sample. According to the results presented in the table, females make up the majority of the research sample accounting for 54% (154 people), which is the largest proportion compared to male participants that represent 46% (132 individuals). Such predominance is connected with the widespread occupation pattern within the education directorates, where the involvement of women in all aspects of activities, administration, education, and organization is considerable. The diversity of opinions obtained in the course of survey provides additional objectiveness and accuracy of analyzing the research variables.

As to the age distribution among the sample participants, the results of the survey show that the largest age group is the group of people aged between 26 and 35 years making up 36% (104 individuals), and next comes the age group of 36-45-year-olds with 31% (89 individuals). It can be concluded that most of the participants are of a professional age and able to cope with the challenges of digital transformations and modern technology in the work environment. The age group of 46-55-year-olds makes up 14%, while those of 25 years old and below represent 13%. The last and the smallest age group includes those who are older than 56 years (6%) of the participants.

#### Reliability Test

The reliability test was carried out with the help of the Cronbach's Alpha coefficient, which is a widely used statistic tool allowing assessing the reliability and consistency of the questionnaire items. The range of Cronbach's Alpha coefficient lies between 0 and 1,

with higher values meaning higher reliability and internal consistency of the scale items. If the value of Alpha exceeds 0.70, it can be considered as acceptable evidence of the reliability of the measurement tool. To check the reliability of the current study instrument, Cronbach's Alpha was calculated both for the items and the whole scale of the research variables, see Table (2).

**Table 2.** Reliability Values for the Study Variables.

Variables and scale	Number of items	Reliability values
Digital transformation	12	0.884
Strategic decision quality	12	0.861
Human resources management performance	12	0.903
Overall scale	36	0.941

**Source:** Prepared by the researcher based on SPSS results.

The findings as shown in Table (2) above indicate that all reliability coefficients for the study variables and the total scale are greater than the minimum acceptable reliability coefficient value of 0.70. The total scale shows the highest reliability of 0.941, human resources management performance variable with 0.903, digital transformation variable with 0.884 and strategic decision quality with 0.861. This implies that there is high internal consistency and reliability of the study instrument and thus the use of it in data analysis and testing of hypotheses with some objective.

#### **Assessment of Normal Distribution**

Methods of statistical tests used for analysis depend on the nature of the data where some of the statistical tests require the data to be normally distributed. In order to test whether the normality assumption applies to the data, the Kolmogorov-Smirnov test is used in the assessment of the distribution of the study variables.

Normal distribution is assumed where the p-value (Sig.) is greater than the significance level of 0.05, thus making it possible to employ parametric tests in data analysis and testing of hypotheses. Table (3) below shows the findings of the normality test of the study variables where all the variables follow normal distribution since their significance levels are greater than 0.05.

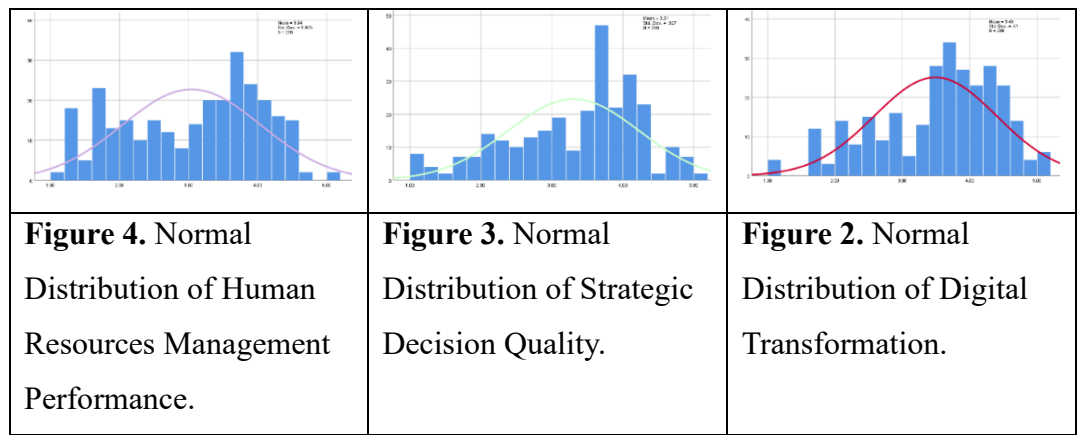
**Table 3.** Normal Distribution Test for the Study Variables.

Variable	Test statistic	Number of items	Test significance
Digital transformation	0.081	286	0.072
Strategic decision quality	0.087	286	0.064
Human resources management performance	0.079	286	0.081

**Source:** Prepared by the researcher based on SPSS results.

From the results in Table 3, it can be seen that the significance level of the variable "digital transformation" is 0.072, whereas the significance level of the variable "strategic decision quality" is 0.064. As far as the variable "human resources management performance" is concerned, its significance level is 0.081. All the above-mentioned significance levels are higher than the generally accepted significance level of 0.05, which means that the data in the study have a normal distribution.

Furthermore, from the graphs showing data gradation, it becomes clear that the distribution curve approaches the normal distribution, which proves the adequacy of the data used for statistical analysis via proper parametric tests.



**Source:** Prepared by the researcher based on SPSS results.

### Descriptive Analysis of the Study Variables

Descriptive statistical techniques will be used in order to carry out the analysis of the study variables as well as their dimensions. The descriptive analysis will employ the arithmetic mean, the standard deviation, coefficient of variation, and the relative importance of the variables in order to evaluate the level of availability of the study variables amongst the respondents and understand the nature of the answers provided to the questionnaire items.

The descriptive analysis of the study variables of digital transformation, strategic decision quality, and performance of human resources management is done in order to bring out the nature and dimensions of the study variables. Arithmetic mean is used to determine the central tendency of the data while standard deviation determines the dispersion of the data. Coefficient of variation shows the relative homogeneity of the data.

**Table 4.** Descriptive Analysis of the Research Variables.

Code	Item	Arithmetic mean	Standard deviation	Coefficient of variation	Relative importance
X1	Digital Skills	3.459	1.026	29.66%	69%
X2	Technological Adaptation	3.510	1.011	28.80%	70%
X3	Digital Work Environment	3.502	1.045	29.84%	70%
X	Digital Transformation	3.491	0.910	26.08%	70%
Z1	Decision Appropriateness	3.153	1.084	34.37%	63%
Z2	Decision Acceptance	3.369	1.014	30.10%	67%
Z3	Decision Quality	3.394	0.950	27.99%	68%
Z	Strategic Decision Quality	3.306	0.927	28.06%	66%
Y1	Task Performance	3.066	1.079	35.19%	61%
Y2	Managing Performance	3.038	1.072	35.30%	61%
Y3	Capacity Performance	3.024	1.139	37.67%	60%

Y	Human Resources Management Performance	3.042	1.005	33.05%	61%
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**Source:** Prepared by the researcher based on SPSS results.

From Table (4), the following is evident:

The variable digital transformation attains an arithmetic mean of 3.491 which shows high availability with a standard deviation of 0.910 which shows moderately dispersed views in the sample. The coefficient of variation is 26.08% indicating acceptable homogeneity among the respondents. This variable records a relative importance of 70% ranking first among the study variables. Hereunder is the analysis of the dimensions of the variable digital transformation:

- Digital Skills: The dimension has an arithmetic mean of 3.459 showing high availability, while the standard deviation is 1.026 showing moderate dispersion in views. The coefficient of variation is 29.66% showing relatively homogeneous views. The relative importance is 69% ranking third among the dimensions of the variable.
- Technological Adaptation: The dimension has an arithmetic mean of 3.510 which shows high availability, while the standard deviation is 1.011 which shows relatively moderate dispersion. The coefficient of variation is 28.80% showing good homogeneity in the responses. The relative importance is 70% making this dimension rank first among the dimensions.
- Digital Work Environment: The arithmetic mean of this dimension is 3.502 which shows high availability, while the standard deviation is 1.045 showing moderate dispersion in views. The coefficient of variation is 29.84% showing acceptable level of homogeneity. This dimension has a relative importance of 70% ranking second among the dimensions.

As for the variable strategic decision quality, the arithmetic mean is 3.306 showing moderate availability tending towards high, while the standard deviation is 0.927 showing moderate dispersion in views. The coefficient of variation is 28.06% showing relative homogeneity in the responses. The relative importance is 66% ranking second among the study variables. Below is the analysis of the dimensions of this variable:

- Decision Appropriateness: The dimension has an arithmetic mean of 3.153 showing moderate availability, while the standard deviation is 1.084 showing moderate to relatively high dispersion in views. The coefficient of variation is 34.37% showing relative variation in the responses. The relative importance is 63% ranking third among the dimensions.
- Decision Acceptance: The dimension has an arithmetic mean of 3.369 showing moderate availability tending towards high, while the standard deviation is 1.014 showing moderate dispersion in views. The coefficient of variation is 30.10% showing relative homogeneity in views. The relative importance is 67% ranking second among the dimensions.
- Decision Quality: The arithmetic mean is 3.394 showing moderate availability tending towards high, while the standard deviation is 0.950 showing moderate dispersion in responses. The coefficient of variation is 27.99% showing relatively good homogeneity in views. The relative importance is 68% ranking first among the dimensions.
- In the variable human resources management performance, the arithmetic mean is 3.042 showing moderate availability, while the standard deviation is 1.005 showing moderate dispersion in responses. The coefficient of variation is 33.05% showing moderate level of homogeneity in views. The relative importance of this variable is 61% ranking third among the study variables. Below is the analysis of the dimensions of this variable:

- Task Performance: The arithmetic mean is 3.066 showing moderate availability, while the standard deviation is 1.079 showing moderate to relatively high dispersion in views. The coefficient of variation is 35.19% showing relatively high variation in responses. The relative importance is 61% ranking first among the dimensions.
- Managing Performance: The dimension has an arithmetic mean of 3.038 showing moderate availability, while the standard deviation is 1.072 showing moderate to relatively high dispersion in views. The coefficient of variation is 35.30% showing relative variation in views. The relative importance is 61% ranking second among the dimensions.
- Capacity Performance: The arithmetic mean is 3.024 showing moderate availability, while the standard deviation is 1.139 showing relatively high dispersion in responses. The coefficient of variation is 37.67% showing greater variation compared to the other dimensions. The relative importance is 60% ranking third among the dimensions.

### Hypothesis Testing

Testing the First Main Hypothesis: There exists a statistically significant effect of digital transformation on human resources management performance in the Ministry of Education, Al-Karkh Second Directorate.

In order to test the above mentioned hypothesis, a multiple linear regression analysis was conducted to determine the influence of the dimensions of digital transformation, such as digital skills, technological adaptation, and digital work environment on human resources management performance.

The findings revealed that the proposed regression model is characterized by high statistical significance; thus, the calculated F-value is equal to 122.839, which is higher than the tabulated F-value of 2.60. The significance level of the model is 0.000, which is less than 0.05 and means a meaningful effect of digital transformation on human resources management performance.

The value of the coefficient of determination is  $R^2 = 0.566$ , meaning that the considered dimensions of digital transformation explain 56.6% of the variation in human resources management performance, while the rest of the variation is explained by factors that were not taken into consideration in the model.

Concerning the sub-dimensions, the digital skills dimension proved to have the highest effect on human resources management performance and provided a standardized slope (beta) equal to 0.445,  $t = 7.421$ ,  $p = 0.000$ , suggesting that improving digital skills of employees contributes to the development of human resources management performance. The technological adaptation dimension also proved to be significant and had a slope of 0.203,  $t = 3.177$ ,  $p = 0.002$ , showing that organizational and individual adaptability to new technologies influences the administrative and organizational performance. Finally, the third dimension – the digital work environment was shown to have a significant effect, with the slope of 0.169,  $t = 3.253$ ,  $p = 0.001$ , meaning that the creation of a favorable digital environment encourages increased work efficiency and promotes human resources management performance in the organization.

The regression equation is as follows:

$$\text{Human Resources Management Performance} = 0.194 + 0.445(\text{Digital Skills}) + 0.203(\text{Technological Adaptation}) + 0.169(\text{Digital Work Environment})$$

According to the results, the first main hypothesis stating that there exists a statistically significant effect of digital transformation on human resources management performance in the Ministry of Education, Al-Karkh Second Directorate can be accepted.

**Table 5.** Results of Testing the Effect of Digital Transformation on Human Resources Management Performance.

Variable	Constant/marginal slope (b)	Calculated t-value	Significance (sig.)	Coefficient of determination (r <sup>2</sup> )	Calculated f-value	Tabulated f-value	Overall significance
Constant	0.194	1.242	0.215	0.566	122.839	2.60	0.000
Digital skills	0.445	7.421	0.000				
Technological adaptation	0.203	3.177	0.002				
Digital work environment	0.169	3.253	0.001				

Source: Prepared by the researcher based on SPSS results.

Hypothesis 2 Test: There exists a statistically significant effect of digital transformation on strategic decision quality in the Ministry of Education / Al-Karkh Second Directorate. To test this hypothesis, a multiple linear regression analysis has been performed in order to analyze the effect of digital transformation sub-dimensions (Digital Skills, Technological Adaptation and Digital Work Environment) on Strategic Decision Quality.

According to the regression output, there exists a high statistical significant model, where F-statistic = 149.142 > critical F value = 2.60. The overall p-value of the model is equal to 0.000, meaning that there exists a statistically significant effect of digital transformation on strategic decision quality (less than 0.05).

The coefficient of determination is  $R^2 = 0.613$ , meaning that 61.3% of variance in strategic decision quality is explained by digital transformation sub-dimensions; the rest is explained by other variables which have not been taken into account in the regression model.

As regards the sub-dimensions, it can be stated that the variable which affects most strategically decision quality is the digital skills with marginal coefficient equal to 0.338 and t-statistic = 6.472 ( $p < 0.000$ ), meaning that digital skills of employees have a great role in improving the strategic decision quality and increasing the accuracy of information for decision making. The next important variable is the technological adaptation with marginal coefficient = 0.290, t-statistic = 5.203 ( $p < 0.000$ ). It means that the ability of an organization to adapt itself to modern technologies is very important from the point of view of strategic and administrative decisions made in the organization. The last sub-dimension, which has a significant effect on strategic decision quality is digital work environment with marginal coefficient = 0.162, t-statistic = 3.572 ( $p < 0.000$ ), meaning that the good digital environment facilitates the fast information flow in the organization and improves the strategic decision-making process.

The regression equation is as follows:

Strategic Decision Quality = 0.548 + 0.338(Digital Skills) + 0.290(Technological Adaptation) + 0.162(Digital Work Environment)

Considering the above results, it is possible to accept the second main hypothesis about statistically significant effect of digital transformation on strategic decision quality in the Ministry of Education / Al-Karkh Second Directorate.

**Table 6.** Results of Testing the Effect of Digital Transformation on Strategic Decision Quality.

Variables	Constant / Marginal Slope (B)	Calculated T-Value	Significance (Sig.)	Coefficient of Determination (R <sup>2</sup> )	Calculated F-Value	Tabulated F-Value	Overall Significance
Constant	0.548	4.029	0.000	0.613	149.142	2.60	0.000
Digital Skills	0.338	6.472	0.000				
Technological Adaptation	0.290	5.203	0.000				

**Source:** Prepared by the researcher based on SPSS results.

Testing of the Third Main Hypothesis: Strategic decision quality has a statistically significant influence on HRM performance at the Ministry of Education, Al-Karkh Second Directorate.

Methodologically, to analyze the effect of the sub-dimensions of strategic decision quality, decision appropriateness, decision acceptance, and decision quality on the performance of HRM, the technique of multiple linear regression has been used. In terms of the regression results, there is found a model of high statistical significance (the value of the F-statistics is 133.229 and it exceeds the critical value of F 2.60). Moreover, the overall p-value of the model is 0.000 (this value is lower than the level of statistical significance of 0.05), and hence, the hypothesis about the influence of the considered independent variable (strategic decision quality) on the dependent variable (HRM performance) should be accepted.

The coefficient of determination (R<sup>2</sup>) is 0.586, which means that the dimensions of strategic decision quality explain 58.6% of the variance in HRM performance, and the rest of the variance is explained by other variables which have not been taken into account in the model.

As for the sub-dimensions, the highest impact on the HRM performance is made by decision acceptance (beta = 0.482, t = 7.134, p = 0.000), which shows that the better employees' acceptance of administrative and strategic decisions is the better HRM performance. As for decision appropriateness, it is also found to have a significant impact on HRM performance (beta = 0.313, t = 5.434, p = 0.000). It proves that there is a necessity of the alignment between decisions, organizational goals, and administrative practice in order to maintain institutional performance.

At last, it is found out that decision quality does not have a significant impact on HRM performance (beta = 0.011, t = 0.166, p = 0.868).

The regression equation is:

$$\text{HRM Performance} = 0.470 + 0.313 * (\text{Decision Appropriateness}) + 0.482 * (\text{Decision Acceptance}) + 0.011 * (\text{Decision Quality})$$

On the basis of the obtained regression results, the Third Main Hypothesis about the influence of strategic decision quality on HRM performance is accepted.

**Table 7.** Results of Testing the Effect of Strategic Decision Quality on Human Resources Management Performance.

Variables	Constant / marginal slope (b)	Calculated t-value	Significance (sig.)	Coefficient of determination (r <sup>2</sup> )	Calculated f-value	Tabulated f-value	Overall significance
Constant	0.470	3.199	0.002	0.586	133.229	2.60	0.000
Decision appropriateness	0.313	5.434	0.000				
Decision acceptance	0.482	7.134	0.000				
Decision quality	0.011	0.166	0.868				

**Source:** Prepared by the researcher based on SPSS results.

Fourth Main Hypothesis Test: Strategic Decision Quality plays the role of a statistically significant mediator in the relationship between Digital Transformation and the Performance of Human Resources Management within Ministry of Education / Al-Karkh Second Directorate.

For testing this hypothesis, Structural Equation Modeling (SEM) has been performed using AMOS v24 to analyze direct and indirect effects between research variables as well as to test the mediating effect of strategic decision quality in the relationship between digital transformation and human resources management performance.

From figure (5), it can be seen that there exists a significant direct effect of digital transformation on strategic decision quality with a standardized coefficient value of 0.778 and significance value of 0.010 which implies that digital transformation is significantly improving the quality of strategic decisions in the organization. A significant direct effect of strategic decision quality on human resources management performance has been observed with a standardized coefficient value of 0.430 and significance value of 0.010 which implies that good decisions enhance administrative and organizational performance in human resources management.

Furthermore, a significant direct effect of digital transformation on human resources management performance has also been observed with a direct standardized coefficient value of 0.408 at the significance value of 0.010 which suggests that there is direct improvement in the efficiency of HRM performance due to digital transformation.

On the other hand, digital transformation has been seen to affect the human resources management performance indirectly through strategic decision quality with an indirect effect value of 0.334 at a significance value of 0.010 which implies that there exists significant mediation by strategic decision quality in the relationship between digital transformation and human resources management performance.

From the coefficient of determination (R<sup>2</sup>) values, it can be concluded that digital transformation is explaining 61% of the variance in strategic decision quality while the model is explaining 62% of the variance in human resources management performance.

**Table 8.** Coefficients of Determination for the Variables.

Variable	Coefficient of determination (r <sup>2</sup> )
Strategic decision quality	0.61
Human resources management performance	0.62

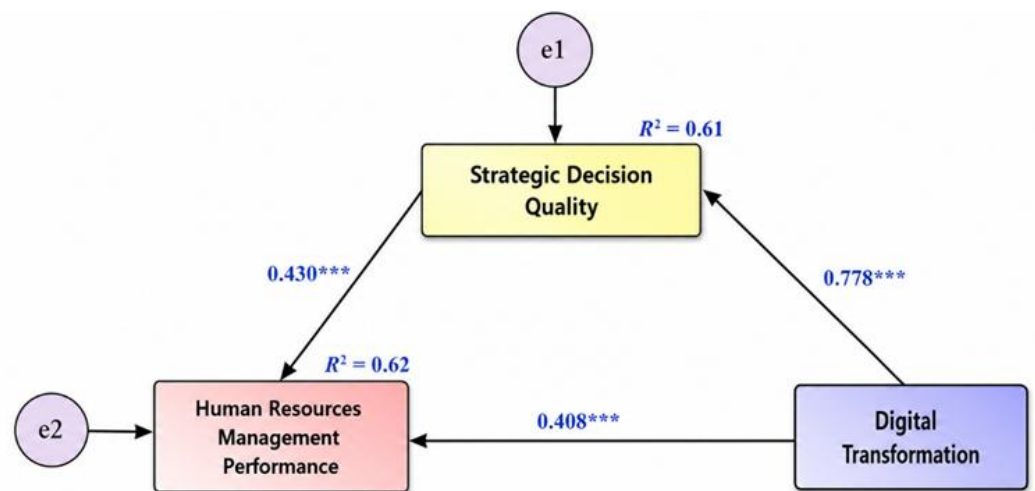
**Source:** Prepared by the researcher based on AMOS results.

These findings indicate that the strategic decision quality acts as a partial mediator, given the sustained impact of digital transformation on human resources management performance and the presence of an additional significant indirect effect through the mediation of the variable. In this respect, it is reasonable to state that the fourth main hypothesis of the study, which suggests that strategic decision quality acts as a significant mediator between digital transformation and human resources management performance at the Ministry of Education / Al-Karkh Second Directorate, is valid.

**Table 9.** Results of Testing the Mediating Role of Strategic Decision Quality.

Path	Standardized Effect	Type of Effect	Significance (P.C.)
Digital Transformation → Strategic Decision Quality	0.778	Direct	0.010
Strategic Decision Quality → Human Resources Management Performance	0.430	Direct	0.010
Digital Transformation → Human Resources Management Performance	0.408	Direct	0.010
Digital Transformation → Strategic Decision Quality → Human Resources Management Performance	0.334	Indirect	0.010

Source: Prepared by the researcher based on AMOS results.



Note: \*\*\*  $p < 0.01$

**Figure 5.** Path Model for Testing the Mediating Role of Strategic Decision Quality in the Relationship between Digital Transformation and Human Resources Management Performance.

Source: Prepared by the researcher based on AMOS results.

#### 4. Conclusions and Recommendations

##### Conclusions:

1. The personal characteristics of the study sample provide the evidence of the presence of work environment that is characterized by human diversity and adequate interaction with the needs of contemporary administrative work and digital transformation. In its turn, this means that there is a functional base that is capable of contributing to organizational development and performance of the institution.
2. The digital transformation variable reveals its significant presence in the directorate. Among its dimensions, the technological adaptation proves to be the most important dimension in terms of support of administrative work because it helps employees adapt themselves to modern technologies. The second important dimension in this case is the digital work environment because it contributes to more flexible and communicative work environment and, finally, there is the dimension of digital skills, which reflects achievement of the proper level of digital competencies, which help in performance of the institution. These results point out on the orientation towards the use of the modern management concepts.
3. The strategic decision quality variable reflects the presence of acceptable level of administrative decisions effectiveness within the directorate. The first place is taken by the decision quality dimension, which reflects relatively high level of emphasis on the improvement of decision making effectiveness. It is followed by the decision acceptance dimension, which shows the proper level of interaction with administrative decisions, and the last place is occupied by the decision appropriateness dimension.
4. The human resources management performance variable shows the moderate level of administrative and organizational efficiency within the directorate. The first place is taken by the task performance dimension, which indicates on acceptable level of performing tasks and responsibilities. It is followed by the managing performance dimension, which indicates on the moderate level of organizational management and administration of the administrative activities, and the last place is taken by the capacity performance dimension.
5. Digital transformation in its dimensions helps in improving the performance of the human resources management within the directorate by providing digital skills, technological adaptation and digital work environment.
6. Digital transformation plays the role of an efficient factor that helps in improving strategic decision quality, improving the information accuracy and supporting the administrative decisions.
7. The strategic decision quality helps in improving the human resources management performance through the improvement of decision acceptance and alignment with the organizational reality.
8. Strategic decision quality mediates the influence of digital transformation on human resources management performance and increases organizational performance.

##### Recommendations:

1. Improving the work environment by developing professional development and digital training programs in accordance with the needs of modern administrative work. Improvement of the cooperation and adaptation to the modern technologies can also improve performance quality and increase institutional efficiency.
2. Focusing on the digital transformation by improving the adaptation to the modern technologies, developing the digital work environment and improving the digital skills of employees in accordance with the modern management requirements. Improving the technological applications can help in improving performance efficiency and accelerate task completion.
3. Improving the strategic decision quality by improving the information quality and administrative analysis and participating in decision-making in order to increase the acceptance and effectiveness of decisions. Paying attention to the alignment of

decisions with organizational and environmental conditions can help in improving administrative work efficiency.

4. Improving the human resources management performance by developing professional and administrative capacities of employees, improving task-performance methods and advancing the modern administrative approaches. Attention to training and job qualification can help in increasing human resources efficiency.
5. Improving digital transformation by developing digital skills and increasing the application of modern technologies in order to increase the efficiency of human resources management performance.
6. Advancing the strategic decision quality by developing digital systems and increasing the application of technology in administrative and organizational processes.
7. Improving the human resources management performance by participating in decision-making and aligning its results with organizational variables.
8. Improving the relationship between digital transformation and strategic decision quality in order to improve human resources management performance.

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