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Information And Communication Technology And Its Role In Improving The Performance Of The Human Resources Task In The Institution Case Study Of The Algerian Post Office - El Bayadh Post Office Unit-

Dr. Cheknane Mohammed[1*], Dr. Rinouba Lakhdar[2]

[1*,2]Research Center for Islamic Sciences and Civilization-Algeria (CRSIC), University of Laghouat –Amar Telidji.
medcheknan@gmail.com, l.rainouba@crsic.dz

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ABSTRACT

This study aims to evaluate the impact of information and communication technology on improving the performance of the human resources task in institutions. Algeria Post was chosen as a field of study, where a field study was conducted on a sample of employees of Algeria Post, specifically the El Bayadh unit, the sample included 220 employees. The statistical program ((SPSS V26) was used to analyze the questionnaire data to present the results and test the hypotheses.

The results of the study showed a statistically significant impact of information and communication technology on improving the performance of the human resources task in the institution under study, and it also recommended the need to intensify training and training courses in the field of uses of information and communication technology, and to work on motivating human resources to innovate in the field of technology.

Keywords: Information and Communication Technology; Human Resources Performance; Algeria Post
JEL Classification: O300; 0O15; L870

1.Introduction:

Modern organizations currently face many challenges as a result of the rapid changes witnessed by the business environment in various fields. The most prominent of these challenges is the rapid development in the field of information and communication technology, as it has become necessary for organizations to update their infrastructure related to information and communication technology, including securing devices, software, databases, human elements, and communication networks that support their operations, which contributes to enhancing effective communication and improving work efficiency within the organization.

Organizations also face new challenges in adopting and using technology effectively and sustainably, which requires leaders in organizations to be aware of the latest technological innovations and work to develop technological strategies that are consistent with the organization's goals and enhance its ability to achieve competitive advantage. Information and communication technology also plays a pivotal role in enhancing interaction and improving operations within the organization, through the use of modern communication systems that contribute to enhancing cooperation and facilitating the exchange of information between individuals in different departments, in addition to data analysis that helps in making accurate decisions, which enhances efficiency and effectiveness in managing the organization and positively affects the performance of the human resources mission.

In light of this, we can formulate the following main problem:

To what extent did information and communication technology contribute to improving the performance of the human resources task at Algeria Post, El Bayadh Unit?

Study hypotheses: To answer the main problem above, we propose the following hypotheses:

Main hypothesis: "There is a statistically significant effect at a significance level of (5%) for information and communication technology and the performance of human resources at Algeria Post, El Bayadh Unit".

To test this hypothesis, it was divided into five sub-hypotheses, each of which concerns the existence or absence of an effect for each dimension of information and communication technology on the performance of the human resources task, as follows:

-The first sub-hypothesis: "There is a statistically significant effect at a significance level of (5%) for devices and equipment and the performance of the human resources task at Algeria Post, El Bayadh Unit".

-The second sub-hypothesis: "There is a statistically significant effect at a significance level of (5%) for software and the performance of the human resources task at Algeria Post, El Bayadh Unit".

-The third sub-hypothesis: "There is a statistically significant effect at a significance level of (5%) for individuals in improving the performance of their task at Algeria Post, El Bayadh Unit".

-Sub-hypothesis four: "There is a statistically significant effect at a significance level of (5%) for databases and the performance of the human resources task of Algeria Post, El Bayadh Unit".

Sub-hypothesis five: "There is a statistically significant effect at a significance level of (5%) for communication networks and the performance of the human resources task of Algeria Post, El Bayadh Unit".

Importance of the study: Our study derives its importance from the fact that it focuses on improving the overall performance of the institution by improving the performance of its human resources task, which is considered its most important strategic resource. This is done by using the dimensions of information and communication technology, which in turn plays a major role in contributing to activating the methods and techniques of improving the performance of the human resources task. This is what prompted us to enrich the nature of this relationship by giving a detailed idea of the relationship between the two concepts. This study can also contribute to increasing the interest of the institution under study in the infrastructure of information and communication technology and its uses in order to improve the performance of its human resources tasks in line with the modern developments of institutions by relying on the latest developments in the field of information and communication technology.

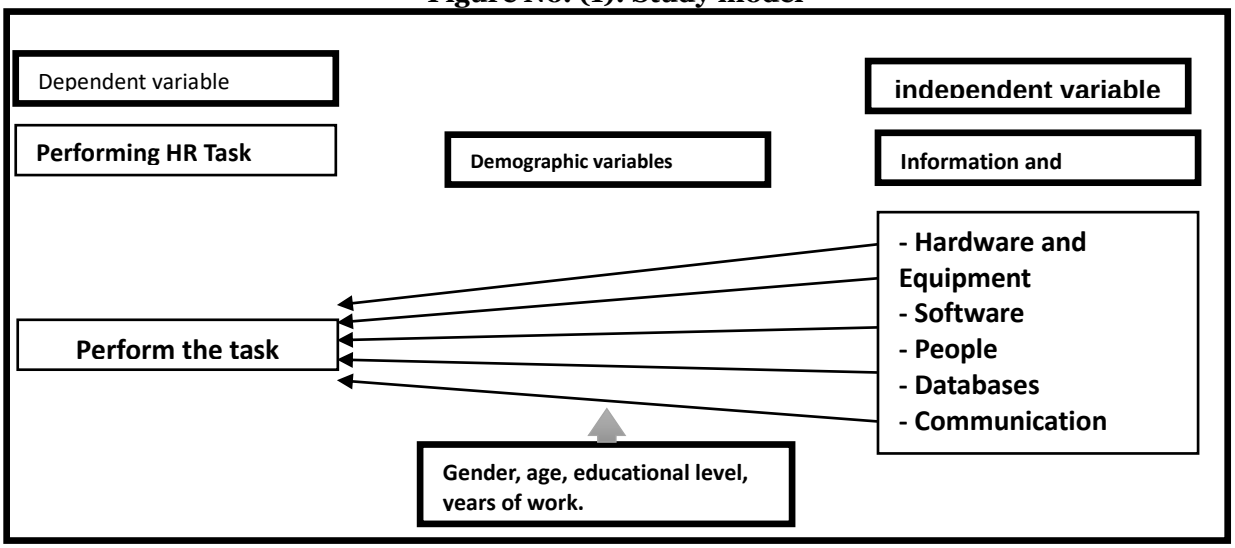
Study Methodology:

The descriptive analytical approach was adopted as it is appropriate for such studies, as the descriptive approach was used to present and describe the various concepts related to the independent variable represented by information and communication technology, and the dependent variable represented by the performance of the human resources task to understand the features of the theoretical aspect of the study, while the analytical approach was used in the applied aspect to analyze the impact between the study variables, by relying on the questionnaire as an appropriate statistical tool for collecting, analyzing and processing data using the statistical program ((SPSS V26, and in order to measure the validity and reliability of the research tool, the Cronbach's alpha reliability coefficient was used, and the arithmetic averages and standard deviations were relied upon to describe the characteristics of the study sample individuals, and the hypotheses were tested using the simple linear regression model and the coefficient of determination.

Study Limits: We set limits for our study, which were embodied in spatial limits, so that this study was conducted at the Algerian Post Office, El Bayadh Unit, and temporal limits were within the month of February 2024.

Study Model: The study variables consist of an independent variable represented by information and communication technology in its dimensions (equipment and devices, software, individuals, rules Data, communication networks), and a dependent variable represented by the performance of the human resources task. In order to give a clear picture of the study variables, we present the following model:

Figure No. (1): Study model



Source: Prepared by researchers based on previous studies

1. Information and Communication Technology

In this section, we highlight information and communication technology, which plays a vital and decisive role in enhancing the economies of many countries. This technology also represents a new challenge for organizations that must adapt to this continuous development to maintain their competitiveness and effectiveness.

1.1Definition of Information and Communication Technology: "The activities and tools used in information and communication technology are related to processing information in terms of receiving, storing, analyzing, and transmitting it, and it is an essential part of various aspects of our daily lives, whether at work, in the factory, or at home." It distinguishes between three main aspects of information and communication technology: data recording and storage technology, data analysis technology, and data transmission technology (communication). (Mahmoud Alam El-Din, 1990, p. 39) "Information and communication technology is a combination of computers and communication means, ranging from optical fibers to satellites and microfilm and reproduction technologies, and it represents a group of inventions that depend on transferring and storing information outside the scope of the human mind." (Al-Hadi Muhammad, 1989, p. 32) Information and communication technology is "the basic foundation upon which administrative institutions and establishments are based to enhance their competitive advantage." Technology means all types of technical, scientific and applied knowledge that contribute to providing highly efficient and optimally performing means, equipment, machines, mechanical and electronic devices, which helps facilitate work for people and saves them time, and achieves the qualitative and quantitative goals of the institution efficiently and effectively." (Falah Al-Aroud and Talal Hamdoun, 2009, p. 478) It is also known as "a group of tools that help users deal with information and implement activities or operations." Related to its processing (Abbas Al-Hamri and Kazem Press, 2017, p. 348). It is also known as "a combination of electronic computers and various means of communication such as optical fibers and satellites, in addition to film and card miniaturization technologies, along with another group of inventions that are invested in various fields." (Qandilji and Al-Samarrai, 2002, p. 38) Through the previous definitions, we can define information and communication technology as: those technological means and modern tools of electronic computers and wired and wireless communications such as telephones and networks, used in collecting, processing, analyzing, organizing and storing information, and then transferring it at the appropriate time and in the best and most accurate way to present it to the beneficiary.

1.2. Characteristics of Information and Communication Technology: Information technology has several characteristics due to its status in institutions at the present time. Among the most important characteristics of information technology, we mention the following: (Bin Saed, 2019, p. 10)

Interactivity: This means that the user of this technology can be a sender and a receiver at the same time, as those concerned with the communication process can exchange roles and tasks, which results in a type of interaction between people and institutions;

Synchronization: This means the ability to send and receive messages at the appropriate time for the user, and does not require all participants to use the system at the same time;

Ease of use: Modern technological communication methods are characterized by simplicity and ease of operation;

Popularity and spread: This means the network's ability to expand and spread more and more from unlimited areas in all parts of the world, so that it derives its strength from this systematic spread of its flexible system.

Decentralization: This means that this technology enjoys independence, as no party can disrupt the Internet worldwide, and therefore it enjoys continuity of work in all cases. (Ghoul and Justice, 2019, p. 216)
Transferability: It is the ability of communication media to transfer information from one medium to another, such as technologies that can convert an audible message into a printed message and vice versa. (Ben Dilamy, 2018, p. 48)
Global and universal: It is the environment in which this technology is active, where information takes different and complex paths that spread throughout the world. (Zarzar, 2010, p. 220)

1.3 Components of information and communication technology:

-Devices and equipment: They are all physical devices that include computers and their attached devices that are used in input, processing and output activities in the information system. Some believe that the physical components are five components, which are: (Taheri, 2018, p. 41)
-Input means: They consist of the keyboard, mouse, audio microphone, camera and other tools;
-Central processing unit: Which processes data and controls the computer system;
-Storage media: such as internal primary storage, and secondary storage such as disks, magnetic and optical tapes;
-Output media: including printers, screens, and audio output media;
-Communication media: used to connect computers.
-Software: which are the programs needed by the computer's hardware components to enable them to manage and complete their necessary work and processing, and perform every task they perform, such as basic programs that facilitate the use of the machine, including the operating system, information storage and retrieval programs, and application programs such as word processing programs, file management, and statistical programs. (Abdawi, 2016, pp. 88-89)
-Individuals: They are the individuals who manage and operate information and communications technology, including specialists, administrators, and end users of the system, as individuals are more important than material requirements. (Abdawi, 2016, p. 82)
-Databases: They are an integrated set of data that are organized and stored in the computer in a way that makes it easy to retrieve, access, deal with, and update from time to time. (Abdawi, 2016, p. 87-88)
-Communication networks: They are the means by which a group of computers are linked using communication media, to form a network in which data and information are exchanged between various computer systems connected to the network across the world, using wired and wireless communication means. (Ben Mahris and Al-Tawti, 2021, p. 605)

1.Performance of the Human Resources Task

Human resources performance occupies a large space in institutions, due to its great importance in their success, survival and continuity, so it has occupied the attention of many researchers, thinkers and managers, and it can be defined as those behaviors that an individual performs within his job to achieve the goals required of him within a specific period of time.

1.1 Definition of performance of the human resources task.

Task performance represents the extent to which human resources contribute effectively to the job duties formally prepared in their job description, and it consists of explicit job behaviors that include the basic job responsibilities specified as part of the job description, and task performance requires greater cognitive ability and is facilitated mainly by: (PRADHAN and JENA, 2017, p. 3)
-Knowledge of the task: meaning knowledge of the technical principles required to ensure job performance and the ability to deal with different tasks.
-Task skill: meaning applying technical knowledge to successfully complete the task without significant supervision.
-Task habits: It is the innate ability to respond to specific functions that facilitate or hinder performance.
Task performance is divided into two parts: (Sheikhi, 2021-2022, p. 75)
*Performing technical administrative tasks: This means the expected job performance, which includes planning, organizing and managing daily work through technical capabilities and skills, etc.
*Performing leadership tasks: Leadership tasks are performed by setting strategic goals, respecting the necessary performance standards, and motivating and directing human resources to accomplish the tasks assigned to them, by encouraging them and recognizing their efforts.

1.2 Contribution of Information and Communication Technology to Improving the Performance of the Human Resources Task

Information and communication technology has contributed to improving the performance of the human resources task by reducing routine work, reducing costs, increasing accuracy and speed in performing tasks, in addition to providing managers and decision-makers with time to plan, which may contribute to making appropriate decisions. It has also improved the organizational and administrative environment and facilitated access to information. Technology has also enhanced competitiveness among human resources,

which would encourage development and increase individual expertise. It has opened opportunities in local and global markets and imposed the existence of training programs. It has made control of technology an indicator of human development, and has also contributed to increasing the efficiency and productivity of human resources and the institution as a whole. (Aqili, Al-Omari, and Al-Ghamdi, 2020, pp. 192-193)

2.The applied aspect

Study community and sample: The target study community in our study consists of the human resources of the Algerian Post Office, El Bayadh Unit, numbering 309 employees. (250) forms were distributed, of which (229) forms were retrieved, and (10) were excluded. (9) Forms were rejected because they were invalid, and therefore (220) forms were accepted. This exceeds (181) items.

Adopted statistical methods: The statistical program SPSS V26 was used to analyze and process the data, and in order to measure the validity and reliability of the research tool, the Cronbach's alpha reliability coefficient was used, and arithmetic averages and standard deviations were used to describe the characteristics of the study sample individuals, and the hypotheses were tested using the simple linear regression model and the coefficient of determination.

Study tool: The questionnaire was used as a tool to collect data related to the study:

The first axis: deals with the personal variables of the respondents from the employees of the Algerian Post Office, El Bayadh Unit, and contained four (4) questions (gender, age, educational level, years of work)

The second axis: deals with the phrases of the independent variable, which included paragraphs of information and communication technology from (1 to 30), and they were as follows: The first dimension (devices and equipment) from (1 to 6), the second dimension (software) from (7 to 12), the third dimension (individuals) from (13 to 18), the fourth dimension (databases) from (19 to 24)

The fifth dimension (communication networks) from (25 to 30).

The third axis: deals with the phrases of the dependent variable, which included paragraphs of human resources task performance from (31 to 36.(

The five-point Likert scale was adopted to evaluate the sample members' answers, where the numbers (1, 2, 3, 4, 5) indicate respectively (strongly agree, agree, neutral, disagree, strongly disagree), while the length of the category and direction are as follows: (from 1 to 1.8) strongly disagree. (from 1.8 to 2.6) disagree. (from 2.6 to 3.4) neutral. (from 3.4 to 4.2) agree. (from 4.2 to 5) strongly agree.

Questionnaire stability test

The stability of the questionnaire means the stability of this tool and its lack of contradiction with itself, and in order to ensure the extent of the stability of the questionnaire and obtain similar results in the event of its repeated distribution to the same sample under similar conditions. Cronbach's alpha coefficient was used using the SPSS v26 program, and the following table shows in detail the values of Cronbach's alpha coefficient for each dimension of the study variables

Table No. (1): Cronbach's alpha coefficient values for the questionnaire dimensions

Cronbach's alpha coefficient	Paragraphs	Questionnaire axes
0.918	6-1	Devices and Equipment
0.881	12-7	Software
0.790	18-13	Individuals
0.833	24-19	Databases
0.775	30-25	Communication networks
0.957	30-1	Information and Communication Technology Hub
0.920	36-31	HR Mission Axis
0.963	36-1	The questionnaire as a whole

Source: Prepared by the researchers based on the outputs of the SPSS V26 program.

From the table, we find that the overall Cronbach's alpha coefficient is equal to 0.963, which indicates that the measurement tool is stable with regard to the study sample, which indicates the stability of the scale and its lack of contradiction with itself, and it achieves the same results if it is reapplied to the same sample. The questionnaire can be relied upon to measure the variables studied, due to its ability to provide results consistent with the answers of those surveyed over time, and the possibility of generalizing the results of the questionnaire to the entire study community, i.e. all employees of the Algerian Post Office, El Bayadh Unit.

Statistical analysis results:

In this section, we will analyze the field study data and extract the results. We will start by presenting the personal characteristics of the study sample, then presenting and discussing the respondents' answers about

the dimensions and variables of the study. After that, we will test the study hypotheses by testing the effect through regression tests, then testing the differences in answers according to personal variables, and coming up with the results of the study and answering the main problem and sub-questions and knowing the role of information and communication technology in improving the performance of human resources.

Studying the personal characteristics of the study sample

In this section, we will analyze the data related to human resources represented by gender, age, educational level, years of work, and present them in tables and forms to facilitate reading, analysis, and extracting results.

Table No. (2): Characteristics of sample members

%	Repetition	Category	The variable
69	153	Male	Sex
31	67	Female	
4	10	Less than 30 years	the age
34	74	Between 30 - 39 years	
33	73	Between 40 - 49 years	
29	63	50 years and above	
20	45	Secondary or less	Academic level
03	07	Senior Technician	
70	153	Bachelor's	
01	3	Engineer	
06	12	Postgraduate studies	
14	31	Less than 5 years	Years of work
31	69	5 to 10 years	
10	22	11 to 15 years	
16	35	16 to 20 years	
29	63	20 years and above	

Source: Prepared by the researchers based on the outputs of the SPSS V26 program.

From the previous table, we notice that the percentage of males is the highest, and this is due to the nature of the work. The different age groups of the study sample are also clear, and we find that 4% of the study sample are under 30 years old, and 34% of the study sample are between 30 and 39 years old, and 33% of the study sample are between 40 and 49 years old, while 29% of the study sample are 50 years old and above.

The largest percentage of employees included in the sample are between 30 and 39 years old at 34%, followed by the age group between 40 and 49 years old at 33%. This means that the institution relies on the youth group that is able to apply information and communication technology, face challenges and stimulate innovation. We notice that 29% of employees are 50 years old and above, which helps in enhancing generational communication, and enables young people to benefit from the experience of adults.

As for the educational level, we find that 6% of the study sample have a postgraduate education, 1% of the sample have an engineering level, 70% have a bachelor's degree, 3% have a senior technician level, and 20% of the study sample have a secondary education level or less. The largest percentage of employees included in the sample have a university education level, whether it is a bachelor's degree, postgraduate studies, or engineering. This indicates that the institution under study is targeting energies with a university level who have the ability to keep up with information and communication technology. Through the table and the results shown in it, we find that 14% of the study sample have less than 5 years of work, and 31% of the study sample members have 5 to 10 years of work, while 10% of those have 11 to 15 years of work, and 16% of those who have worked in the institution from 16 to 20 years, while those who have 20 years or more of work in the institution represent 29% of the study sample. The largest category of the study sample members in terms of years of work are those whose years of work range from 5 to 10 years, estimated at 31%, meaning that the largest percentage are those who do not have much experience, which prompts them to exert more effort to gain more experience and interact more with those who have more experience. The percentage of the category whose years of work range from 20 years or more came in second place at 29%, which explains why many workers do not benefit from partial retirement, which in turn may enhance the continuity of generations and the institution's benefit from their accumulated experience. And transferring it to the rising generations, then comes the category whose years of work range from 16 to 20 years, and they are those who have acceptable experience, followed by the category whose years of work range less than 5 years, and this may be due to the lack of employment in the institution in recent years. On the other hand, we see that there is a significant percentage of those who have experience in the institution, and this in turn may increase confidence and credibility in the answers to the questionnaire.

Trend of the phrases of the second axis: (Information and Communication Technology)

To test the extent of employees' agreement with the questionnaire questions related to the dimensions of information and communication technology and the extent of its application in the institution under study,

the frequencies and percentages were extracted, as well as the arithmetic averages and standard deviations of the study sample's answers for all paragraphs of the five dimensions of information and communication technology. The results were as follows:
Analysis of the study sample's answers on the paragraphs of the first dimension "Devices and Equipment"

Table No. (3): Trend of the study sample's answers to the paragraphs of the first dimension "Devices and Equipment"

Arrangement	Direction	Standard deviation	Arithmetic mean	Phrases
4	Okay	1.086	3.89	The institution has sufficient devices and computers to perform various tasks.
5	Okay	0.999	3.86	The devices and computers in the organization provide fast and accurate data processing.
1	Okay	0.852	4.07	I easily deal with the devices and computers available to the institution.
3	Okay	0.960	3.93	The devices and computers available in the institution help me to perform the work.
6	Okay	0.931	3.85	Equipment and computers are used optimally.
2	Okay	0.785	3.94	The institution has specialists in hardware and computer maintenance.
Okay		0.792	3.92	Devices and Equipment

Source: Prepared by the researchers based on the outputs of SPSS V26 program

From the previous table, we notice that paragraph No. 3 came in first place with an arithmetic mean of 4.07 and a standard deviation of 0.852, and paragraph No. 5 came in sixth place with an arithmetic mean of 3.85 and a standard deviation of 0.931, and the paragraphs of the first dimension were all in the direction of "agree" with an arithmetic mean of 3.92 and a standard deviation of 0.792, and thus it can be said that the equipment and devices are available in the institution and are used by human resources.
Analysis of the study sample's answers on the paragraphs of the second dimension "Software"

Table No. (4): The direction of the study sample's answers on the paragraphs of the second dimension "Software"

Arrangement	Direction	Standard deviation	Arithmetic mean	Phrases
4	Okay	0.736	3.75	The organization relies on installing special software to manage its human resources.
3	Okay	0.913	3.86	The software adopted by the organization is compatible with the nature of my work.
2	Okay	0.816	3.96	The software available makes it easier for me to do my job.
6	Okay	0.882	3.56	The company is constantly updating and developing the software.
5	Okay	0.859	3.62	The software used helps in defining permissions and tasks.
1	Okay	0.788	4.01	The company has software that meets the needs of individuals at work and allows for providing high-quality service to the customer.
Okay		0.660	3.79	Software

Source: Prepared by the researchers based on the outputs of SPSS V26 program

From the previous table, we notice that paragraph No. 12 came in first place with an arithmetic mean of 4.01 and a standard deviation of 0.788, and paragraph No. 10 came in sixth place with an arithmetic mean of 3.56 and a standard deviation of 0.882, and the paragraphs of the second dimension were all in the direction of

"agree" with an arithmetic mean of 3.79 and a standard deviation of 0.660, and thus it can be said that the software is available in the institution and is used by human resources.
Analysis of the study sample's answers to the paragraphs of the third dimension "Individuals"

Table No. (5): Direction of the study sample's answers to the paragraphs of the third dimension "Individuals"

Arrangement	Direction	Standard deviation	Arithmetic mean	Phrases
2	Okay	0.827	3.76	The organization has specialists in the field of information and communication technology (engineers, programmers, system designers...).
1	Okay	0.730	4.04	I have sufficient ability to use modern methods of information and communication technology.
4	neutral	0.893	3.26	The organization attracts specialists in systems management (salesmen, accountants, specialized administrators...).
6	neutral	1.070	2.83	The organization provides appropriate moral incentives to its human resources.
5	neutral	1.109	3.20	The organization provides appropriate financial incentives to its human resources.
3	Okay	0.894	3.49	The organization conducts training courses and programs for its human resources on a regular basis on new and advanced technologies.
Okay		0.649	3.43	Individuals

Source: Prepared by the researchers based on the outputs of SPSS V26 program

From the previous table, we notice that paragraph No. 14 came in first place with an arithmetic mean of 4.04 and a standard deviation of 0.730, and paragraph No. 16 came in sixth place with an arithmetic mean of 2.83 and a standard deviation of 1.070, and the paragraphs of the third dimension were all in the direction of "agree" with an arithmetic mean of 3.43 and a standard deviation of 0.649. Therefore, it can be said that the dimension of individuals with regard to information and communication technology is available in the institution under study.
Analysis of the study sample's answers on the paragraphs of the fourth dimension "databases"

Table No. (6): The direction of the study sample's answers on the paragraphs of the fourth dimension "databases"

Arrangement	Direction	Standard deviation	Arithmetic mean	Phrases
5	Okay	0.625	3.84	The organization has detailed databases of its human resources.
4	Okay	0.780	3.94	The organization constantly updates its databases.
3	Okay	0.796	3.98	I find it easy to access databases.
1	Strongly agree	0.537	4.20	All post offices of the Corporation are linked to a unified database of their customers.
2	Okay	0.646	4.11	The necessary data protection is available.
6	Okay	0.979	3.62	The organization's databases are managed with modern and advanced programs.

Source: Prepared by the researchers based on the outputs of the SPSS V26 program

Databases 3.95 0.547 Agree
From the previous table, we notice that paragraph No. 22 came in first place with an arithmetic mean of 4.20 and a standard deviation of 0.537, and paragraph No. 24 came in sixth place with an arithmetic mean of 3.62 and a standard deviation of 0.979, and the paragraphs of the fourth dimension were all in the direction of "agree" with an arithmetic mean of 3.95 and a standard deviation of 0.547, and thus it can be said that the databases are well managed by the institution.

Analysis of the study sample's answers to the paragraphs of the fifth dimension "Communication Networks"

Table No. (7): The direction of the study sample's answers to the paragraphs of the fifth dimension "Communication Networks"

Arrangement	Direction	Standard deviation	Arithmetic mean	Phrases
3	Okay	0.782	3.84	The organization uses various communication networks to connect all its departments and interests.
4	Okay	0.908	3.80	The network available in the organization is compatible with the requirements and needs of the work.
2	Okay	0.909	3.88	The organization uses the Internet in its dealings with customers and suppliers.
6	neutral	1.073	3.00	The organization uses various communication networks (Internet, Extranet, Intranet) to conduct training courses for its human resources.
5	neutral	1.101	3.19	Problems related to communication networks are quickly fixed.
1	Okay	0.712	3.99	The organization is keen to provide network security for the purpose of protecting information and data.
Okay		0.634	3.62	Communication networks

Source: Prepared by the researchers based on the outputs of SPSS V26 program

From the previous table, we note that paragraph No. 30 came in first place with an arithmetic mean of 3.99 and a standard deviation of 0.712, and paragraph No. 28 came in sixth place with an arithmetic mean of 3.00 and a standard deviation of 1.073, and the paragraphs of the fifth dimension were all in the direction of "agree" with an arithmetic mean of 3.62 and a standard deviation of 0.634, and thus it can be said that communication networks are available in the institution under study.

Statistical analysis of the opinions of the study sample on the axis of human resources task performance

In this requirement, we studied the level of human resources performance in the institution under study within the dependent variable "human resources performance", and the following tables summarize the trends of the study sample members and their opinions regarding their level of performance. The frequencies and percentages were extracted, as well as the arithmetic means and standard deviations for the answers of the study sample for all paragraphs of the three dimensions of human resources performance. The results were as follows:

Analysis of the study sample's answers to the paragraphs of the sixth dimension "Task Performance" We conducted a study on task performance in the Algerian Post Office, El Bayadh Unit, within the dependent variable "Human Resources Performance", and the following tables summarize the trends of the study sample members on the dimension of task performance.

Table No. (8): Trend of the study sample members' answers to the paragraphs of the sixth dimension "Task Performance"

Arrangement	Direction	Standard deviation	Arithmetic mean	Phrases
1	Strongly agree	0.715	4.22	ICT has contributed to simplifying and facilitating work procedures.
3	Okay	0.889	4.09	ICT has contributed to reducing workloads.
5	Okay	0.802	4.07	ICT has contributed to the optimal utilization of material resources.
4	Okay	0.790	4.08	ICT has contributed to achieving speed in decision-making.
2	Okay	0.655	4.19	ICT has contributed to reducing errors while performing my work.
6	Okay	0.839	3.91	ICT has contributed to coordinating the work of the various departments and functions in the organization.

Source: Prepared by the researchers based on the outputs of the SPSS V26 program

Task performance 4.09 0.664 Agree

From the previous table, we note that paragraph No. 31 came in first place with an arithmetic mean of 4.22 and a standard deviation of 0.715, and paragraph No. 36 came in sixth place with an arithmetic mean of 3.91 and a standard deviation of 0.839, and the paragraphs of the sixth dimension were all in the direction of "agree" with an arithmetic mean of 4.09 and a standard deviation of 0.664, and thus the dimension of task performance is available for human resources in the institution under study with the contribution of information and communication technology.

Testing and analyzing the study hypotheses

In this section, we will try to test the hypotheses to prove their validity as the goal of the study, so that a main hypothesis was relied upon and branched into sub-hypotheses, and this is through the necessary statistical tests. So that the null hypothesis (H0) is accepted if the significant value is greater than (0.05), and is rejected if the significant value is less than (0.05)

Testing the first sub-hypothesis:

H0: There is no statistically significant effect at a significance level of (5%) for devices and equipment and the performance of the human resources task of the Algerian Post Corporation, El Bayadh Unit.

H1: There is a statistically significant effect at a significance level of (5%) between devices and equipment and the performance of the human resources task of the Algerian Post Corporation, El Bayadh Unit.

Table No. (9): Determination coefficient for the first sub-hypothesis

Estimated error	Corrected coefficient of determination	Coefficient of determination (2R)	Correlation coefficient (R)	model
0.52722	0.370	0.372	[a]0.610	1

Source: Prepared by the researchers based on the outputs of SPSS V26 program.

From the previous table, we note that the correlation coefficient R (0.610) indicates an acceptable direct correlation between devices and equipment and human resources performance. We also note that the coefficient of determination 2R equals (0.372), i.e. 37.2% of the change in devices and equipment explains the change in human resources task performance, and the remaining 62.8% is explained by other factors.

Table No. (10): Simple linear regression model for devices and equipment and human resources task performance

Significance level	F	Significance level	T	Beta	Std.Error	B	model
0.000[b]	129.355	0.000 0.000	11.606 11.373	0.610	0.180 0.045	2.089 0.512	(Fixed) Devices and Equipment

Source: Prepared by the researchers based on the outputs of the SPSS V26 program.

From the previous table, we note that the calculated F value is equal to (129.355), which is greater than its tabular value, and the level of significance is less than (0.05). Therefore, the model is considered statistically significant. The T-test result also indicates that the relationship is statistically significant, as the level of significance is less than (0.05). This means rejecting the hypothesis (H0) and accepting the alternative hypothesis (H1), i.e. there is a statistically significant effect at a significance level of (5%) for devices and equipment and the performance of the human resources task of the Algerian Post Corporation, El Bayadh Unit.

The simple linear regression equation for the first sub-hypothesis can be extracted as follows:

Y= 2.089 + 0.512 X

HR task performance = 2.089 + hardware and equipment

Testing the second sub-hypothesis:

H0: There is no statistically significant effect at a significance level (5%) between software and HR task performance for Algeria Post, El Bayadh Unit.

H1: There is a statistically significant effect at a significance level (5%) between software and HR task performance for Algeria Post, El Bayadh Unit.

Table No. (11): Determination coefficient for the second sub-hypothesis

Estimated error	Corrected coefficient of determination	Coefficient of determination (2R)	Correlation coefficient (R)	model
0.49375	0.447	0.450	0.670 [a]	1

Source: Prepared by the researchers based on the outputs of the program SPSS V26

From the previous table, we note that the correlation coefficient R (0.670) indicates an acceptable direct correlation between software and the performance of the human resources task. We also note that the coefficient of determination 2R equals (0.450), i.e. 45% of the change in software explains the change in the performance of the human resources task, and the remaining 55% is explained by other factors.

Table No. (12): Simple linear regression model for software and human resources task performance

Significance level	F	Significance level	T	Beta	Std.Error	B	model
0.000[b]	178.050	0.000 0.000	7.930 13.344	0.670	0.195 0.051	1.538 0.674	(Fixed) Devices and Equipment

Source: Prepared by the researchers based on the outputs of the program SPSS V26

From the previous table, we note that the calculated F value is equal to (178.050), which is greater than its tabular value, and the level of significance is less than (0.05), and therefore the model is considered statistically significant. The T-test result also indicates that the relationship is statistically significant, as the level of significance is less than (0.05), which means rejecting the hypothesis (H0) and accepting the alternative hypothesis (H1), i.e. there is a statistically significant effect at a significance level of (5%) for software and the performance of the human resources task of the Algerian Post Corporation, El Bayadh Unit. The simple linear regression equation for the second sub-hypothesis can be extracted as follows:

Y= 1.538 + 0.674 X

Human resources task performance = 1.538 + 0.674Software

Testing the third sub-hypothesis:

H0: There is no statistically significant effect at a significance level of (5%) For individuals and their performance of their mission for the Algerian Post Office, El Bayadh Unit.

H1: There is a statistically significant effect at a significance level of (5%) for individuals and their performance of their mission for the Algerian Post Office, El Bayadh Unit.

Table No. (13): Determination coefficient for the third sub-hypothesis

Estimated error	Corrected coefficient of determination	Coefficient of determination (2R)	Correlation coefficient (R)	model
0.55403	0.304	0.307	0.554 [a]	1

Source: Prepared by the researchers based on the outputs of the program SPSS V26

From the previous table, we note that the correlation coefficient R (0.554) indicates an acceptable direct correlation between individuals and their performance. We also note that the coefficient of determination 2R equals (0.307), i.e. 30.7% of the change in individuals explains the change in their performance of their task, and the remaining 69.3% is explained by other factors.

Table No. (14): Simple linear regression model for individuals and their performance of their task

Significance level	F	Significance level	T	Beta	Std.Error	B	model
0.000[b]	96.555	0.000 0.000	10.687 9.826	0.554	0.201 0.058	2.152 0.566	(Fixed) Individuals

Source: Prepared by the researchers based on the outputs of the SPSS V26 program.

From the previous table, we note that the calculated F value is equal to (96.555), which is greater than its tabular value, and the level of significance is less than (0.05). Therefore, the model is considered statistically significant. The T-test result also indicates that the relationship is statistically significant, as the level of significance is less than (0.05). This means rejecting the hypothesis (H0) and accepting the alternative hypothesis (H1), i.e. there is a statistically significant effect at a significance level of (5%) for individuals and their performance of their mission for the Algerian Post Office, El Bayadh Unit. The simple linear regression equation for the third sub-hypothesis can be extracted as follows:

Y= 2.152 + 0.566 X

HR task performance = 2.152 + 0.566 individuals

Testing the fourth sub-hypothesis:

H0: There is no statistically significant effect at a significance level of (5%) for databases and task performance Human Resources of Algeria Post, El Bayadh Unit.

H1: There is a statistically significant effect at a significance level of (5%) for databases and the performance of the human resources task of Algeria Post, El Bayadh Unit.

Table No. (15): Determination coefficient for the fourth sub-hypothesis

Estimated error	Corrected coefficient of determination	Coefficient of determination (2R)	Correlation coefficient (R)	model
0.52422	0.377	0.380	0.616 [a]	**1**

Source: Prepared by the researchers based on the outputs of the programSPSS V26

From the previous table, we note that the correlation coefficient R (0.616) indicates an acceptable direct correlation between databases and the performance of the human resources task. We also note that the coefficient of determination 2R equals (0.380), i.e. 38% of the change in databases explains the change in human resources performance, and the remaining 62% is explained by other factors.

Table No. (16): Simple linear regression model for databases and human resources task performance

Significance level	F	Significance level	T	Beta	Std.Error	B	model
0.000[b]	133.346	0.000 0.000	4.442 11.548	 0.616	0.258 0.065	1.146 0.747	(Fixed) Databases

Source: Prepared by the researchers based on the outputs of the SPSS V26 program.

From the previous table, we note that the calculated F value is equal to (133.346), which is greater than its tabular value, and the significance level is less than (0.05). Therefore, the model is considered statistically significant. The T-test result also indicates that the relationship is statistically significant, as the significance level is less than (0.05). This means rejecting the hypothesis (H0) and accepting the alternative hypothesis (H1), i.e. there is a statistically significant effect at a significance level of (5%) for the databases and the performance of the human resources task of the Algerian Post Office, El Bayadh Unit. The simple linear regression equation for the fourth sub-hypothesis can be extracted as follows:

Y= 1.146+ 0.747 X

HR task performance = 1.146 + 0.747 Databases

Testing the fifth sub-hypothesis:

H0: There is no statistically significant effect at a significance level (5%) for communication networks and human resources task performance for Algeria Post, El Bayadh Unit.

H1: There is a statistically significant effect at a significance level (5%) for communication networks and human resources task performance for Algeria Post, El Bayadh Unit.

Table No. (17): Coefficient of determination for the fifth sub-hypothesis

Estimated error	Corrected coefficient of determination	Coefficient of determination (2R)	Correlation coefficient (R)	model
0.48073	0.476	0.478	0.692 [a]	1

Source: Prepared by the researchers based on the outputs of SPSS V26 program.

From the previous table, we note that the correlation coefficient R (0.692) indicates an acceptable direct correlation between communication networks and the performance of the human resources task. We also note that the coefficient of determination 2R equals (0.478), i.e. 47.8% of the change in communication networks explains the change in the performance of the human resources task, and the remaining 52.2% is explained by other factors.

Table No. (18): Simple linear regression model for communication networks and the performance of the human resources task

Significance level	F	Significance level	T	Beta	Std.Error	B	model
0.000[b]	199.786	0.000 0.000	7.864 14.135	 0.692	0.188 0.051	1.478 0.724	(Fixed) Communication networks

Source: Prepared by the researchers based on the outputs of the SPSS V26 program

From the previous table, we note that the calculated F value is equal to (199.786), which is greater than its tabular value, and the level of significance is less than (0.05), and therefore the model is considered statistically significant. The T-test result also indicates that the relationship is statistically significant, as the level of significance is less than (0.05.(

This means rejecting the hypothesis (H0) and accepting the alternative hypothesis (H1), i.e. there is a statistically significant effect at a significance level of (5%) for communication networks and the performance of the human resources task of the Algerian Post Corporation, El Bayadh Unit. The simple linear regression equation for the fifth sub-hypothesis can be extracted as follows:

Y= 1.478 + 0.724 X

Performance of the human resources task = 1.478 + 0.724 Communication networks
Testing the main hypothesis:
H0: There is no statistically significant effect at a significance level of (5%) for technology Information and communication technology and human resources performance of Algeria Post, El Bayadh unit.
H1: There is a statistically significant effect at the significance level (5%) of information and communication technology and human resources performance of Algeria Post, El Bayadh unit.

Table No. (19): Determination coefficient for the main hypothesis

Estimated error	Corrected coefficient of determination	Coefficient of determination (2R)	Correlation coefficient (R)	model
0.47095	0.497	0.499	0.707 [a]	1

Source: Prepared by the researchers based on the outputs of SPSS V26 program.

From the previous table, we note that the correlation coefficient R (0.707) indicates an acceptable direct correlation between information and communication technology and human resources task performance. We also note that the coefficient of determination 2R equals (0.499), i.e. 49.9% of the change in information and communication technology explains the change in human resources task performance, and the remaining 50.1% is explained by other factors.

Table No. (20): Simple linear regression model for information and communication technology and human resources task performance

Significance level	F	Significance level	T	Beta	Std.Error	B	model
0.000[b]	217.326	0.000 0.000	5.265 14.742	0.707	0.207 0.055	1.087 0.804	(Fixed) Technology

Source: Prepared by the researchers based on the outputs of SPSS V26.

From the previous table, we note that the calculated F value is equal to (217.326), which is greater than its tabular value, and the significance level is less than (0.05), and therefore the model is considered statistically significant. The T-test result also indicates that the relationship is statistically significant, as the significance level is less than (0.05). This means rejecting the hypothesis (H0) and accepting the alternative hypothesis (H1), i.e. there is a statistically significant effect at a significance level of (5%) for information and communication technology and the performance of the human resources task of the Algerian Post Office, El Bayadh Unit. The simple linear regression equation for the main sub-hypothesis can be extracted as follows:
Y= 1.087 + 0.804X
Performance of the human resources task = 1.087 + 0.804 Information and communication technology
Through the above, the study hypotheses were tested, which express the main problem of the study to know the impact of the dimensions of information and communication technology on the performance of the human resources task, and the results showed that there is a statistically significant effect for each After one of the dimensions of information and communication technology on the performance of the human resources task in the institution under study. As well as the existence of a statistically significant effect of information and communication technology and the performance of the human resources task at the Algerian Post Office, El Bayadh Unit.

Conclusion:

Among the most important results of the field study conducted on a sample of workers at the Algerian Post Office, El Bayadh Unit, are the following:

-Accepting the main hypothesis that states that there is a statistically significant effect at a significance level (5%) for information and communication technology and the performance of the human resources task at the Algerian Post Office, El Bayadh Unit.

-Accepting the first sub-hypothesis: which states that there is a statistically significant effect at a significance level (5%) for devices and equipment and the performance of the human resources task at the Algerian Post Office, El Bayadh Unit.

-Accepting the second sub-hypothesis: the alternative, which states that there is a statistically significant effect at a significance level (5%) for software and the performance of the human resources task at the Algerian Post Office, El Bayadh Unit.

-Accepting the third sub-hypothesis: which states that there is a statistically significant effect at a significance level (5%) for individuals and their performance of their tasks at the Algerian Post Office, El Bayadh Unit.

-Accepting the fourth sub-hypothesis: which states that there is a statistically significant effect at a significance level of (5%) for databases and the performance of the human resources task of Algeria Post, El Bayadh Unit.

-Accepting the fifth sub-hypothesis: which states that there is a statistically significant effect at a significance level of (5%) for communication networks and the performance of the human resources task of Algeria Post, El Bayadh Unit.

In light of the results of the study, a set of recommendations were reached, the most important of which are the following:

-The necessity for the institution under study to work on intensifying investment in the infrastructure of information and communication technology by purchasing modern and advanced devices and equipment, and ensuring the periodic and continuous updating of software in line with developments in the field of information and communication technology, and working to train the human element periodically on modern techniques in the field of technology, and ensuring the updating and continuous protection of databases, and carrying out the continuous development of networks and ensuring their protection.

-Intensifying training and training courses in the field of uses of information and communication technology.

-Working to motivate human resources to innovate in the field of technology.

-Involving distinguished human resources in information and communication technology to train and educate their colleagues at work.

-Creating a culture of cooperation, team spirit and teamwork to facilitate the transfer of knowledge and exchange of experiences to improve the performance of human resource tasks.

-The need for the institution's management to seek to diagnose the deficit in the performance of the human resources task and address it in effective ways.

-Hiring experts and specialists in the field of information and communication technology from outside the institution to benefit from their experiences and knowledge.

-Continuous interest in research and development.

-Hiring research and development centers, especially scientific research laboratories in Algerian and foreign universities leading in the field of information and communication technology.

-Organizing forums and conferences with the participation of specialists in this field.

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