The Impact of E- HRM on Job Performance of Employees in Palestinian Universities: \ Palestine Polytechnic University

Dr. Marwan Said Jaloud

PALESTINE POLYTECHNIC UNIVERSITY
COLLEGE OF ADMINISTRATIVE SCIENCES AND INFORMATICS
ADMINISTRATIVE SCIENCES DEPARTMENT

Abstract

This study aimed to examine the impact of using electronic human resource management systems on employees' job performance in Palestinian universities, focusing on Palestine Polytechnic University as a case study. A descriptive-analytical approach was followed to achieve the study's objectives, utilizing a questionnaire as the primary data collection tool. The questionnaire consisted of 43 items that aligned with the study's objectives and the components of the independent variable and the dependent variable. The study population consisted of 480 employees with permanent contracts at Palestine Polytechnic University, covering diverse academic and administrative roles. A stratified homogeneous sample of 217 employees was selected for the study. 217 questionnaires were distributed, all of which were returned, yielding a 100% response rate, The SPSS statistical software was used to analyze the questionnaire items.

Additionally, the study's results confirmed a positive and significant relationship between the independent variable 'electronic human resource management systems' and the dependent variable 'job performance of employees at Palestine Polytechnic University, The study also highlighted that electronic human resource management notably impacts employee job performance in Palestinian universities. The most significant impact was observed in the "electronic communication" dimension, followed by "electronic evaluation," "e-recruitment and selection," and "e-compensation and incentives." Electronic training had the least impact.

Furthermore, study findings indicate that although the university employs electronic platforms to promote career openings, the utilization of electronic interviews for job applicants is limited. This area requires additional focus and progress. The study suggests that funding electronic scientific conferences, supporting scientific research, and bolstering digital transformation are all beneficial measures to consider. By providing financial and technical assistance for organizing and participating in these conferences, one can enhance scientific debate and research activity.

The key words

E-HRM , Electronic Management, Human Resources, JobPerformance.

Date of Submission: 04-07-2024 Date of acceptance: 18-07-2024

I. Introduction

By the way, there is no denying that computers and information systems have permeated every aspect of life, necessitating the need for all organizations to keep up with them and utilize their computerized systems, particularly in administrative management, organizational change, and computer-assisted productivity. As a result, both public and commercial companies have seen a radical change in information systems, with the development of modern information systems now primarily relying on computers, databases, communication networks, and other technological means. "New management terminologies, including electronic management (e-Management), electronic business (e-business), electronic marketing (e-marketing), electronic human resources management (E-HRM), electronic recruiting (e-recruitment), and other contemporary terminologies, have resulted from this. (Al-Omari, 2019).

In the current business environment, commercial enterprises face distinct obstacles that compel them to devise innovative strategies to manage the frequent and rapid personnel turnover. Since the incorporation of supplementary responsibilities and obligations has become imperative for the enterprise's prosperity, it has become more difficult for them to effectively manage, attract, and communicate with their staff. A multitude of elements contribute to low employee engagement, including insufficient compensation and benefits associated with the position, limited prospects for professional growth and education, and ineffective leadership. To attain

a satisfactory level of employee engagement, organizations must align their human resource management strategies with these evolving market conditions and the aforementioned concerns. (Chayanan, 2020).

Accordingly, an organization that implements human resource management, including development, training, selection, appointment, and compensation systems, can effectively and flexibly achieve goals and develop strategies. It is also capable of implementing policies within the organization in a manner consistent with established internal policies and methods to ensure that human resources contribute to achieving its goals. Solutions can be found to develop human resources to help improve the abilities, opportunities, and motivation of employees. (Nguyen et al., 2020).

As universities try to handle complicated workforce needs, support different employee groups, and adapt to shifting demands in higher education, E-HRM systems are becoming more and more widespread. (Boon et al., 2020).

These systems can provide significant assistance in maintaining information related to tenure, promotions, academic and staff appointments, and training and professional development efforts. However, the impact of E-HRM on university employee performance is still the subject of debate and research. According to some studies (Al Awadhi & Morris, 2016), these systems have the potential to enhance performance through the promotion of communication, transparency, and development. However, other research, particularly in complex institutions like universities, continues to question the effectiveness of these systems.

E-HRM systems may be too stiff or inflexible to accommodate the variety of needs of university personnel, which is a major cause for concern. Some staff members may believe, for instance, that these systems do not appropriately consider the special requirements of academic work or that they are overly concerned with administrative duties rather than promoting career growth. (Liu et al., 2018). Other issues can relate to data security and privacy, the possibility of prejudice or discrimination, and how these technologies may affect employee agency and autonomy. (Cascio & Montealegre, 2016).

In an effort to manage complex labor requirements and adapt to shifting expectations in higher education, universities will likely continue to implement E-HRM systems despite these reservations. Hence, for universities to fulfill employee needs and accomplish organizational goals, it is vital to comprehend the impact that these systems have on employee engagement and performance.

In this case, explores the effects of E-HRM on employee performance in universities to illuminate the advantages and disadvantages of these systems in this setting.

1.2 The Problem of the Study

Efficient computerized administrative systems are considered advantageous when they fulfill the requirements of managers and employees while effectively serving the organization. The trust, approval, and contentment of employees with regard to these systems are crucial determinants in the assessment of job performance. There have been recent demands for the inclusion of multiple parties in employee evaluations to promote transparency and fairness. (Lynn, 2021).

Electronic human resource management (E-HRM) stands as a contemporary tool widely adopted bynumerous institutions and companies worldwide. By leveraging technology and computer systems, E-HRM enhances employee management processes and facilitates performance tracking and development. Despite widespread adoption in numerous countries, the integration of this technology into Palestinian universities is still in its early stages. Hence, it becomes imperative to investigate its influence on the job performance of employees within these institutions. As a result, this study aims to investigate the impact of electronic human resource management on the job performance of Palestinian university employees... It seeks to ascertain whether the adoption of this tool correlates with enhanced job performance, the advancement of university employees' skills and technical competencies, and the enhancement of the quality of education and services delivered to students. We can formulate the study problem as as the following question:

What is the current status of electronic human resource management used in Palestinian universities, and what is its impact on the job performance of university employees?

1.3 Objectives of the Study

- 1. The primary objective of the research is to determine the impact of electronic human resource management on employee performance in Palestinian universities.
- 2. The main objectives of the study are summarized as follows:
- 3. Assessing the impact of electronic management of human resources in all of its dimensions on Employee performance in Palestinian universities.
- 4. Identifying the factors that influence the impact of electronic human resource management on Employee performance in Palestinian universities.
- 5. Outlining best practices in the use of electronic human resource management in Palestinian universities.

6. Providing recommendations and guidelines aimed at developing and improving electronic human resource management in Palestinian universities, as well as improving employee job performance.

1.4.2 Practical Significance

Standing on the weaknesses and strengths points of the electronic human resource management system used in Palestinian universities contributes to the possibility of developing this system and keeping up with modern human resource management standards for employees.

Emphasizing the significance of modern electronic systems for human resource management and the subsequent correction of deviations, as well as motivating and promoting those who deserve it. It also serves as a foundation for evaluating human resource management systems such as recruitment, appointment, training, wages, and other related functions.

Providing guidance and advice to those interested in scientific research to study computerized administrative systems in all administrative fields in the Palestinian business environment, as well as ways to develop these systems.

The objective of this study is to evaluate how electronic human resource management affects the job performance of employees in Palestinian universities. The outcomes of this research hold practical implications in several domains:

- 1. Enhancing employee performance within Palestinian universities, thereby boosting productivity and work quality, by establishing effective strategies for human resource management through electronic systems.
- 2. Innovating new administrative tools and approaches for more efficient and streamlined human resource management practices applicable across various public and private sectors.
- 3. Minimizing conventional administrative tasks and their associated expenses within Palestinian universities through the adoption of electronic human resource management methodologies.
- 4. Cultivating a flexible and conducive work environment for employees in Palestinian universities, fostering communication and interaction among peers, managers, and supervisors, ultimately leading to improved employee performance.

1.5 Study Questions

The main research question is, "What is the current status of electronic Human Resource Management used in Palestinian universities, and what is its impact on the job performance of university employees?

- 1. This study will address the following key questions: What is the reality of electronic recruitment and selection of electronic human resource management on the job performance foremployees in Palestinian universities?
- 2. What is the reality of electronic training for electronic human resource management on the job performance of employees in Palestinian universities?
- 3. What is the reality of electronic performance evaluation for electronic human resource management on the job performance of employees in Palestinian universities?
- 4. What is the reality of electronic communications for electronic human resource management on the job performance of employees in Palestinian universities?
- 5. What is the reality of electronic incentives and compensation for electronic human resource management on the job performance of employees in Palestinian universities?
- 6. What is the reality of job performance for employees in Palestinian universities?

1.6 Study Hypotheses

The first main hypothesiswas that there is a statistically significant relationship at the level of significance ($a \le 0.05$) between electronic human resource management and the job performance of Employees in Palestinian universities from the perspective of Employees in Palestinian universities.

The second main hypothesisis that there is a statistically significant impact for electronic human resource management and job performance of Employees in Palestinian universities at the level of significance ($a \le 0.05$) from the perspective of Employees in Palestinian universities.

This hypothesis generated the following main hypotheses:

- 1. There is a statistically significant impact at the level of significance (a≤0.05) for E-recruitment and E-selection of electronic human resource management approved in Palestinian universities and the job performance of their employees from the perspective of employees in Palestinian universities.
- 2. There is a statistically significant impact at the level of significance ($a \le 0.05$) for E-Training of electronic human resource management approved in Palestinian universities and the job performance of their employees from the perspective of employees in Palestinian universities.

- 3. There is a statistically significant impact at the level of significance (a < 0.05) between the performance evaluation of electronic human resource management approved in Palestinian universities and the job performance of their employees from the perspective of employees in Palestinian universities.
- 4. There is a statistically significant impact at the level of significance (a≤0.05) for E-Communications of electronic human resource management approved in Palestinian universities and the job performance of their employees from the perspective of employees in Palestinian universities.
- 5. There is a statistically significant impact at the level of significance (a≤0.05) for E-Compensation of electronic human resource management approved in Palestinian universities and the job performance of their employees from the perspective of employees in Palestinian universities.

The third main hypothesis

There are statistically significant differences related to the responses of the respondents about the electronic management system for human resources used in Palestinian universities due to demographic variables (gender, age, educational level, job level, years of experience, job title and collage).

The fourth main hypothesis

There are statistically significant differences related to the respondents' responses about job performance due to demographic variables (gender, age, educational level, job level, years of experience, job title, and collegee).

INTRODUCTION AND LITERATURE REVIEW

With the development of technology, the idea of electronic human resource management (E-HRM) has become more widely accepted. It speaks to how human resources (HR) procedures and activities are managed using information technology (IT). The administration of pay and benefits, performance management, training and development, and recruitment are just a few of the HR procedures that are automated by E-HRM systems. (Nanayakkara, 2020).

Consequently, this section shall discuss electronic human resource management (E-HRM), comprising its essential components and functions, alongside its significant advantages for supporting a structured and methodical approach to human resource management. Initially, we will discuss electronic management and its historical development, which marks the beginning of electronic human resource management.

2.1.2 Electronic Management

The Historical Development of Electronic Management

Electronic management has evolved significantly over the past few decades, thanks to the enormous advancements in information technology and telecommunications. Electronic management has become an essential part of business management, contributing to the facilitation and improvement of various operations and activities, both within organizations and between them and their customers and business partners. Electronic management enables fast and easy access to information and data and helps increase efficiency and productivity while reducing errors and costs. Recent developments in electronic management include machine learning and artificial intelligence, which enable organizations to improve their operations and make more effective and accurate decisions. (M B, 2022).

2.1.4 Electronic Human Resource Management

Electronic Human Resource Management (E-HRM) is a concept that refers to the integration of technology and digital solutions in managing various aspects of human resources within organizations. This concept includes the use of software, electronic platforms, and digital tools to simplify HR processes and improve overall efficiency. (Elsawy & Others, 2021).

The Definition of Electronic Human Resource Management

Electronic Human Resource Management: The "E-HRM" refers to the application of information technology to the management of human resource procedures, such as hiring, onboarding, training, development, performance evaluation, and employee relations. Online training, performance monitoring, and self-service options for updating personal information and benefits are just a few of the services that E-HRM systems offer to employees and managers, in addition to automating HR procedures. (Kumar, P., & Sharma, A., 2021).

Electronic Human Resource Management: the use of technology, computer software, and specialized systems to manage and organize human resourceprocesses within organizations through the application of modern methods and techniques that enable the improvement of HR management processes more efficiently and effectively. (Stone& Others, 2018).

The Importance of Electronic Human Resource Management

E-HRM is the integration of information technology into HR processes, such as recruitment, performance management, and employee training and development that can bring several benefits to organizations, such as:

- 1. Increased efficiency, and reduced costs.
- 2. Improved decision-making.
- 3. Implementing E-HRM can lead to improved HR performance, greater strategic alignment between HR and organizational goals, enhanced employee engagement, and job satisfaction.

4. Improved overall organizational performance. Therefore, E-HRM can be a valuable tool for organizations aiming to enhance their HR processes and align their human capital with their strategic objectives. (Yogesh, 2023).

E-Performance Evaluation Definition

E-Performance Evaluation is the process of analyzing and measuring performance related to digital technologies, electronic applications, and E-Learning, to determine their effectiveness in achieving specific goals and improving organizational and individual performance. The evaluation may include factors such as content quality, level of interaction and participation, overall satisfaction of learners and trainers, and data analysis and statistics (Horton, 2020).

E-Performance Evaluation, also known as electronic performance evaluation, refers to the process of assessing and appraising employee performance using digital tools and technologies. It involves the use of electronic platforms, software, or online systems to collect, measure, and analyze data related to an employee's job performance, competencies, goals, and achievements (Imam, 2019).

The Importance of E- Performance Evaluation

Each function of electronic human resource management has great importance, we will mention the points related to the importance of electronic employee performance evaluation:

- 1. Provides objective feedback: Electronic Performance Evaluation provides an objective evaluation of an employee's performance without any biases or personal opinions.
- 2. Increases transparency: With E-Performance Evaluation, the evaluation process becomes more transparent, and both the employees and the managers have access to the evaluation results.
- 3. Improves efficiency: The use of electronic systems for performance evaluation can help streamline the process, making it more efficient and less time-consuming.
- 4. Facilitates data analysis: Electronic Performance Evaluation provides a wealth of data that can be used for analysis and decision-making purposes, such as identifying areas for improvement and tracking progress over time.
- 5. Enhances accountability: Electronic Performance Evaluation contributes to the development of an accountability culture in which employees are held to specific standards and are responsible for their performance.

Overall, E-Performance Evaluation can lead to more accurate and consistent evaluations, improved employee performance, and better organizational outcomes. (M.H, 2022).

2.1.6 The Conclusion of Section One

In conclusion, this section highlights the importance of electronic management and human resource management in the modern era. Adopting digital technologies and electronic tools in human resource management represents a significant shift in how employees are managed and administrative processes are developed.

The study demonstrates that electronic human resource management provides numerous opportunities to enhance the efficiency and effectiveness of human resource management. Electronic systems can be used to manage employees' personal information, organize salaries and benefits, evaluate employee performance, provide online training and development, and manage recruitment and selection processes more effectively.

Through these functions, electronic human resource management plays a vital role in enhancing communication and interaction between employees and organizational management. Electronic tools provide platforms for effective communication and collaboration, contributing to improved response time and interaction among employees. Additionally, they assist in improving decision-making processes and achieving effective performance evaluation and statistical analysis.

In summary, this section expounded upon the operations of electronic human resource management and underscored its substantial influence on propelling progressions in contemporary management. It improves interaction, communication, and efficacy between personnel and organizational leadership.

2.2.3 The Importance of Job Performance

Job performance is critical to the success of any organization because it has a direct bearing on that of the company. Proficient job performance has the potential to result in heightened levels of profitability, customer satisfaction, and productivity. Conversely, subpar job performance may lead to reduced efficiency, diminished client contentment, and even monetary setbacks. Employers must therefore establish transparent performance standards and furnish their personnel with the required resources and instruction to ensure that they carry out their duties efficiently. In addition to providing employees with feedback and identifying areas for development, routine performance evaluations can ultimately result in enhanced job performance. (2019, Abdulrahman).

2.2.4 Job Performance Evaluation

Job performance evaluation is the process of measuring and assessing the performance of employees within their work context according to specified standards and indicators. The purpose of performance appraisal is to

evaluate the extent to which employees achieve their set objectives and the level of execution of assigned tasks, as well as to appreciate their contribution to the achievement of organizational goals. (Kenyatta, 2019).

2.2.10 The Conclusion of Section 2

In conclusion, we have discussed the topic of employee performance, which is of paramount importance in any organization. Achieving excellent job performance contributes to the attainment of organizational goals and overall success. Monitoring and evaluating job performance serve as powerful tools to enhance performance and develop employees' capabilities.

Good job performance provides numerous benefits for both the organization and employees alike. Among these benefits, effective job performance includes increased productivity and efficiency in work processes, as well as enhancing the quality of products and services offered. It also contributes to improving the organization's reputation and building strong relationships with customers and partners.

Furthermore, good job performance promotes employee satisfaction and motivation, as they feel recognized and appreciated when achieving outstanding results in their work. This leads to increased motivation and commitment to work, ultimately improving employee satisfaction and continuity within the organization.

Section No .3 Palestine Polytechnic University

Palestine Polytechnic University, also known as PPU, is a public university located in Hebron, Palestine. Here are some key facts and information about the university:

2.3.1 The Establishment and Development of Polytechnic Palestine University

Polytechnic Palestine University was established in 2006 as an academic institution located in the city of Hebron, Palestine. The university was founded to provide excellent higher education in the fields of technology, engineering, management, and applied sciences and to develop human and technological capacities in Palestine. Polytechnic Palestine University is considered one of the newest universities in Palestine, but it has quickly succeeded in developing itself and building a strong reputation as a high-quality academic institution. The curricula have been designed to align with the requirements of the job market and the needs of the local and regional community, ensuring ample employment opportunities for graduates, and the university offers a variety of majors, including civil engineering, electrical engineering, mechanical engineering, information technology, computer science, business administration, graphic design, communications, and media. The university also provides diverse study programs in the fields of medical and health sciences, life sciences, and the environment. Over the years, Polytechnic Palestine University has witnessed significant growth in expanding its student base and developing its infrastructure. The campus has been expanded, and modern facilities such as well-equipped scientific laboratories and extensive libraries with diverse academic resources and references have been established. Furthermore, advanced technology has been provided to enhance the learning environment and support academic research.

2.3.2 Palestine Polytechnic University houses important colleges and disciplines

Palestine Polytechnic University houses several important colleges and disciplines that meet the needs of the job market and contribute to economic and social development in Palestine. Among the well-known colleges and major disciplines that offer exceptional education are:

- 1. College of Engineering: It encompasses diverse engineering specializations such as civil engineering, electrical engineering, and mechanical engineering. The engineering programs at the university stand out for their modern curricula and well-equipped laboratories that allow students to apply theoretical concepts to practical work.
- 2. College of Information Technology and Computer Science: It offers specializations in the field of information technology and computer science, aiming to equip students with the skills needed to work in the growing IT industry. A stimulating learning environment and a comprehensive curriculum covering areas such as programming, database management, information security, and web application development are provided.
- 3. College of Business and Applied Sciences: It provides programs in business administration, marketing, accounting, project management, and applied sciences. This college distinguishes itself with modern educational curricula that focus on developing students' managerial, leadership, and practical skills.
- 4. College of Health Sciences and Medicine: It includes disciplines in medical laboratory sciences, nursing, physical therapy, pharmacy, and nutrition. This college is known for its commitment to producing highly skilled healthcare professionals through comprehensive academic programs and practical training.

These colleges and disciplines at Palestine Polytechnic University contribute significantly to the educational landscape in Palestine by preparing students for successful careers and meeting the demands of the evolving job market.

In addition to the aforementioned colleges and disciplines, Palestine Polytechnic University offers a wide range of programs and specializations in various fields. The university aims to develop students' capabilities and empower them to achieve their professional and academic aspirations.

2.3.3 The Key Features of Palestine Polytechnic University

High-Quality Education: The university is committed to providing an excellent education that meets international academic standards. The curricula are carefully designed to meet the needs of the job market and industry requirements.

- 1. Advanced Infrastructure: The university boasts modern facilities equipped with state-of-the-art technologies, including advanced scientific laboratories and extensive libraries with diverse knowledge resources. This creates a suitable learning environment for students and faculty members.
- 2. Career Guidance and Practical Training: The university provides opportunities for students to benefit from training and practical application programs, including workshops and on-the-job training. This helps in developing their skills and enhancing their prospects in the job market.
- 3. Focus on Scientific Research: The university encourages scientific research and promotes research activities among faculty members and students. It provides support and resources for the development of research projects and initiatives.

These innovative and advanced educational programs at Palestine Polytechnic University offer opportunities for students to acquire knowledge and practical skills in the field of healthcare. With its commitment to high-quality education, state-of-the-art infrastructure, career guidance, practical training, and emphasis on scientific research, the university ensures that students are well-prepared for their future endeavors and contribute to the social and economic development of Palestine.

Scientific research and publishing results in prestigious scientific journals are encouraged at Palestine Polytechnic University. Students are motivated to participate in research and innovation projects, which enhances their research and innovative capabilities.

- 1. Community Engagement: Palestine Polytechnic University builds strong partnerships with local and regional institutions and companies, aiming to develop educational and training programs that align with the needs of the community and various economic sectors.
- 2. Diversity and Equality: Palestine Polytechnic University values diversity and equality and strives to provide fair and equal educational opportunities for all, regardless of gender, religion, or cultural background. In summary, Palestine Polytechnic University is an advanced educational institution that aims to provide high-quality education and develop human and technological capabilities in Palestine. The university offers diverse programs in various disciplines, possesses modern infrastructure, focuses on scientific research, and engages with the community. This makes it an ideal choice for students seeking excellent education and the development of their practical skills, (https://www.ppu.edu/).

Section 4. Previous Studies

In this section, an effort will be made to elucidate the primary studies that are closely intertwined with the variables under scrutiny. The primary objective is to ascertain prior scholarly contributions about the subject matter of the present study while emphasizing the distinguishing factors that set it apart from the preceding research endeavor.

2.4.4 Comparison between Current Study and Previous Studies

Multiple previous studies have been reviewed and summarized in this study, addressing the role of information technology in organizing human resources functions in general in various public, private, and academic institutions.

The scientific gap has been identified by addressing the impact of electronic human resource management on the job performance of employees at Palestine Polytechnic University specifically.

The study provided a comprehensive explanation of the differences between the current study and the most important previous studies, highlighting points of similarity and difference in terms of variables, objectives, study population, methodology used, and results. This was illustrated through the following:

The current study aligns with the studies conducted by Abu Naser (2017), Al-Shawa (2022), Al-Zoor (2021), Al-Eisaawi (2021), Badr (2018), Al-Harazneh (2021), and Selatan (2018) in terms of the independent variable, which is electronic human resource management (e-HRM). It also agrees with them in terms of using the descriptive-analytical methodology. However, the difference lies in the dependent variable, where Abu Naser's study (2017) focused on organizational performance, Al-Shawa's (2021) on organizational performance, Al-Zoor's (2021) on roles of knowledge workers, Al-Eisaawi's on organizational performance, Badr's on job performance, Al-Harazneh's on job performance, and Selatan's on career planning.

Regarding the objectives, the current study aims to investigate the impact of e-HRM on job performance. However, the objectives differed; Abu Naser (2017) aimed to understand the impact of e-HRM on organizational performance, focusing on Al-Azhar University as the study population. Al-Shawa's objective was to determine the effect of these electronic systems on organizational performance, Al-Zoor aimed to understand the reality of these systems on roles of knowledge workers, Al-Eisaawi and Badr aimed to understand the impact of HRM systems on organizational performance, Al-Harazneh aimed to discover the effect of these systems on job performance, and Selatan aimed to investigate their impact on career planning.

The study populations varied; Abu Naser focused on the academic community at Al-Azhar University, Al-Shawa on Palestine University, Al-Zoor on the Iraqi Ministry of Health, Al-Eisaawi on diverse companies in the UAE, Badr on international non-governmental organizations operating in the humanitarian sector. Hence, the study populations diversified between the public and private sectors, while the current study focused on the community of Palestine Polytechnic University in Hebron.

Based on this, the researcher identified the scientific gap that the study will cover, which is studying the impact of e-HRM systems at Palestine Polytechnic University in Hebron.

After we reviewed the agreement and disagreement of previous studies related to the subject of the study with the current study, it became clear that there are different viewpoints of researchers, both according to their perceptions and inclinations, but they agree on the importance of the role of electronic human resources management practices in achieving job performance and institutional performance. What distinguishes this study from previous studies is that most previous studies touched on one or more elements of human resources practices, but the current study examined electronic human resources management with job performance and also focused on Employees in universities. Previous studies benefited from identifying issues related to electronic human resources management practices and job performance and devising research questions and tools.

3. (Study Methodology and Procedures)

This study will use the descriptive-analytical methodology, which is descriptive and analytical. It focuses on electronic human resource management and its impact on the performance and satisfaction of employees in Palestinian universities. It also examines its ability to enhance its efficiency, improve its work, and simulate the reality and future developments in the Palestinian business environment. The study aims to classify and record the data and facts that will be collected, interpret and analyze them comprehensively, and then extract meanings capable of describing the problem of the study with the necessary accuracy.

Finally, it will provide recommendations for developing those systems to enhance employee efficiency and increase their confidence in electronic human resource management applications.

3.1 Study Community

The employees at Palestine Polytechnic University, at various administrative levels in the organizational structure.

Based on field visits and interviews conducted with the university's Human Resources Manager, it was ascertained that the institution employs a total of (322 academics). These academics are categorized as follows: (80) with a doctorate, (62) with a master's degree, (51) with a bachelor's degree in applied professions, (64) lab supervisors, (23) lab technicians, and (42) academics with administrative duties.

There are 158 administrative staff members.

The total number of individuals in the community is 480.

3.2 Study Sample

A stratified homogeneous sample of individuals from the study community was taken, with equal proportions based on the number of individuals in each department of the university and also with equal proportions for the administrative structure within it. This sample comprises 217 employees at the university, representing 45% of the study community. It includes individuals from all administrative levels. This is because all employees at various administrative levels are managed within an electronic human resource management system. The number of individuals in the sample was determined according to Morgan's table for determining sample size from the study community. (Study Consultancy and Statistical Analysis website, 2022).

		Re	quired S	ample S	ize [†]			
	Confid	ence = 9	5%		Confid	ence = 9	9%	
Population Size		Margin	of Error			Margin	of Error	
	5.0%	3.5%	2.5%	1.0%	5.0%	3.5%	2.5%	1.0%
10	10	10	10	10	10	10	10	10
20	19	20	20	20	19	20	20	20
30	28	29	29	30	29	29	30	30
50	44	47	48	50	47	48	49	50
75	63	69	72	74	67	71	73	75
100	80	89	94	99	87	93	96	99
150	108	126	137	148	122	135	142	149
200	132	160	177	196	154	174	186	198
250	152	190	215	244	182	211	229	246
300	169	217	251	291	207	246	270	295
400	196	265	318	384	250	309	348	391
500	217	306	377	475	285	365	421	485
600	234	340	432	565	315	416	490	579
700	248	370	481	653	341	462	554	672
800	260	396	526	739	363	503	615	763

To calculate the percentage for each category in the sample, i find the percentage of each category from the total number of individuals in the sample, which amounted to 480 individuals by the next way:

- "With a doctorate," 80 = (80/480) * 100% = 16.7%.
- "With a master's degree", 62 = (62/480) * 100% = 13%.
- "With a bachelor's degree in applied professions" 51 = (51/480) * 100% = 10.6%.
- "Lab supervisors: "64 = (64/480) * 100% = 13.4%.
- "Lab technicians = 23 = (23/480) * 100% = 4.7%.
- "Academics with administrative duties" 42 = (42/480) * 100% = 8.7%.
- "Administrative staff members: "158 = (158/480) * 100% = 32.9.

To calculate the number of individuals in each category of the selected sample, which consists of 217 employees according to Morgan's table, we calculated these proportions using the following method:

- "With a doctorate" =217*0.167 = 36 employees.
- "With a master's degree" = 217 * 0.13 = 28 employee.

With a bachelor's degree in applied professions" = 217 * 0.106 = 23 employees.

- "Lab supervisors"=217*0.134=29employees.
- "Lab technicians"=217*0.047=10employees.
- "Academics with administrative duties" =217* 0.087 = 19 employees.
- "Administrative staff members "=217* 0.329 = 72 employees."

Description of sample Demographic variables: Gender, Age, Educational Qualification, Years of Experience, Job Title, and College.

Variable	Variable Level	Number	Percentage
Gender	Male	143	65.9%
	Female	74	34.1%
Age	Less than 30 years	35	%16.1
	30 to 44 years	97	%44.7
	45 years and above	85	%39.2
	General Secondary Education or lower	0	%0
Educational	Diploma	7	%3.2
Qualification	Bachelor's Degree	89	%41.0
	Master's Degree	53	%24.4
	Doctorate	68	%31.3
Years of	Less than 5 years	35	%16.1
Experience	5 to 9 years	38	%17.5
	10 years and above	144	%66.4
	Academic	110	%50.7
Job	Administrative	75	%34.6
Title	Academic with Administrative Duties	32	%14.7
	Postgraduate Studies	9	%4.1
College	Dual Studies	11	%5.15
	Medicine	22	%10.1
	Engineering	38	%17.5
	Information Technology and Computer Science	8	%3.7
	Administration Sciences	43	%19.8
	Applied Sciences	26	%12.0
	Applied Professions	19	%8.8
	Humanities	30	%13.8
	Nursing	11	%5.1

Table (3.2) Distribution of Study Sample by Demographic Variables

3.3 Study Tool Components

The study tool for this study was designed based on two main frameworks:

The First Framework:Relates to demographic data and includes psychometric variables associated with the characteristics of the study participants. This section encompasses the following variables: gender, age, educational qualification, years of experience, job title, and college.

The Second Framework: Contains the targeted dimensions that give rise to the dimensions of the variables under study. This section includes both the independent and dependent variables. The independent variable was represented in a set of dimensions consisting of (30) items distributed across five dimensions. As for the second axis, it represents the dependent variable related to "job performance" and consists of (13) items.

Table (3.3) illustrates the distribution of questions related to dimensions and axes within the current study tool. Table (3.3): Paragraphs Distributed Across Dimensions and Axes Forming the Study Variables under Investigation

Variable	Dimension	Number of Items
	Electronic Recruitment and Selection	10
Electronic Human Resources Management	Electronic Training	5
	Electronic Evaluation	5
	Electronic Communications	5
	Electronic Compensation	5
Job Performance		13
Number of Items		43

3.5 Steps to Apply the Study

Firstly: Data Collection from Secondary Sources: Data collection from secondary sources involved conducting a comprehensive review of relevant literature, including the questionnaire of previous studies, journals, conferences, university libraries, and the Human Resources Department at Palestine Polytechnic University, it also involved referring to reputable websites that publish study and studies on topics related to the use of electronic management systems in human resource functions. The purpose of this data collection was to ensure that the study problem has not been extensively addressed in previous studies. It also involved summarizing those previous studies and providing a critical summary that highlights the study gap addressed by the current study and the knowledge contribution it offers. This was achieved by providing a comprehensive explanation of electronic human resource management systems and their impact on the job performance of employees at Palestine Polytechnic University.

Secondly: Data Collection from Primary Sources (Field Study)

The questionnaire was used as a tool to gather information because it allows for explicit and unrestricted answers to questions. It enables participants to choose the appropriate time and place to complete the questionnaire. Additionally, through the questionnaire, a vast amount of information can be collected from multiple individuals within a specified timeframe. The questionnaire was administered electronically, and closed-ended questions were selected as the method for answering the questionnaire questions. This was done to obtain practical and standardized information. Furthermore, closed-ended questions facilitated ease and speed of response, eliminating the need for deep thinking or significant effort. They also facilitated easy data collection, interpretation, and reaching specific results.

3.6 Study Variables

Demographic variables: Gender, Age, Educational Qualification, Years of Experience, Job Title, and College. The independent variable: Is electronic human resource managementand it is made up of several major components, including E-Recruitment & E-Selection, E-Training, E- Performance Evaluation, E-Communications, and E-Compensation.

The dependent variable: Is job performance.

3.7 The Statistical Methods Used

- 1. Percentages and Frequencies: These were utilized to describe the study sample.
- 2. Mean, Weighted Mean, and Standard Deviation: These statistical measures were employed.
- 3. Cronbach's Alpha: This test was used to assess the reliability of the questionnaire items.
- 4. Pearson Correlation Coefficient: This test was used to measure the degree of correlation between variables. The researcher used it to calculate internal consistency, construct validity, and examine the relationship between different domains.
- 5. Simple Linear Regression Model: The researcher employed this model to measure the impact of the independent variable on the dependent variable in the study.

3.8 The Scale Used in The Study Tool

To determine the scale interval in the decimal scale of the study, the range between the scale grades (5-1=4) was calculated and then divided by the highest value on the scale to obtain the scale interval. The Likert five-point scale was employed in constructing the study tool, where the grade "1" was chosen for strongly disagree, and the grade "5" for strongly agree, with other grades corresponding to the various choices and responses

.

Table (3.7): The Adopted Criterion in the Study

(***)								
Arithmetic Mean	Relative Weight	Degree of Agreement						
From1.00 - 1.80	From 20% to 36%	Strongly Disagree						
Greater than 1.80 to 2.60	Greater than 36% to 52%	Disagree						
Greater than 2.60 to 3.40	Greater than 52% to 68%	Neutral						
Greater than 3.40 to 4.20	Greater than 68% to 84%	Agree						
Greater than 4.20 to 5.00	Greater than 84% to 100%	Strongly Agree						

To interpret the study results and assess the level of response, the researcher relied on arranging the arithmetic means at the domain level of the questionnaire and the item level within each domain, the researcher determined the degree of agreement according to the adopted criterion for the study.

- 4.1 (Data Analysis, Hypothesis Testing, and Discussion)
- 4.2 Analysis of Study Questions and Testing Study Hypotheses
- ⇒ Analysis of the First Main Question: What is the current status of electronic Human Resource Management used in Palestinian universities, and what is its impact on the job performance of university employees?

To analyze the first main question, the researcher used the mean, standard deviation, and relative weight for each field of study, as illustrated in the following table

Table (4.1): The reality of electronic management of human resources and work performance

No.	Dimension	Arithmetic Mean	Weight (%)	Standard Deviation	Rank	Agreement Score
1	E-Recruitment and Selection	3.55	71.00	0.53	3	Agree
2	E-Training	3.45	69.04	0.60	5	Agree
3	E- Evaluation	3.86	77.24	0.66	2	Agree
4	E-Communications	4.08	81.59	0.59	1	Agree
5	E-Compensation	3.48	69.65	0.63	4	Agree
E Hu	man Resources M.	3.69	73.71	0.52		Agree
Field: Job Performance		3.70	74.00	0.51	Agree	
All D	rimensions	3.69	73.86	0.50		Agree

Through the previous table, it becomes evident to the researcher that there is a relationship between electronic human resource management and the work performance of employees in Palestinian universities. All fields received high endorsement from respondents with a relative weight of 73.36%. The fourth dimension, "electronic communication," received the highest response rate and ranked first with a relative weight of 81.59%. Meanwhile, the second dimension, "electronic training," ranked last with a relative weight of 69.04%, albeit with a high level of agreement. The researcher attributes this to the general trend towards using electronic communication, which is characterized by speed, quality of information transfer, the ability to reach a large number of employees simultaneously, and ensuring information confidentiality and security.

Following that, electronic evaluation scored 77.24%, explaining the increase in efficiency and accuracy as electronic systems allow for more precise and specific performance evaluations using defined performance criteria. It also reduces reliance on paper documents and bureaucratic procedures. Furthermore, the use of electronic evaluation data facilitates administrative decision-making, policy development for performance improvement, and skill enhancement.

Next is electronic recruitment and selection with a percentage of 71%, attributed by the researcher to expanding the scope of research and achieving greater transparency in the recruitment and selection process. Data coordination is simplified for universities to better organize and preserve applicant and employee information through electronic data management systems. Additionally, electronic systems reduce bureaucratic errors associated with traditional paper-based management processes, which can be costly and prone to errors.

Following that is electronic incentives and compensation at 69.65%, aiming to increase efficiency and transparency. The electronic system for incentives and compensation simplifies and organizes salary and benefit management processes better, contributing to increased efficiency, improved transparency, error reduction, and decreased human error rates.

Lastly, electronic training received a percentage of 69.04% due to its flexibility and accessibility. Electronic training allows university employees to access educational materials and training courses from anywhere at any time, enabling them to learn skills and knowledge flexibly to suit their schedules. However, it is noteworthy that a broader focus on electronic training is necessary.

Analysis of Subsidiary Question 1: What is the reality of electronic recruitment and selection for electronic human resource management on the job performance of employees in Palestinian universities? To analyze Subsidiary Question 1, the researcher utilized the mean, standard deviation, and relative weight for each item under "electronic recruitment and selection," as illustrated in the following table

Table (4.2): The reality of Electronic Recruitment and Selectionon the job performance of employees in Palestinian universities

		A '.1		0, 1 1	D 1	
		Arithmetic Mean	Weight (%)	Standard Deviation	Rank	Agreement Score
No.	Item					
1	The university administration adopts a clear electronic policy in recruiting academic qualifications.	3.66	73.18	0.89	3	Agree
2	The university administration utilizes electronic means to search for and attract degree holders for employment.	3.41	68.11	0.94	6	Agree
3	The university administration employs suitable electronic methods to appoint innovative individuals within the university.	3.19	63.80	0.92	8	Neutral
4	Applicant data for job positions are stored in an electronic database, which is referenced in the case of new job opportunities.	3.50	70.00	0.97	4	Agree
5	The university employs online platforms to announce job vacancies within the institution.	4.51	90.28	0.52	1	Strongly Agree
6	Employment applications are submitted electronically through the university's online portal.	4.47	89.35	0.60	2	Strongly Agree
7	The university administration relies on an electronic system to screen submitted job applications.	3.49	69.72	0.84	5	Agree
8	The university employs electronic interviews for job applicants.	2.86	57.29	0.79	10	Neutral
9	The university utilizes electronic assessments for job applicants.	3.07	61.40	0.88	9	Neutral
10	The process of electronic recruitment contributes to eliminating the role of intermediaries	3.35	67.04	0.92	7	Neutral

From the previous table, it is evident to the researcher that the first dimension, "electronic recruitment and selection," received a high level of agreement, with a relative weight of 71.0%. The items are as follows:

Item (5), which states "The university uses electronic platforms to advertise vacancies in the university," received the highest relative weight at 90.28%. The researcher attributes this to the importance of electronic means in recruitment processes for their ability to expand reach, provide instant updates, and reduce costs. The university can update vacant positions and their requirements instantly on the website, allowing candidates continuous access to accurate and up-to-date information. Additionally, advertising through electronic platforms can be more cost-effective compared to other methods.

Item (10), which states "The university uses electronic interviews for job applicants," received the lowest relative weight at 57.29%. The researcher attributes this to its relatively lower importance compared to other aspects mentioned in the text. This indicates that the use of electronic interviews for job applicants is considered less important compared to other factors mentioned in the text, perhaps due to other more critical factors in the selection and recruitment process or its less frequent utilization.

Additionally, the university's reliance on electronic interviews for job applicants remains relatively moderate.

Analysis of Subsidiary Question 2: What is the reality of electronic training for electronic human resource management on the job performance of employees in Palestinian universities?

To analyze Subsidiary Question 2, the researcher used the mean, standard deviation, and relative weight for each item under "electronic training," as illustrated in the following table:

Table (4.3): The reality of electronic training for electronic human resource management on the job performance of employees in Palestinian universities

	or emproyees in re	Arithmetic	Weight	Standard	Rank	Agragamant
No.	Itam		_		Kalik	Agreement
NO.	Item	Mean	(%)	Deviation		Score
1	Employees are aware of the importance of electronic training	3.63	72.59	0.88	4	Agree
2	Training needs are electronically identified.	4.01	80.19	0.70	2	Agree
3	The university possesses sufficient technical and administrative capabilities to educate its employees electronically.	3.61	72.23	1.05	5	Agree
4	The university administration encourages electronic scientific conferences	4.04	80.83	0.90	1	Agree
5	Electronic methods are utilized to provide feedback to trainees.	4.00	80.09	0.70	3	Agree

From the previous table, it is evident to the researcher that the second dimension, "electronic training," received a high level of agreement, with a relative weight of 69.04%. The items are as follows:

Item (4), which states "The university encourages electronic scientific conferences," received the highest relative weight at 80.83%. The researcher attributes this to the university's direction towards technological advancement and transition to the digital environment in scientific research. Additionally, electronic scientific conferences are seen as a means to attract attention, increase discussion, highlight the university, and enhance its competitiveness.

Item (2), which states "Training needs are identified electronically," received a percentage of 80.19%. The researcher interprets this as electronically identifying training needs being one of the fundamental bases for developing and improving employee performance and advancing the university. Additionally, relying on electronic learning technologies and platforms to identify training needs is more effective and efficient than traditional methods. Electronic technologies also have a positive impact on the ease of implementing and monitoring this process.

Item (3), which states "The university has sufficient technical and administrative capabilities to electronically educate its employees," received the lowest relative weight at 72.23%. The researcher attributes this to the university's limited capabilities in this area, indicating a need for increased attention to developing this aspect.

Analysis of Subsidiary Question 3: What is the reality of electronic performance evaluation for electronic human resource management on the job performance of employees in Palestinian universities? To analyze Subsidiary Question 3, the researcher used the mean, standard deviation, and relative weight for each item under "electronic evaluation," as illustrated in the following table

Table (4.4):The reality of electronic performance evaluation for electronic human resource management on the job performance of employees in Palestinian universities

No.	Item	Arithmetic	Weight	Standard	Rank	Agreement
		Mean	(%)	Deviation		Score
1	The university possesses electronic programs where employees' daily activities, work schedules, and accomplishments are stored.	3.51	70.19	0.89	3	Agree
2	Employee data is electronically retained for reference at any time.	3.00	60.09	0.93	5	Neutral
3	Employees are encouraged to utilize electronic technologies in evaluations.	3.70	74.07	0.88	2	Agree
4	Electronic assessment contributes to both individual and collective employee performance evaluations.	3.78	75.56	0.73	1	Agree
5	Electronic assessment offers detailed and immediate feedback to employees regarding them. Performance and professional development.	3.31	66.30	0.69	4	Neutral

Based on the table above, it is evident to the researcher that the third dimension, "Electronic Assessment," received an agreement score, with a relative weight of 77.24%. The subsections are as follows:

Item 4, which discusses the contribution of electronic assessment to evaluating employee performance individually and collectively, received the highest relative weight of 75.56%. This indicates the high level of trust employees have in the electronic individual and collective assessment system. The researcher attributes this to the accuracy of this system in monitoring the actual performance of employees within clear goals, standards, and indicators that make the evaluation process more accurate, transparent, and fair.

On the other hand, item 2, which mentions electronically storing employee data for reference at any time, received the lowest relative weight of 60.09%. The researcher attributes this to the fact that these systems are accessed by specific individuals responsible for the employee evaluation process and assigning specific grades, and not everyone can access these systems. Additionally, data is updated by the HR manager and employees in the HR department.

Overall, these findings indicate a high level of confidence in electronic assessment systems for evaluating employee performance, especially in terms of accuracy and transparency, while also highlighting the controlled access and updating mechanisms of electronic employee data systems

Analysis of Subsidiary Question 4: What is the reality of electronic communications for electronic human resource management on the job performance of employees in Palestinian universities?

To analyze Subsidiary Question 4, the researcher used the mean, standard deviation, and relative weight for each item under "electronic communications," as illustrated in the following table:

Table (4.5):The reality of electronic communications for electronic human resource management on the job performance of employees in Palestinian universities

Agreement Score Strongly Agree Agree
Strongly Agree
Agree
Agree
I
Agree
Agree
Agree
_

From the previous table, it is evident to the researcher that the fourth dimension, "electronic communication," received a high level of agreement, with a relative weight of 81.59%. The items are as follows:

Item (1), which states "All modern communication means such as phones, faxes, and internet network are available in the university," received the highest relative weight at 88.06%. The researcher attributes this to their contribution to enabling administrative and academic operations, improving organizational efficiency and management. Moreover, it helps expand relationships and collaboration with other entities.

Item (4), which states "The available electronic programs have the ability for flexible information exchange among system users," received the lowest relative weight at 76.85%. The researcher attributes this to the advanced and complex nature of these electronic programs. Learning and controlling them may require specific technical skills, which could create a psychological barrier to their effective use. Additionally, there might be a need for guiding and training users on how to use these programs effectively and how to flexibly exchange information through them. In the absence of sufficient training, the exchange may be less effective.

Analysis of Subsidiary Question 5: What is the reality of electronic incentives and compensation for electronic human resource management on the job performance of employees in Palestinian universities? To analyze Subsidiary Question 5, the researcher used the mean, standard deviation, and relative weight for each item under "electronic incentives and compensation," as illustrated in the following table:

Table (4.6):the reality of electronic incentives and compensation for electronic human resource management on the job performance of employees in Palestinian universities

	the job performance of employees in a destinant universities					
		Arithmetic Mean	Weight (%)	Standard Deviation	Rank	Agreement Score
No	Item					
1	Electronic human resource management applications aid in collecting, processing, analyzing, and storing incentives and compensation data	4.40	88.06	0.50	1	Strongly Agree
2	Electronic human resource management applications provide access to incentives and compensation data to anyone at any time	4.12	82.41	0.77	3	Agree

No	Item	Arithmetic Mean	Weight (%)	Standard Deviation	Rank	Agreement Score
3	Electronic human resource management applications assist in achieving fair incentives and compensations within the university.	3.85	76.94	0.80	4	Agree
4	Clear foundations for the distribution of rewards and incentives exist and are reviewed electronically.	3.84	76.85	0.79	5	Agree
5	A system for securing electronic payment processes is in place	4.19	83.80	0.62	2	Agree

Based on the table above, it is evident to the researcher that the fifth dimension, "Electronic Incentives and Compensations," obtained an agreement score, with a relative weight of 69.65%. The subsections are as follows: Item 1, which discusses the role of electronic human resource management applications in collecting, processing, analyzing, and storing incentive and compensation data, received the highest relative weight of 79.26%. The researcher attributes this process automation, as electronic human resource management applications contribute to automating many processes related to incentives and compensation. This increases the accuracy and efficiency of data collection, processing, and analysis. Additionally, automation helps reduce human errors in data collection and analysis. These applications also assist in ensuring compliance with policies and regulations related to incentives and compensation, enhancing transparency within the university.

Item 4, which states that there are clear foundations for distributing rewards and incentives that are reviewed electronically, received the lowest relative weight of 59.54%. The researcher attributes this to the lack of clarity in the foundations, as the criteria used for distributing rewards and incentives may not be clear enough, making electronic review challenging. There may be a need to improve and clarify these criteria. Furthermore, there are operational challenges that make it difficult to implement electronic reviews for the rewards distribution process, such as system integration, security, and data protection concerns.

⇒ Analysis of Subsidiary Question 6: What is the reality of job performance for employees in Palestinian universities?

To analyze Subsidiary Question 6, the researcher used the mean, standard deviation, and relative weight for each item under the "job performance" axis, as shown in the following table:

Table (4.7): The reality of job performance for employees in Palestinian universities

	Table (4.7). The reality of jou	1				,
No.	Item	Arithmetic Mean	Weight (%)	Standard Deviation	Rank	Agreement Score
1	The university has clear criteria for performance evaluation	3.94	78.70	0.62	3	Agree
2	The university aims to continuously improve employee performance	3.82	76.48	0.69	4	Agree
3	Utilizing modern techniques work leads to an increase in job performance	4.11	82.21	0.57	1	Agree
4	Promotions at the university are based on employees' good job performance	3.63	72.59	0.92	9	Agree
5	Electronic human resource management works to enhance the efficiency of administrative processes	3.74	74.72	0.87	5	Agree
6	Electronic human resource management strives to overcome obstacles that hinder performance levels.	3.71	74.14	0.78	6	Agree
7	Do you believe that electronic human resource management contributes to enhancing employees' performance in the organization?	3.68	73.58	0.75	8	Agree
8	Electronic human resource management helps define clear responsibilities for employees	3.57	71.44	0.61	10	Agree
9	Electronic human resource management speeds up the delivery of instructions to employees	4.08	81.69	0.76	2	Agree
10	Electronic human resource management increases competition among employees to enhance	3.28	65.67	0.68	13	Neutral

DOI: 10.35629/8028-130777105 www.ijbmi.org 91 | Page

No.	Item	Arithmetic Mean	Weight (%)	Standard Deviation	Rank	Agreement Score
	performance efficiency					
11	Electronic human resource management motivates employees and enhances their capacity for achievement	3.40	68.09	0.60	12	Agree
12	The use of electronic human resource management leads to the availability of sufficient work-related information	3.71	74.23	0.79	7	Agree
13	Do you believe that electronic human resource management contributes to increasing employees' willingness to collaborate with their colleagues?	3.44	68.74	0.81	11	Agree

Based on the table above, it is evident that the second axis, "Job Performance," received a high level of agreement, with a relative weight of 74.0%. The items under this axis are as follows:

Item 3: "Using modern technologies at work leads to increased job performance." This item obtained the highest relative weight of 82.21%. The researcher attributes this to the enhancement of efficiency and effectiveness in tasks and job functions through the utilization of modern technologies. Information technology and electronic tools can expedite tasks with higher precision, while also fostering innovation and creativity by providing interactive tools and environments.

Item 10: "Electronic HR management contributes to increasing competition among employees to improve performance." This item received the lowest relative weight of 65.67%. This suggests that the university primarily focuses on other aspects of electronic HR management and perceives them as playing a lesser role in enhancing competition among employees. The university predominantly employs electronic HR management to streamline and improve administrative processes such as payroll management, employee management, and administrative reporting, with less emphasis on fostering competition among employees.

4.3 Testing and Discussion of Study Hypotheses

Primary Hypothesis 1: There exists a statistically significant relationship at a significance level ($\alpha \le 0.05$) between electronic human resource management and the job performance of employees at Palestinian universities from the perspective of university staff.

To test this hypothesis, the Pearson correlation coefficient was utilized to study the relationship between the "electronic human resource management" domain and the dependent variable "job performance." If the significance level derived from the correlation coefficient results is less than 0.05, it signifies the rejection of the null hypothesis and the acceptance of the alternative hypothesis. This is illustrated in the following table:

Table (4.8): Pearson Correlation Coefficient between Electronic Human Resource Management and Job Performance of Employees

1 distinuite of Employees		
Hypothesis	Correlation Coefficient	Probability Value (Sig)
There is a statistically significant relationship at a significance level ($\alpha \le 0.0$) between electronic human resource management and job performance of employed at Palestinian universities from the perspective of university staff.	'	0.000

The preceding table illustrates that the Pearson correlation coefficient between the independent variable (electronic human resource management) and the dependent variable (job performance) reached 0.874. Furthermore, the probability value (Sig= 0.000) is smaller than the significance level of 0.05. Consequently, we infer the presence of a statistically significant relationship at a significance level ($\alpha \le 0.05$) between electronic human resource management and the job performance of employees in Palestinian universities. The researcher attributes this to the important relationship between electronic human resource management and job performance in these universities.

Secondary Hypothesis 2: There is a statistically significant effect at a significance level ($\alpha \le 0.05$) of electronic human resource management on the job performance of employees at Palestinian universities from the perspective of university staff.

To test this hypothesis, simple linear regression was employed to study the impact of "electronic human resource management" on the dependent variable "job performance." If the significance level derived from the regression results is less than 0.05, this indicates the rejection of the null hypothesis and the acceptance of the alternative hypothesis. The software program (E-views, 13) was utilized due to its higher accuracy in regression results. This is demonstrated in the following table:

	J00 I	errorm	ance		
Independent Variables	Regression coefficient		dard ror	T-test value	The p-value Sig
Constant (C)	0.530	0.1	22	4.35	0.0147
Electronic Human Resource Management (A)	0.860	0.0	33	26.31	0.0000
Coefficient of Determination = 0.764			Adjuste	ed determination coefficient =	= 0.763
The value of the F-test is 692.23			The p-value = 0.0000		
The correlation coefficient = 0.874			Autocorrelation (Durbin-Watson Stat) = 1.913		at) = 1.913
Breusch-Godfrey Serial Correlation I M Test- (0.821)			Heteroskedasticity Test: ARCH- (0.891)		

Table (4.9): Simple Linear Regression Analysis for the Impact of Electronic Human Resource Management on Job Performance

Through the previous table, the researcher can deduce a set of results and comment on them as follows:

The F-value, which measures the model's goodness of fit (692.23), and the p-value (0.000), indicate that the model is statistically significant. This means that the model can be relied upon for analysis and interpretation of results. The correlation coefficient (0.874) indicates a positive and significant relationship between electronic human resource management and job performance. The adjusted determination coefficient (0.763) suggests that 76.3% of the variance in job performance is explained by electronic human resource management, while 23.7% is attributed to other variables not included in the model.

The impact of the independent variable (electronic human resource management) on the dependent variable (job performance) is 0.860. This means that a one-unit increase in the independent variable corresponds to a 0.860 increase in the dependent variable.

The Durbin-Watson statistic suggests no autocorrelation among the residuals. This is further supported by the test value (0.823), which is greater than 0.05, indicating the absence of autocorrelation issues. The ARCH test value (0.892), also greater than 0.05, indicates no problem of heteroscedasticity in the error variances.

The regression equation was formulated as follows: [The equation would be provided here, if mentioned in the original text.]

These observations and analyses collectively suggest that the model is suitable for explaining the relationship between electronic human resource management and job performance:

Y = 0.530 C + 0.823(A)

The researcher explains this by the presence of a positive impact between electronic human resource management and the job performance of employees in Palestinian universities, as perceived by the university staff. Electronic technologies help empower employees by providing them with access to their personal and professional information, as well as improving their time management. Furthermore, these technologies facilitate continuous training and development for employees, which can enhance their performance and efficiency.

Sub-Hypothesis 1: There is a statistically significant impact at a significance level ($\alpha \le 0.05$) of electronic recruitment and selection on the job performance of employees at Palestinian universities from the perspective of university employees.

To test this sub-hypothesis, a simple linear regression was used to study the impact of "electronic recruitment and selection" on the dependent variable "job performance." If the significance level obtained from the regression coefficient results is less than 0.05, it indicates the rejection of the null hypothesis and the acceptance of the alternative hypothesis. The software program (E-views, 13) was employed for its accuracy in regression results. The following table illustrates this:

Table (4.10): Simple Linear Regression Analysis of the Impact of Electronic Recruitment and Selection of Job Performance

Independent Variables	Regression coefficient	Standard Error	T- test value	The p-value Sig
Constant (C)	1.15	0.163	7.90	0.0147
Electronic recruitment and selection (Variable A) 0.717		0.045	15.82	0.0000
Coefficient of determination = 0.539		Adjusted determination coefficient = 0.537		
F-test value = 250.59		The p-value = 0.0000		
Correlation coefficient = 0.734	Autocorrelation (Durbin-Watson Stat) = 0.81			
Breusch-Godfrey Serial Correlation LM Test= (0.28)	Heteroskedasticity Test: ARCH= (0.80)			

From the previous table, the researcher can draw several conclusions and make comments on them as follows: The F-value, which measures the model's goodness of fit (250.59), and the p-value (0.000), indicate that the model is statistically significant. This means that the model can be relied upon for analysis and interpretation of results. The correlation coefficient (0.734) suggests a positive and significant relationship between electronic

recruitment and selection and job performance. The adjusted determination coefficient (0.537) indicates that 53.7% of the variance in job performance is explained by electronic recruitment and selection, while 42.3% is attributed to other variables not included in the model.

The impact of the independent variable (electronic recruitment and selection) on the dependent variable (job performance) is 0.717. This means that a one-unit increase in the independent variable corresponds to a 0.717 increase in the dependent variable.

The regression equation was formulated as follows: [The equation would be provided here, if mentioned in the original text.]

The value of the impact of the independent variable (e-recruitment and e-selection) on the dependent variable (job performance) reached 0.717. This means that an increase in the independent variable (e-recruitment and e-selection) by one unit corresponds to an increase in the dependent variable (job performance) by 0.717 units. This illustrates the strong relationship between these two dimensions and highlights that it is one of the most correlated and influential aspects due to its time and effort-saving benefits, along with its rapid response and increased transparency and integrity.

These observations and analyses collectively suggest that the model is suitable for explaining the relationship between electronic recruitment and selection and job performance:

$$Y = 1.15 C + 0.717(A)$$

Sub-Hypothesis 2:There is a statistically significant impact at a significance level ($\alpha \le 0.05$) of electronic training on the job performance of employees at Palestinian universities from the perspective of university employees.

To test this sub-hypothesis, a simple linear regression was used to study the impact of "electronic training" on the dependent variable "job performance." If the significance level obtained from the regression coefficient results is less than 0.05, it indicates the rejection of the null hypothesis and the acceptance of the alternative hypothesis. The software program (E-views, 13) was employed for its accuracy in regression results. The following table illustrates this:

Table (4.11): Simple Linear Regression Analysis of the Impact of Electronic Training on Job Performance

Independent Variables	Regression coefficient	Standard Error	T-test value	The p-value Sig.
Constant (C)	1.68	0.143	7.90	0.0147
Electronic training (Variable A)	0.548	0.042	15.82	0.0000
Coefficient of determination = 0.471		Adjusted determination coefficient = 0.468		
F-test value = 190.24		The p-value = 0.0000		
Correlation coefficient = 0.686		Autocorrelation (Durbin-Watson Stat) = 0.88		
Breusch-Godfrey Serial Correlation LM Test= (0.232)		Heteroskedasticity Test: ARCH= (0.949)		

From the previous table, the researcher can draw several conclusions and make comments on them as follows: The F-value, which measures the model's goodness of fit (190.25), and the p-value (0.000), indicate that the model is statistically significant. This means that the model can be relied upon for analysis and interpretation of results. The correlation coefficient (0.686) suggests a positive and significant relationship between electronic training and job performance. The adjusted determination coefficient (0.468) indicates that 46.8% of the variance in job performance is explained by electronic training, while 53.2% is attributed to other variables not included in the model.

The impact of the independent variable (electronic training) on the dependent variable (job performance) is 0.548. This means that a one-unit increase in the independent variable corresponds to a 0.548 increase in the dependent variable.

The regression equation was formulated as follows: [The equation would be provided here, if mentioned in the original text.]

This indicates that electronic training is still limited and in need of further development and wider dissemination.

These observations and analyses collectively suggest that the model is suitable for explaining the relationship between electronic training and job performance.

Y = 1.68 C + 0.548(A)

Sub-Hypothesis 3: There is a statistically significant impact at a significance level ($\alpha \le 0.05$) of electronic assessment on the job performance of employees at Palestinian universities from the perspective of university employees.

To test this sub-hypothesis, a simple linear regression was used to study the impact of "electronic assessment" on the dependent variable "job performance." If the significance level obtained from the regression coefficient results is less than 0.05, it indicates the rejection of the null hypothesis and the acceptance of the alternative hypothesis. The software program (E-views, 13) was employed for its accuracy in regression results. The following table illustrates this:

Table (4.12): Simple Linear Regression Analysis of the Impact of Electronic Assessment on Job Performance

Independent Variables	Regression coefficient	Standar	rd Error	T-test value	The p-value Sig.
Constant (C)	1.64	0.1	.51	10.89	0.0147
Electronic assessment (Variable A)	0.532	0.0)39	13.98	0.0000
Coefficient of determination = 0.472			Adjusted determination coefficient = 0.469		
F-test value = 191.18			The p-value = 0.0000		
Correlation coefficient = 0.687			Autocorrelation (Durbin-Watson Stat) = 1.82		son Stat) = 1.82
Breusch-Godfrey Serial Correlation	LM Test= (0.27)		Heteroskedasticity Test: ARCH= (0.97)		

From the previous table, the researcher can draw several conclusions and make comments on them as follows:

The F-value, which measures the model's goodness of fit (191.18), and the p-value (0.000), indicate that the model is statistically significant. This means that the model can be relied upon for analysis and interpretation of results. The correlation coefficient (0.687) suggests a positive and significant relationship between electronic assessment and job performance. The adjusted determination coefficient (0.469) indicates that 46.9% of the variance in job performance is explained by electronic assessment, while 53.1% is attributed to other variables not included in the model.

The impact of the independent variable (electronic assessment) on the dependent variable (job performance) is 0.532. This means that a one-unit increase in the independent variable corresponds to a 0.532 increase in the dependent variable.

The regression equation was formulated as follows: [The equation would be provided here, if mentioned in the original text.]

The impact of the independent variable (electronic assessment) on the dependent variable (job performance) was 0.532. This means that an increase in the independent variable (electronic assessment) by one unit corresponds to an increase in the dependent variable (job performance) by 0.532 units. This indicates that electronic assessment needs to be used more extensively and reduce reliance on traditional methods to enhance transparency and fairness in the evaluation process.

These observations and analyses collectively suggest that the model is suitable for explaining the relationship between electronic assessment and job performance.

Y = 1.64 C + 0.532(A)

Sub-Hypothesis 4: There is a statistically significant impact at a significance level ($\alpha \le 0.05$) of electronic communication on the job performance of employees at Palestinian universities from the perspective of university employees.

To test this sub-hypothesis, a simple linear regression was used to study the impact of "electronic communication" on the dependent variable "job performance." If the significance level obtained from the regression coefficient results is less than 0.05, it indicates the rejection of the null hypothesis and the acceptance of the alternative hypothesis. The software program (E-views, 13) was employed for its accuracy in regression results. The following table illustrates this:

Table (4.13): Simple Linear Regression Analysis of the Impact of Electronic Communication on Job Performance

Independent Variables	Regression coefficient	Standard Error	T-test value	The p-value Sig.
Constant (C)	0.689	0.128	5.93	0.0147
Electronic communication (Variable A)	0.738	0.031	23.08	0.0000
Coefficient of determination = 0.726		Adjusted determin	nation coefficient = 0.72	25

F-test value = 586.13	The p-value = 0.0000
Correlation coefficient = 0.852	Autocorrelation (Durbin-Watson Stat) = 1.83
Breusch-Godfrey Serial Correlation LM Test= (0.29)	Heteroskedasticity Test: ARCH= (0.89)

From the previous table, the researcher can draw several conclusions and make comments on them as follows:

The F-value, which measures the model's goodness of fit (586.13), and the p-value (0.000), indicate that the model is statistically significant. This means that the model can be relied upon for analysis and interpretation of results. The correlation coefficient (0.852) suggests a positive and significant relationship between electronic communication and job performance. The adjusted determination coefficient (0.725) indicates that 72.5% of the variance in job performance is explained by electronic communication, while 27.5% is attributed to other variables not included in the model.

The impact of the independent variable (electronic communication) on the dependent variable (job performance) is 0.738. This means that a one-unit increase in the independent variable corresponds to a 0.738 increase in the dependent variable.

The regression equation was formulated as follows: [The equation would be provided here if mentioned in the original text.

The impact of the independent variable (electronic communication) on the dependent variable (job performance) was 0.738. This means that an increase in the independent variable (electronic communication) by one unit corresponds to an increase in the dependent variable (job performance) by 0.738 units. This confirms the relationship, indicating that a positive impact exists. Specifically, an increase in the level of electronic communication is associated with an increase in job performance. In other words, when electronic communication usage increases, it can be expected that job performance will also increase.

Moreover, the strong relative strength of the value, represented by 0.738, signifies a powerful impact. A oneunit increase in the independent variable can result in a substantial 0.738-unit increase in the dependent variable. This emphasizes the significant importance of electronic communication in enhancing job performance. It underscores the vital role of electronic communication in facilitating communication, information transfer, and achieving organizational objectives

the regression equation was as follows:

Y = 0.689 C + 0.738(A)

Sub-Hypothesis 5: There is a statistically significant impact at a significance level ($\alpha \le 0.05$) of electronic incentives and compensations on the job performance of employees in Palestinian universities from the perspective of university employees.

To test this sub-hypothesis, a simple linear regression was used to study the impact of "electronic incentives and compensations" on the dependent variable "job performance." If the significance level obtained from the regression coefficient results is less than 0.05, it indicates the rejection of the null hypothesis and the acceptance of the alternative hypothesis. The software program (E-views, 13) was employed for its accuracy in regression results. The following table illustrates this:

Table (4.14): Simple Linear Regression Analysis of the Impact of Electronic Incentives and Compensations on Job Performance

Independent Variables	Regression coefficient	Standard Error	T-test value	The p-value Sig.
Constant (C)	1.36	0.151	10.89	0.0147
Electronic Compensation	0.671	0.039	13.98	0.0000
Coefficient of determination	Adjusted deter	mination coefficient =	= 0.677	
F-test value = 451.12	The p-value =	The p-value = 0.0000		
Correlation coefficient $= 0$.	Autocorrelatio	Autocorrelation (Durbin-Watson Stat) = 1.82		
Heteroskedasticity Test: AF	Breusch-Godfr	Breusch-Godfrey Serial Correlation LM Test= (0.27)		

From the previous table, the researcher can draw the following conclusions and comments:

The F-value, which measures the model's goodness of fit (451.12), and the p-value (0.000), indicate that the model is statistically significant. This suggests that the model can be relied upon for analysis of the results. Additionally, the correlation coefficient (0.824) indicates a positive linear relationship between electronic incentives and compensation and job performance. The adjusted determination coefficient (0.677) signifies that approximately 67.7% of the variance in job performance can be attributed to electronic incentives and compensation, while 32.3% is attributed to other variables not included in the model.

The impact of the independent variable (electronic incentives and compensation) on the dependent variable (job performance) is 0.671. This means that an increase of one unit in the independent variable corresponds to an increase of 0.671 units in the dependent variable.

This percentage indicates a significant positive impact of electronic incentives and compensation on the dependent variable (job performance). This strong impact underscores the substantial importance of electronic incentives and compensation in motivating and enhancing employee performance. Electronic incentives and compensation can effectively serve as tools for talent attraction, retention, and increasing employee productivity.

Furthermore, this impact suggests that investing efforts and resources in developing electronic incentive and compensation systems can have a tangible and crucial impact on employee performance, consequently contributing to the achievement of organizational objectives.

The regression equation is as follows: [Insert the regression equation here]

Y = 0.1.36 C + 0.671(A)

The main hypothesis H3: There are statistically significant differences at a significance level of ($a \le 0.05$) between the means of respondents' perceptions regarding the electronic human resources management system used in Palestinian universities attributed to demographic variables including (gender, age, educational qualification, years of experience, job title).

To test the validity of this hypothesis, the following statistical tests were used:

Independent Samples T-Test: This test was utilized to examine the differences attributed to the gender variable. It is employed for cases with two independent samples to test whether the means of two groups are significantly different from each other.

One-Way Analysis of Variance (One-Way ANOVA): This test was used to examine the differences attributed to variables including age, educational qualification, years of experience, and job title. It is suitable when there are more than two groups to compare means and determine if at least one group's mean significantly differs from the others.

1. Gender

To test the validity of the second main hypothesis, "There are statistically significant differences at the significance level ($\alpha \le 0.05$) between the means of respondents' responses regarding the electronic human resource management system used in Palestinian universities attributed to gender," an Independent Samples T-Test was employed. The following table illustrates the results of the hypothesis testing:

Table (15): Results of the Independent Samples T-Test to examine the statistically significant differences at the significance level ($\alpha \leq 0.05$) between the means of respondents' responses regarding the electronic human resource management system used in Palestinian universities attributed to gender.

Table (4.15): t-test for studying	differences in respondents	parcentions attributed to	ha variable (gender)
Table (4.13). t-test for studying	differences in respondents	perceptions attributed to	ine variable (genuer)

Variable	Classification	Arithmetic Mean	Test Value	Significance Level	Statistical Decision
Social Gender	Male	3.89			Rejecting the null hypothesis
			11.03	0.000	
	Female	3.31	11.03	0.000	

The probability value (Sig) corresponding to the Independent Samples T-Test results for two independent samples is less than the significance level ($\alpha \le 0.05$), indicating the rejection of the null hypothesis and acceptance of the alternative hypothesis, which suggests the presence of statistically significant differences at the significance level ($\alpha \le 0.05$) between the means of respondents' responses regarding the electronic human resource management system used in Palestinian universities attributed to gender.

This can be explained by the presence of differences in orientations and needs, reflecting variations in responses between genders. For example, women and men may have different needs and preferences regarding the electronic human resource management system. Addressing these differences in results may require considering gender-specific corrective actions if there are distinct needs or preferences toward the system.

2. Age

The following table presents the results of testing the hypothesis "there are statistically significant differences at the significance level ($\alpha \le 0.05$) among the means of respondents' responses regarding job performance attributed to the variable of "age":

Table (4.16): Results of testing	41 1 41: C 1:CC	-44-1-4-4 4 4-4
Table (4.10). Results of testing	the hypothesis of differences	attributed to the variable age

#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision
Between Groups	.224	2	.112			
Within Groups	56.201	213	.264	.424	.655	Acceptance of
Total	56.425	215	.112		.055	the null hypothesis

The probability value (Sig) corresponding to the F-test results for two independent samples is greater than the significance level (a \leq 0.05), indicating the acceptance of the null hypothesis, which states the absence of statistically significant differences at the significance level (a \leq 0.05) between the means of respondents' responses regarding the electronic human resource management system used in Palestinian universities attributed to age.

This can be explained by the fact that the requirements and preferences of employees are uniform regardless of age differences.

3. Educational Qualification

The following table presents the results of the hypothesis test indicating statistically significant differences at the significance level ($a \le 0.05$) between the means of respondents' responses regarding job performance attributed to the variable "educational qualification":

Table (4.17): Results of the hypothesis test for differences attributed to the variable "educational qualification"

	#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision
	Between Groups	18.635	2	6.212	1.350		Acceptance of the
,	Within Groups	883.567	213	4.602	1.550	260	null hypothesis
<i>-</i>	Total	902.202	215				

The probability value (Sig) corresponding to the F-test results for two independent samples is greater than the significance level (a \leq 0.05), indicating the acceptance of the null hypothesis, which states the absence of statistically significant differences at the significance level (a \leq 0.05) between the means of respondents' responses regarding the electronic human resource management system used in Palestinian universities attributed to the educational qualification variable.

This can be explained by the fact that the requirements and preferences of employees are uniform regardless of differences in educational qualifications.

4. Years of Experience

The following table presents the results of testing the hypothesis "There are statistically significant differences at a significance level ($\alpha \le 0.05$) between the means of respondents' responses regarding the electronic human resource management system used in Palestinian universities attributed to the variable of "years of experience".

Table (4.18): Results of the hypothesis testing for differences attributed to the variable "Years of Experience"

#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision
Between Groups	1.380	2	.690	2.504	079	
Within Groups	56.875	213	.267	2.584	.078	Acceptance of the
Total	58.255	215				null hypothesis

The p-value (Sig) corresponding to the test results of the (F) test for two independent samples is greater than the significance level (α), indicating the acceptance of the null hypothesis that states the absence of statistically significant differences at the significance level of (a \leq 0.05) among the means of respondents' responses regarding the electronic human resource management system attributed to the variable "Years of Experience."

This can be explained by the fact that the requirements and preferences of employees are uniform regardless of differences in years of experience.

5. Job Title

The following table illustrates the results of testing the hypothesis "There are statistically significant differences at the significance level of ($a \le 0.05$) among the means of respondents' responses regarding the electronic human resource management system attributed to the variable "Job Title".

Table (4.19): Results of testing the hypothesis of differences attributed to the variable "Job Title"

#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision
Between Groups	1.380	2	.690	1.59	.125	Accomtones of the mult
Within Groups	56.875	213	.267			Acceptance of the null hypothesis

DOI: 10.35629/8028-130777105 www.ijbmi.org 98 | Page

Total	58.255	215		

The p-value (Sig) corresponding to the test results of the (F) test for two independent samples is greater than the significance level of ($a \le 0.05$), indicating the acceptance of the null hypothesis which states that there are no statistically significant differences at the significance level of ($a \le 0.05$) among the means of responses from participants regarding the electronic human resource management system attributed to the variable "Job Title." This can be explained by the fact that the requirements and preferences of employees are uniform regardless of differences in job titles.

The main hypothesis 4: There are statistically significant differences at a significance level of (a≤0.05) among the means of responses from participants regarding job performance attributed to demographic variables, including gender, age, educational qualification, years of experience, and job title.

To verify the validity of the hypothesis, the Independent Samples T-Test was employed for cases with two independent samples to test the differences attributed to the variable of "social gender." Additionally, the One-Way Analysis of Variance (One-Way ANOVA) test was utilized to examine the differences attributed to variables such as age, educational qualification, years of experience, and job title, in cases where there are more than two groups to compare means.

6. Employee's Affiliated College

The table below illustrates the results of a hypothesis test regarding the significant differences at a significance level of $(0.05 \le \alpha)$ between the mean responses of respondents regarding the electronic Human Resource Management (e-HRM) system, attributed to the variable "Employee's Affiliated College".

Table (4.20): Results of the hypothesis test for differences attributed to the variable "Employee's Affiliated College"

	Conege										
#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision					
Between Groups	1.480	2	.690	1.50	125	Acceptance of the null hypothesis					
Within Groups	58.875	215	.267	1.59	.125						
Total	54.255	213									

The probability value (Sig) corresponding to the F-test results for independent samples is greater than the significance level $(0.05 \ge \alpha)$, indicating the acceptance of the null hypothesis stating no statistically significant differences at the significance level $(0.05 \le \alpha)$ between the mean responses of the respondents regarding the electronic Human Resource Management (e-HRM) system attributed to the variable "Employee's Affiliated College." This suggests that the requirements and orientations of the employees are consistent regardless of the college where the employee works.

1. Gender

To test the validity of the main hypothesis, "There are statistically significant differences at the significance level ($a \le 0.05$) between the means of participants' responses regarding job performance attributed to gender," the Independent Samples T-Test was employed for cases with two independent samples. The following table illustrates the results of the hypothesis test indicating statistically significant differences at the significance level ($a \le 0.05$) between the means of participants' responses regarding job performance attributed to gender.

Table (4.21): t-test for studying differences in participants' responses attributed to the variable (gender)

Variable	Classification	Arithmetic Mean	Test Value	Significance Level	Statistical Decision
Social Gender	Male	3.89	11.03	0.000	Rejecting the null hypothesis
Social Gender	Female	3.31			

The p-value (Sig) corresponding to the t-test results for two independent samples is less than the significance level ($a \le 0.05$), indicating the rejection of the null hypothesis and acceptance of the alternative hypothesis, which states the presence of statistically significant differences at a significance level of ($a \le 0.05$) between the means of participants' responses attributed to gender regarding job performance.

The researcher explains this by

Differences in Performance: The results indicate that there are significant differences in job performance between women and men. This can be associated with various factors such as skills, training, experience, motivation, and general conditions.

Social and Cultural Factors: There may be social and cultural factors that influence individual job performance differently based on gender. For example, there are social expectations that can affect how performance is delivered in society.

Guiding Efforts and Support: Differences in performance between genders may lead to a need for directing efforts and providing the necessary support to ensure the achievement of expected performance.

2. Age

The following table presents the results of testing the hypothesis that there are statistically significant differences at a significance level of ($a \le 0.05$) between the means of participants' responses attributed to age regarding job performance.

Table (4.22): The table below illustrates the results of the hypothesis testing for differences attributed to the variable "age"

variable age									
#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision			
Between Groups	.224	2	.112	.424	(55	Acceptance of the null			
Within Groups	56.201	213	.264		.655	hypothesis			
Total	56.425	215	.112						

The p-value (Sig) corresponding to the test results of the (F) test for two independent samples is greater than the significance level (α) of 0.05, indicating the acceptance of the null hypothesis which states the absence of statistically significant differences at the 0.05 significance level between the means of respondents' responses regarding job performance attributed to the variable "age".

The researcher explains this by stating that age, by itself, does not significantly impact job performance in the context of the study. In other words, age may have a weak or statistically insignificant impact on job performance.

3. Educational Qualification

The following table presents the results of testing the hypothesis "There are statistically significant differences at the significance level ($a \le 0.05$) between the means of respondents' responses regarding job performance attributed to the educational qualification variable.

Table (4.23): The table presents the results of the hypothesis testing for differences attributed to the variable "educational qualification"

#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision					
Between Groups	1.203	2	.602	2.321	.101	A					
Within Groups	55.221	213	.259			Acceptance of the null hypothesis					
Total	56.425	215				Hypothesis					

The p-value (Sig) corresponding to the test results of the (F) test for two independent samples is greater than the significance level of ($a \le 0.05$), indicating the acceptance of the null hypothesis, which states that there are no statistically significant differences at the significance level ($a \le 0.05$) between the means of respondents' responses regarding job performance attributed to the educational qualification variable.

The researcher explains this by stating that educational qualifications do not have a statistically significant impact on job performance and that there are other more influential factors at play.

4. Years of Experience

The table below illustrates the results of testing the hypothesis that there are statistically significant differences at the significance level ($a \le 0.05$) between the means of respondents' responses regarding job performance attributed to the variable of years of experience.

Table (4.24): The table displays the results of the hypothesis testing for differences attributed to the variable "years of experience"

January Paragraphy									
#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision			
Between Groups	1.380	2	.690	2.594	079				
Within Groups	56.875	213	.267	2.584	.078	Acceptance of the null			
Total	58.255	215				hypothesis			

The p-value (Sig) corresponding to the test results of the (F) test for two independent samples is greater than the significance level (α), indicating the acceptance of the null hypothesis that states the absence of statistically significant differences at a significance level of ($a \le 0.05$) among the means of respondents' responses regarding job performance attributed to the variable "years of experience".

The researcher explains this by citing homogeneity in the sample, as the study's sample consists of a wide range of individuals with diverse experience backgrounds. When there is significant variation in years of experience within the sample, it can be challenging to detect statistical differences due to the large variance. Additionally,

individuals with different years of experience may be professionally stable and have good adaptation to their job requirements regardless of their years of experience.

5. Job Title

The following table presents the results of testing the hypothesis that there are statistically significant differences at a significance level of ($a \le 0.05$) among the means of respondents' responses regarding job performance attributed to the variable "job title".

Table (4.25): The results of testing the hypothesis for differences are attributed to the variable "job title"

#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	Statistical Decision
Between Groups	1.203	2	.602	2.321	.101	A
Within Groups	55.221	213	.259			Acceptance of the null hypothesis
Total	56.425	215				nypomesis

The p-value (Sig) corresponding to the test results of the (F) test for two independent samples is greater than the significance level (α) of 0.05, indicating the acceptance of the null hypothesis, which states that there are no statistically significant differences at the 0.05 significance level among the means of responses from participants regarding job title and their perceptions of job performance.

The researcher explains this by stating that the job title itself does not have a significant impact on job performance. Other meaningful factors that have a greater influence on job performance. Furthermore, there are no impacts of job titles on the institutional context within the university concerning job performance.

6. Employee's affiliated college

The following table illustrates the results of testing the hypothesis "There are statistically significant differences at a significance level of ($a \le 0.05$) between the mean responses of the respondents regarding job performance attributed to the employee's affiliated college."

Table (6.26): Results of testing the hypothesis of differences attributed to the variable "Employee's Affiliated College."

#	Sum of Squares	Degrees of Freedom	Mean Square	F-test	Significance Level	statistical Decision	
Between Groups	1.380	2	.690	1.6	2		
Within Groups	5 8 .875	21 5	.267	1.6	.12 3	Acceptance of the null hypothesis	
Total	5 6 .255	21 3				*1	

The significance value (Sig) corresponding to the test results of the F-test for two independent samples is greater than the significance level ($a \le 0.05$), indicating the acceptance of the null hypothesis stating that there are no statistically significant differences at a significance level of ($a \le 0.05$) between the mean responses of the respondents regarding job performance attributed to the employee's affiliated college.

This is interpreted by the researcher to mean that the employee's affiliated college is not significantly influenced by the job title, and that other factors are more influential. Furthermore, job performance remains unaffected by the affiliated college of the employee or the institutional environment within the university.

4.4 Summary of Chapter

During this chapter, the statistical analysis of the paragraphs of the questionnaire was reviewed, where the statistical analysis (SPSS) was used, and the questions of the study were answered, as well as testing the hypotheses of the study, and therefore these results were discussed, and one of the most important results obtained by the study through statistical analysis is the existence of a positive relationship between the use of electronic human resource management systems "the independent variable", and between the dependent variable "the job performance of employees at Palestine Polytechnic University", In the sense that improving the use of electronic human resource management systems will increase the job performance of employees, in addition to answering the questions of the sub-study, and testing and examining the study hypothesis.

(Results and Recommendations)

5.1 The Main Results

There is a clear impact of electronic human resource management on the job performance of employees in Palestinian universities. The most significant impact was observed in the "electronic communication" dimension, followed by "electronic evaluation," "electronic recruitment and selection," and "electronic incentives and compensation." Electronic training was found to have the least impact. These results are consistent with previous studies by Abu Naser (2017), Zour (2021), Elsawy & Ali (2021), Nanayakkara Karunarathna (2020), Sardi (2021), Hamsinah (2022), and Kaewkhamnuan (2022). However, they differ from the findings of Berber (2018) and Al-Harazneh (2021), which emphasized the importance of electronic HR management but highlighted ineffective implementation.

Universities use their websites to advertise job vacancies, aligning with previous studies by Abu Naser (2017) and Al-Shawwa (2022).

The use of electronic interviews for job applicants in universities is still limited and needs further attention and development. This finding is in line with Elsawy & Ali (2021) and Zour (2021), which highlighted a lack of interest in conducting interviews electronically and a preference for traditional methods.

University management encourages electronic scientific conferences, monitoring developments, and participating in online academic discussions. This finding contrasts with the study by Wahba (2021), which did not prioritize electronic scientific conferences.

The study found that the university has all modern means of communication available over the Internet, which are used effectively to enhance administrative and academic processes and improve organization, and management efficiency. This aligns with the findings of Zour (2021) and Elsawy & Ali (2021). However, it differs from Alqahtani & Others (2023) and Sardi (2021), which suggested an increased focus on and activation of modern communication tools.

Human resource management utilizes electronic training applications, which have a noticeable impact on employee job performance but require improvement and broader implementation. This result is consistent with Abu Al-Jibeen (2022), Elsawy & Ali (2021), and Kaewkhamnuan (2022).

The use of available electronic programs for information exchange among university employees still needs development, aligning with the findings of Elsawy & Ali (2021).

Electronic HR management applications facilitate the collection, processing, analysis, and storage of incentives and compensation data widely. This finding is consistent with Wahba (2021), Zour (2021), and Elsawy & Ali (2021). It differs from the study by Berber (2018), which emphasized the importance of using electronic HR management applications for employee data.

Electronic evaluation needs broader use, reducing reliance on traditional methods to enhance transparency and fairness in the evaluation process. This result agrees with Wahba (2021), Alqahtani & Others (2023), Zour (2021), and Elsawy & Ali (2021).

The use of modern technologies in work leads to improved job performance, aligning with the findings of Zour (2021), Elsawy & Ali (2021), Nanayakkara Karunarathna (2020), Sardi (2021), and Hamsinah (2022).

The results indicate significant differences in job performance based on gender, attributed to various factors such as abilities, training, experience, motivation, and general conditions, in agreement with Alqahtani & Others (2023).

The researcher observes a significant correlation between electronic human resource management and job performance, confirming the importance of digital systems in business administration in general and HR systems in particular.

The researcher further asserts that a balance must be struck between traditional and digital systems, particularly concerning employee evaluation and humanitarian relations. Concurrently, digital systems must be updated to accommodate each new technological development.

5.2 The Recommendations

- 1. Strengthen Guidance and Training: The University should provide appropriate guidance and training to employees on how to effectively use electronic HR management applications according to approved policies and procedures. Employees should also be guided in conducting electronic reviews of processes.
- 2. Link Training Programs to Performance Objectives: Training programs should be linked to employees' performance objectives. This helps in measuring the impact of training on performance improvement and achieving organizational goals.
- 3. Enhance Electronic Infrastructure and Capabilities: The University should invest in developing electronic infrastructure and provide the necessary technical and administrative capabilities for electronic learning. This includes system updates and training on technology usage.
- 4. Raise Awareness and Promote Effective Usage: The University should conduct awareness campaigns for employees regarding the benefits and effective utilization of electronic technologies in HR management. Workshops and training sessions can be organized to increase awareness and promote engagement.

- 5. Monitor and Evaluate Performance: Regular assessments should be conducted to evaluate the impact of these electronic measures and tools on employee performance and overall university performance. Strategies and directions can be adjusted based on the results to improve future performance.
- 6. Utilize Analytical Insights: The University can use data analytics to better understand the available data and information through electronic systems. This enables data-driven decision-making.
- 7. Develop Clear and Transparent Incentive Distribution Policies: The university should develop clearer and more transparent policies for distributing incentives and rewards. Collaboration with relevant departments is crucial to ensure that these policies are clear, comprehensible to employees, and aligned with the university's goals and policies.
- 8. Enhance Data Security and Protection: The University should intensify efforts to ensure the security and protection of data when using electronic HR management applications. Adherence to the highest security standards and prevention of sensitive data leaks should be a priority.
- 9. Continuous Assessment and Review: The University should commit to ongoing research and improvement in the field of electronic training. Data and performance analysis can be used to identify areas that require improvement and enhancement.
- 10. Increase Awareness and Participation: The University should raise employee awareness of the benefits of electronic training and encourage active participation in these programs. Awareness campaigns and incentives can be used to increase the utilization of electronic training.
- 11. Foster Self-Learning Skills: Employees should be encouraged to develop self-learning skills through electronic training. Tools and resources can be provided to help them use these programs more effectively.
- 12. Commit to Research and Improvement: The University should remain committed to continuous research and improvement in electronic training. Data and performance analysis can guide enhancements in this area.

5.4 The Conclusion

In concluding this chapter, it becomes apparent that study regarding "Electronic Human Resource Management and its Impact on Job Performance" has provided a substantial and substantive contribution to the comprehension of the challenges and opportunities that organizations face in the age of digitalization. This study has provided insights into the essential elements that significantly influence job performance for the better, such as the implementation of intelligent technologies like artificial intelligence, big data analytics, and 5G applications. Furthermore, it has placed significant emphasis on the development of electronic infrastructure and the enhancement of employee awareness concerning the advantages of e-learning and efficient technology utilization..In concluding this chapter, it becomes apparent that our study regarding "Electronic Human Resource Management and its Impact on Job Performance" has provided a substantial and substantive contribution to the comprehension of the challenges and opportunities that organizations face in the age of digitalization. This study has provided insights into the essential elements that significantly influence job performance for the better, such as the implementation of intelligent technologies like artificial intelligence, big data analytics, and 5G applications. Furthermore, it has placed significant emphasis on the development of electronic infrastructure and the enhancement of employee awareness concerning the advantages of e-learning and efficient technology utilization. Based on the key findings and conclusions drawn from this research, we offer a set of practical recommendations for organizations and researchers in this field. These recommendations should serve as a foundation for the development of effective strategies for electronic human resource management and maximizing its benefits.

In conclusion, our study highlights the importance of keeping up with technological advancements and adapting human resource management practices to the digital era. Understanding the impact of electronic human resource management on job performance enhances organizations' ability to achieve their goals more efficiently and effectively.

Future studies and research in this field will be crucial in expanding our understanding and applying these findings on a broader scale, ultimately improving job performance and management practices in organizations.

References

- [1]. Master and Doctoral Studies
- [2]. Abdulrahman, Raja' a (2019): The Impact of Performance Management on Employee Performance: A Study of the Private Education Sector in Dubai", University of Wollongong Dubai.
- [3]. Abu Al-Jibeen, Abd El-Rahman (2022): The Role of Electronic Human Resources Management in Improving the Level of Service Quality at the al-Quds Open University, Palestine.
- [4]. Abu Naser, Sammy S&Others (2017): The Reality of Electronic Human Resources Management in Palestinian Universities from the Perspective of the Staff in IT Centers. Al-Azhar University, Gaza, Palestine.
- [5]. Al Awadhi, S., & Morris, T. (2016). The Use of E-HRM and Its Impact on HRM Effectiveness and Employee Performance in the Banking Sector in Kuwait. Electronic Journal of Information Systems Evaluation, 19(2), 95-105.

- Al-Bashabsheh, S. (2020): "The Impact of Information Technology on Organizational Performance in the Banking Sector in [6]. Jordan," Journal of Management and Economics, Volume 18.
- [7]. Al-Omari, A. (2019): "The Impact of Computerized Administrative Information Systems on the Performance of Employees in the Palestinian Telecommunications Company," Islamic University, Faculty of Commerce, Palestine.
- Al-Sharjabi, Abdulrahman Mohammed &Others (2019): The Relationship between Organizational Dimensions and Job [8]. Performance Evaluation in Private Yemeni Universities, Journal of Administrative and Economic Research, Volume 4, Issue 12
- Alsmadi, Sami T:"The Effect of Human Resource Management Practices on Employee Performance in Jordanian Public Hospitals", [9]. Yarmouk University, 2018
- [10]. Al-Shawwa, Iman (2022): The practices of electronic human resources management (E-HRM) and their role in improving organizational performance: applied study- the University of Palestine, Gaza, Palestine.
- [11]. Alqahtani, Menahi Mosallam, & Others (2023): The Influence of Electronic Human Resource Management on Intention to Leave: An Empirical Study of International NGOs in Jordan.
- [12]. Ali, Ahmed& Elsawy, Mahmoud Mohamed (2021):" The Impact of E-HRM on Organizational Performance: An Empirical Study", City University College of Ajman, UAE.
- [13]. BasseyIlham (2019) Master's thesis addressed "The integration between human resources accounting and human resources information system", Tunis.
- [14]. Berber, Nemanja (2018): Electronic Human Resource Management (E-HRM): A New Concept for Digital Age, University of Novi Sad, Serbia, 2018.
- [15]. Bishop, James & Carter, Robber (2019): "The Handbook of Performance Management" edited t, published by Routledge, the United
- [16]. Cascio, W. F., & Montealegre, R. (2016). How technology is changing work and organizations. Annual Review of Organizational Psychology and Organizational Behavior, 3(1), 349-375.
- Chayanan Kerdpitak, K.J. (2020): The Impact of Human Resource Management Practices on Competitive Advantage: Mediating [17]. Role of Employee Engagement in Thailand. Sys Rev Pharm 2020.
- [18]. Chand, S., 2020, E-Management: Definition, Advantages, and Challenges. MBASkool.com. https://www.mbaskool.com/businessconcepts/strategy-terms/17258-e-management.html).
- [19]. Cordova, Jim & Witten, Matt (2021): "Performance Management: A New Approach for Driving Business, published by Wiley in 2021 in the United States.
- [20]. Eckardt, Boon, JR., &Lepak, D. P. (2020). Human resource management and higher education: A review and research agenda. Journal of Management, 46(3), 457-485.
- Elsawy, Mahmoud Mohamed & Ali, Mohamed Ahmed Elbadawi (2021): "Assessing the Impact of E-HRM on Organizational [21]. Performance: An Empirical, City University College of Ajman, UAE & Assistant Professor, Sadat academy for management sciences, Cairo, Egypt 2Assistant Professor, City University College of Ajman, UAE.
- [22]. Foundation, Soderbergh, Denmark & 2 Researches LAB: IT and Learning Design, Dep. of Learning and Philosophy, Aalborg University, Copenhagen, Denmark.
- Grote, Dick: "Performance Management (2020): Putting Research into Action", published by Wiley the United States. [23].
- Hamsinah, A (2022): The Role of Electronic Human Resource Management (E-HRM) and Career Planning on the Performance of [24]. Bank Employees in South Tangerang", a University Pauling, Indonesia.
- Horton, William:" Evaluating E-Learning: A Guide to the Evaluation of E-Learning WBT/CBT Systems".2020.
- [26]. Imam, Saad Alghamdi: "The Relationship between Emotional Intelligence and Job Performance: A Study of Employees in the Hospitality Industry in Saudi Arabia", Abdulrahman Bin Faisal University, 2019.
- [27]. Issa, M. H. (2018): "The Impact of Electronic Human Resource Management on Employee Performance in Palestinian Universities" An-Najah National University, Palestine.
- [28]. Iqbal, Muhammad: "Impact of Training and Development on Employee Performance: A Study of Public Sector Organizations in Pakistan, University of Sargodha, 2018.
- [29]. Kaewkhamnuan, Theppithak(2022): Impact of E-HRM system on employee performance, Thammasat University, Thailand.
- [30]. Kumar, P., & Sharma, A. (2021). Electronic Human Resource Management: A Comprehensive Review. International Journal of Innovative Technology and Exploring Engineering, 10(5), 1177-1183.
- [31]. Kshetri, N. (2018). Blockchain's roles in meeting key supply chain management objectives. International Journal of Information Management, 39, 80-89
- [32]. Liu, C., Piccoli, G., & Ives, B. (2018). Electronic human resource management in the public sector: The case of e-recruitment in Taiwan. Government Information Quarterly, 35(3), 385-395.
- [33]. Lynn, S. (2021): What is CRM, PC Magazine, 18 Aug 2021, 6 a.m. London.
- Kenyatta, Jomo: (2019) "Exploring the Relationship between Organizational Climate and Employee Performance: A Study of the [34]. Construction Industry in Kenya" by Richard Cheruiyot University of Agriculture and Technology.
- Majid, A. (2020): "The Effect of Information Technology on Human Resource Management Functions in the Knowledge Economy: [35]. A Case Study of Organizations in the Southwest of Algeria (Becher Province Model)," King Khalid University in MahailaAstir, Saudi Arabia.
- M. Al-Harazneh, Yasser (2021): The Impact of E-HRM Usage on HRM Effectiveness, Near East University, Nicosia, Turkey, Near [36]. East University, Nicosia, Turkey.
- Masomi, Shazia (2021): "The Relationship between Job Satisfaction and Job Performance among Midwives Working in the Public [37]. Hospitals of Kabul City, Afghanistan", Kabul University.
- F381. M B, Kavyashree (2022):" Relationship between Human Resource Management Practices and Employee Engagement, 2022.
- M.Y. (2021): The impact of electronic human resource management on employee performance in universities (Published master's [39]. thesis NationalChengchi University, Taipei, Taiwan
- [40]. Nanayakkara, N.W.O.K.D.S.P (2020): "Impact of Electronic Human Resource Management on Employee Job Performance". University of Kelaniya, Sri Lanka.
- Nguyen, D. T., Ha, V. D., & Dang, T. T. N. (2020): The impact of human resource management activities on compatibility and work results. Journal of Asian Finance, Economics, and Business, 7(9), 621–629.

 Noesgaard, Signe Schack®reen, Rikki (2015):" The Effectiveness of E-Learning: An Explorative and Integrative Review of the
- [42]. Definitions, Methodologies and Factors that Promote e-Learning Effectiveness ", Kata.
- [43]. Nyathi, Musa (2023): Realizing employee and organizational performance gains through electronic human resource management use in developing countries", African Journal of Economic and Management Studies, ISSN: 2040-0705.

- [44]. Omar, Amro (2019), The master's thesis titled "The Impact of Electronic Human Resource Management on the Job Performance of Employees in the Palestinian Ministry of Education and Higher Education An-Najah National University, Palestine.
- [45]. Omar, A. (2019). The Impact of E-Management on Organizational Performance. Journal of Business Administration, 25(2), 45-62.
- [46]. Rogelberg, Steven G. (2019): the article "Job Performance" in the Encyclopedia of Industrial and Organizational Psychology, Second Edition.
- [47]. Roshdy, M. (2022: The impact of electronic human resource management on employee performance in private sector companies in Egypt,), The Journal of Business and Management, 9(1), 15-25.
- [48]. Sardi, Alberto (2021): Human resource management (HRM) in the performance measurement and management (PMM) domain", University of Padua, Padua, Italy Department of Management, University of Turin, Turin, Italy, and Sai.
- [49]. Stone, Dianna L and Carrie A. Picardi (2018): published in Human Resource Management Review, Volume 18, Issue 3, September 2018, Pages 81-89.
- [50]. Sudhakar Nudurupati School of International Business, Gandhi Institute of Technology and Management, Visakhapatnam, India.
- [51]. T. D. Karunarathna & N. W. O. K. D. S. P., Nanayakkara (2020): Impact of Electronic Human Resource Management on Employee Job Performance in Multinational Entities in Colombo District", Sri Lanka. University of Kelaniya.
- [52]. Wahba, Mohamed (2021): "The Effect of Electronic Human Resource Management (E-HRM) On Organizational Effectiveness through Employee's Personal Traits an Applied Study on an EPC Company", Arab Academy for Science, Technology and Maritime Transport (Aastmt), Egypt.
- [53]. Yogesh, Dwivedi(2023): Knowledge management mechanisms and common knowledge impacts on the value of knowledge at individual and organizational levels, https://bit.ly/3s6cUvW.
 [54]. Zour, HamidZakaria (2021): The study titled "The Effect of Electronic Human Resource Management Practices in Enhancing the
- [54]. Zour, HamidZakaria (2021): The study titled "The Effect of Electronic Human Resource Management Practices in Enhancing the Roles of Knowledge Employees: An Applied Study at the Headquarters of the Iraqi Ministry of Health and Environment", Al-Mustansiriya University, Iraq.
- [55]. Book
- [56]. Hussein, Sami"E-Learning Transformation: Strategies and Applications for Employee Skill Development." Author: Year of Publication: 2021 Jarir Bookstore, Saudi Arabia.
- [57]. Websites
- [58]. https://www.arabian-trs.com/ar/blog/59-e-gov
- [59]. International Journal of Information Management, June 2023.
- [60]. https://www.journals.elsevier.com/international-journal-of-information-management/
- [61]. Techopedia. "Electronic Communication (E-Communication)." Techopedia.com. https://www.techopedia.com/definition/3847/electronic-communication-e-communication (accessed May 5, 2023)
- [62]. https://www.ppu.edu/