

أثر تطبيق الإدارة الإلكترونية على فاعلية أداء العاملين في جامعة مؤتة

The Impact of Applying Electronic Management on Employees' Performance Effectiveness at Mutah University

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Abstract

This study aims to explore the impact of the implementation of electronic management to develop the effectiveness of performance Workers in Mutah University. The study population was composed of all administrative staff members in the university (N=2000) during the academic year (2023/2024). The sample included (200) administrative staff members, who were randomly selected from the study population. To achieve the purpose of the study, the researcher created a questionnaire comprised of 23 items measured on a four-point Likert scale. The findings revealed that the impact of the implementation of electronic management on employees' performance in Mutah University was strong and positive. The electronic document rank was first with high degree; the electronic services rank was second with moderate degree and electronic planning rank was third.

Key words: E-Management, Employee performance, Administration

الملخص

تهدف هذه الدراسة إلى استكشاف "أثر تطبيق الإدارة الإلكترونية على تطوير أداء العاملين في جامعة مؤتة". تكون مجتمع الدراسة من جميع أعضاء الهيئة الإدارية في الجامعة (2000) خلال العام الدراسي (2023/2024). وبلغت عينة الدراسة (200) عضو هيئة إدارية، تم اختيارهم عشوائياً من مجتمع الدراسة. ولتحقيق هدف الدراسة، صمم

الباحث استبانة مكونة من (23) فقرة موزعة على أربع درجات. وأظهرت النتائج أن أثر تطبيق الإدارة الإلكترونية على أداء العاملين في جامعة مؤتة كان قوياً وإيجابياً، حيث احتلت الوثائق الإلكترونية المرتبة الأولى بدرجة عالية، والخدمات الإلكترونية المرتبة الثانية بدرجة متوسطة، والتخطيط الإلكتروني المرتبة الثالثة.

الكلمات المفتاحية: الإدارة الإلكترونية، أداء الموظفين، الإدارة.

1.1 Introduction

With the emergence of the Internet, development of information technology, communication methods, and the conversion of functions to electronic business, and with the increasing technological shift to digital organizations, it became necessary to transform jobs and paper files to electronic files (Al-Salmi and Al-Sulaiti, 2008).

Electronic management is known as an administrative process which depends on the capabilities of the Internet and business networks for planning, direction, and control over the resources and core capabilities of the institution and others without limits in order to achieve the objectives of the institution (Nagm, 2004). According to Samir (2009) electronic management is the implementation of Business and transactions between two or more parties, whether from individuals or institutions through the use of electronic communications networks.

Electronic management's importance can be seen in that it helps achieve a number of benefits, the most prominent of which is to simplify complex procedures within organizations. However, this reflects positively on the service level and speed of delivery and facilitates communication between departments and staff, accuracy and objectivity in completing transactions and significantly reduces the use of paper, which positively impacts organizational effectiveness (Seraea, 2023).

This study aims to find out the impact of electronic management components such as electronic planning, electronic documents and electronic services on the level of effectiveness of the performance of the workers at the University of Mutah from the perspective of workers, this study contribute to add a bit of knowledge for researchers, practitioners of business and Students of MBA (Khelif and Ziadi, 2020)

According to Al-Douri (2020) performance is a complete assignment or tasks, as well as it related to just human element. In other way some researchers believe that the performance of the individual different activities and tasks and others believe it is the way which employees achieve their tasks during the production and operational processes that by using the means of production which are available. In addition, (Armstrong, 2006) defines the performance as improve organizational performance through the development process and the performance of individuals and the way to get better results.

Performance is considered the main axis, which managers focus their efforts on, where it constitutes significantly the most important organization aims, where the efficiency depends on

the efficiency of the performance of human resources, which is supposed to perform the functions assigned to it in all the effectiveness (Abdel-Qader& Al-Mahayreh, , 2015), in addition to that the human element is respected to be one of the most important organization element, which plays main and important role to achieve the organization's goals as the performance of individuals determines the overall performance of the organization.

Getting the maximum performance of the staff is the main challenge for managers in all kinds of organizations, so organizations must motivate their employees to get the maximum performance. The methods to improve employee performance are : Rewarding performance system, training employees about skills of information technology and determining the right person to do specific tasks, and making his task respected by other employees (Kirkpatrick, 2006).

It has become a motivating factor for organizations seeking competition and excellence in production and outputs, and about effectiveness of their performance of employees, so organization have accelerated to get benefit form Information Technology, as the information technology has contributed to raising the performance of employees, to improve the administrative decisions, to simplify and facilitate the procedures and optimal utilization of resources human, that through the application of a number of procedures and changes in the structure and operations and management organization, and also training users on how to use, that to ensure the organization's work perfectly (Attia, 2012).

Due to the rapid progress technological, electronic management necessary to the effectiveness of staff performance (Rawash, 2012), where technological progress helped the on the development of the modern administrative methods of work in recent years and also provided an opportunity to improve performance, which would shorten the time and effort, so all of that was imposed on institutions to transform the traditional systems in completion of the work to modern electronic methods (Abu Ashour, 2013).

The significance of this study is centered on the following key points:

1. This study centers on electronic management and its role in performance effectiveness (Al Rawashdeh, et al., 2024).
2. It aims to develop administrative work by raising awareness about electronic management's impact on worker performance, potentially serving as a starting point for future research on related topics not covered in this paper (Al Samman, 2022).
3. The study seeks to provide recommendations for Mutah University decision-makers on overcoming obstacles that hinder performance when implementing electronic management systems (Kaupa, et al., 2020).

It is important to note that this study was conducted during the academic year 2015-2016, and the field of electronic management has witnessed rapid developments since then, especially with the spread of cloud computing technologies and artificial intelligence. Therefore, readers should consider this temporal context when applying the results, taking into account recent technological developments.

1.2 Study Problem

Electronic management represents one of the most significant modern management applications that emerged during the information revolution and technological advancement period. Many organizations are now actively competing to implement these new technologies within their administrative frameworks. Modern organizations pay considerable attention to electronic management systems because of their substantial impact on multiple organizational variables. These systems directly influence employee satisfaction levels and significantly affect worker performance and overall effectiveness. However, there appears to be a notable gap in practical applications that properly measure and standardize the impact of electronic management on worker performance effectiveness.

In today's environment of rapidly advancing technology and computer applications, implementing electronic management has transitioned from being merely beneficial to becoming an indispensable necessity, particularly within human resources departments. Organizations that successfully integrate these systems can achieve positive outcomes in terms of performance improvement and enhancement of employee competencies.

The adoption of electronic management techniques serves as a critical strategic advantage in contemporary organizational settings, allowing institutions to optimize their administrative processes while creating more efficient and satisfactory working environments. Compared to traditional manual management, electronic management is expected to enhance employee performance through improved efficiency, accuracy, and speed of administrative processes.

According to the above, this study aims to answer the main question:

"What are the effects of electronic management on the efficiency of workers at the University of Mutah?

The following sub-questions are derived from this main question:

1. What is the impact of automating administrative processes and transforming them into digital processes using information technology on the performance and accuracy of Mutah University employees' tasks?
2. To what extent have electronic performance management systems enhanced the process of measuring and evaluating employee performance at the university, and what is the impact of this on productivity?
3. To what extent does the use of electronic human resource management systems and internal communication systems improve the efficiency of information flow and decision-making related to employee performance?

4. To what extent do electronic technologies and e-learning contribute to identifying training needs and developing digital skills in improving the professional capabilities and performance of Mutah University employees?

1.3 Study Hypotheses:

In order to obtain a logical solution to the problem of the study Based on Correct scientific methodology, it has been following hypotheses nihilism mode, (which have been dependable to build the study sample):

The Main hypothesis:

Ho.1: There is no statistically significant effect of electronic management components (planning, documents, and services) on employee performance effectiveness at Mutah University at a significance level of (0.05).

Sub-hypotheses:

- There is no statistically significant effect of electronic planning on employee performance effectiveness at a significance level of (0.05).
- There is no statistically significant effect of electronic document management on employee performance effectiveness at Mutah University at a significance level of (0.05).
- There is no statistically significant effect of electronic services on employee performance effectiveness at Mutah University at a significance level of (0.05).

1.4 The study model

The study model illustrates the relationship between the independent variable and the dependent variable. The independent variable is represented by electronic management components, which include electronic planning, electronic document management, and electronic services. The dependent variable is employee performance effectiveness at Mutah University. The model is presented in Figure (1).

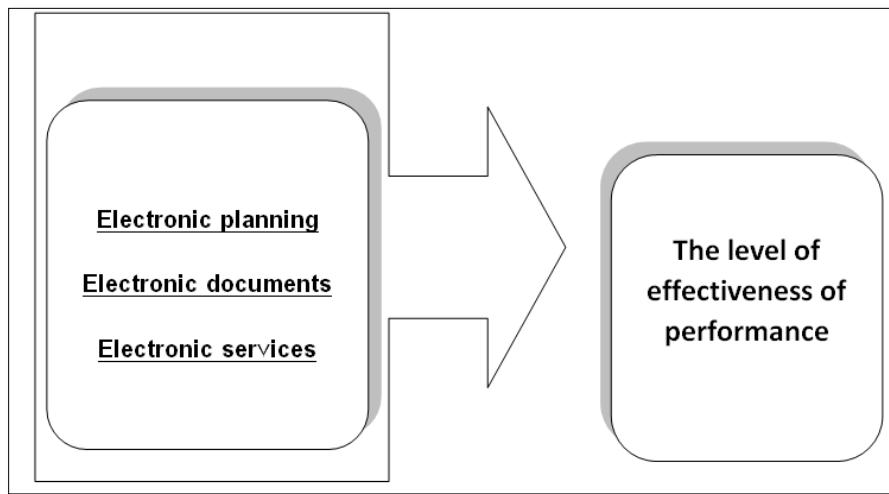


Figure (1): Study Model of the Relationship between Electronic Management Components and Employee Performance Effectiveness

Source: Prepared by the researcher based on Abu Ashour (2013) and Lozi & Zahrani (2012).

1.5 Procedural definitions of study variables:

Electronic Management:

Electronic management refers to an integrated administrative system that relies on information and communication technologies to transform traditional manual administrative processes into digital processes, aiming to improve efficiency, accuracy, and speed while reducing time and effort (Tashtoush, 2021). Procedurally, it involves the use of modern management techniques and communication networks to perform planning, organizing, directing, and controlling functions in human resource management.

Electronic Documents:

Electronic documents are defined as digital records of information and data that are created, stored, displayed, or processed using computers or electronic devices. These documents may include text, graphics, tables, and electronic data transmitted through electronic communication channels such as e-mail.

Electronic Planning:

Electronic planning refers to a dynamic and flexible planning process that utilizes digital technologies to achieve organizational objectives through continuous updating, adaptability, and responsiveness to change.

Electronic Services:

Electronic services are services that are provided partially or fully through electronic technologies to facilitate access to information and accelerate service delivery through interaction between users and electronic systems.

Employee Performance:

Employee performance is defined as the degree to which employees accomplish assigned tasks and responsibilities with accuracy, efficiency, and minimal effort in order to achieve organizational goals. It reflects employees' ability to contribute effectively to organizational success through productivity, service quality, and human resource development.

1.6 Literature review

Recent literature highlights the growing importance of electronic management due to its significant impact on employee performance and the effectiveness of human resource management. The use of information and communication technologies enhances organizational dynamism, operational capacity, and administrative efficiency (Li Ma & Maolin Ye, 2015).

Several studies have examined the level of electronic management application in higher education institutions. Research conducted in public and private universities reported a moderate level of electronic management adoption and emphasized the necessity of developing supportive legislation, improving technological infrastructure, and providing employee training to ensure successful implementation (Ashour, 2012; Kanani, 2010).

Other studies investigated the impact of electronic management in different sectors, particularly the banking sector. Findings revealed a positive relationship between electronic management and organizational performance, including improved decision-making processes and human resource development (Salem & Alrahahle, 2014). Similarly, electronic management was found to significantly enhance employee performance and human resource efficiency in financial institutions (Okolie & Eze, 2023).

In addition, previous research identified several organizational factors influencing job performance, such as work environment, communication, motivation, experience, training, and leadership (Lozi & Zahrani, 2012). Further evidence indicated that organizational culture, leadership position, job content, and financial incentives positively affect employee performance, while personal problems showed no significant impact (Rashid Saeed et al., 2013).

Leadership and information technology adoption were also found to play a critical role in organizational change and performance improvement. Effective leadership supports technological adoption and enhances departmental effectiveness in higher education institutions (Abbas & Asghar, 2010; Gorman, 2011). Moreover, the use of information technology has been shown to significantly improve employee performance in terms of quality, efficiency, and productivity (Attia, 2012; Zoubi, 2006).

Overall, the reviewed literature confirms that electronic management is a key driver of organizational performance improvement, particularly in educational institutions. Building on these findings, the current study examines the impact of electronic management components on employee performance at Mutah University, contributing to the limited empirical evidence available within public higher education institutions in Jordan.

1.7 Methodology

This study adopted a descriptive research design and a field survey approach. The study population consisted of administrative staff at Mutah University, selected due to the nature of their work, which relies heavily on administrative records and documentation for completing transactions. According to the latest available statistical data, the total number of administrative staff was approximately 2,000 employees. A simple random sampling technique was used to select the study sample, which represented 10% of the total population.

Data were collected using a questionnaire developed based on relevant previous studies. The questionnaire was divided into three main sections. The first section included demographic characteristics such as educational qualification, years of experience, and job title. The second section measured the independent variable, which consisted of electronic management dimensions (Badwi, 2013). The third section measured the dependent variable, employee performance (Al-Hawi, 2011).

The questionnaire items were measured using a five-point Likert scale ranging from strongly agree to strongly disagree. To analyze the data and test the study hypotheses, descriptive statistical methods were applied using the Statistical Package for the Social Sciences (SPSS). Reliability was assessed using Cronbach's alpha coefficient to ensure internal consistency.

To ensure content validity, the questionnaire was reviewed by a panel of specialists to verify its suitability, clarity, and ability to accurately measure the study variables. The use of random sampling and established measurement scales contributed to the rigor and representativeness of the study findings. It should be noted that the data were collected during the academic year 2015–2016; therefore, the results should be interpreted within the context of that period, considering the continuous developments in electronic management technologies..

2. Electronic Management

The rapid development of modern technologies and the information technology revolution, along with the widespread availability of the Internet and communication networks, has made it essential for organizations to adopt these technologies. Electronic management has become a key tool for improving performance quality, enhancing productivity, developing work methods, and achieving organizational objectives with high efficiency, while supporting economic and social transformation at the global level.

2.1 The Concept of Electronic Management

Electronic management emerged as a modern administrative concept driven by advancements in information and communication technologies, leading to improved productivity, speed, and service quality. It is defined as the effective utilization of information and communication technologies to perform core managerial functions across organizational levels (Awamleh & Abdalhafez, 2003). It also refers to the exchange of business transactions through electronic means rather than traditional physical methods (Gonium, 2004).

Electronic management involves reducing paper-based procedures and adopting electronic office systems to enhance administrative efficiency. It represents a comprehensive administrative system that includes computerized processes such as planning, organizing, leading, and controlling, while electronic communication remains only one component within this broader framework. This distinction is essential for understanding the overall impact of electronic management on organizational performance.

2.2 The Historical Development of Electronic Management

Electronic management emerged from gradual technological developments over the past five decades, beginning with the widespread use of computer systems in organizational activities during the 1950s and 1960s to improve speed and reduce effort, time, and resources (Saad, 2006). It later evolved as an innovative concept driven by the information technology revolution and the knowledge-based economy, encouraging a shift from traditional administrative systems to electronic management practices (Al-Alaq, 2005). Over time, electronic management matured into a comprehensive digital transformation of administrative processes, supporting organizational efficiency and effectiveness (Dubes, 2021)..

2.3 The Objectives of Electronic Management

Electronic management aims to improve administrative performance by restructuring traditional institutions and enhancing the technological efficiency of human resources (Ghanm, 2006). It also focuses on improving administrative work through the use of modern digital technologies, reducing bureaucracy, simplifying procedures, and providing decision-makers with timely and accurate information (Al-Shishani, 2006).

Based on these objectives, electronic management at Mutah University is expected to enhance work performance by streamlining administrative procedures and improving access to accurate and timely information. These objectives align with the purpose of this study, which examines the impact of electronic management components on employee performance effectiveness.

2.4 The Importance of Electronic Management

Electronic management plays a vital role at both organizational and national levels. Its importance includes reducing production costs, improving organizational performance, minimizing risks associated with paper-based procedures, and strengthening economic efficiency (Ghoneim, 2004). Rapid technological advancements are expected to further expand the

application of electronic management, leading to more efficient and effective organizations (Turpan et al., 2008).

At Mutah University, electronic management is anticipated to provide strategic benefits such as cost reduction, improved service quality, enhanced decision-making, and increased competitiveness. These benefits contribute directly to improving employee performance by creating a supportive and efficient administrative environment (Ashmel et al., 2022).

2.5 Electronic Management Elements

Electronic management consists of several key elements, including computer hardware and related accessories (Yasin, 2006), software applications that support administrative operations, and network communication systems that facilitate information sharing and data transmission (Turpan, 2002). In addition, the human element plays a critical role in electronic management, as skilled professionals and experts are essential for operating and sustaining electronic management systems effectively.

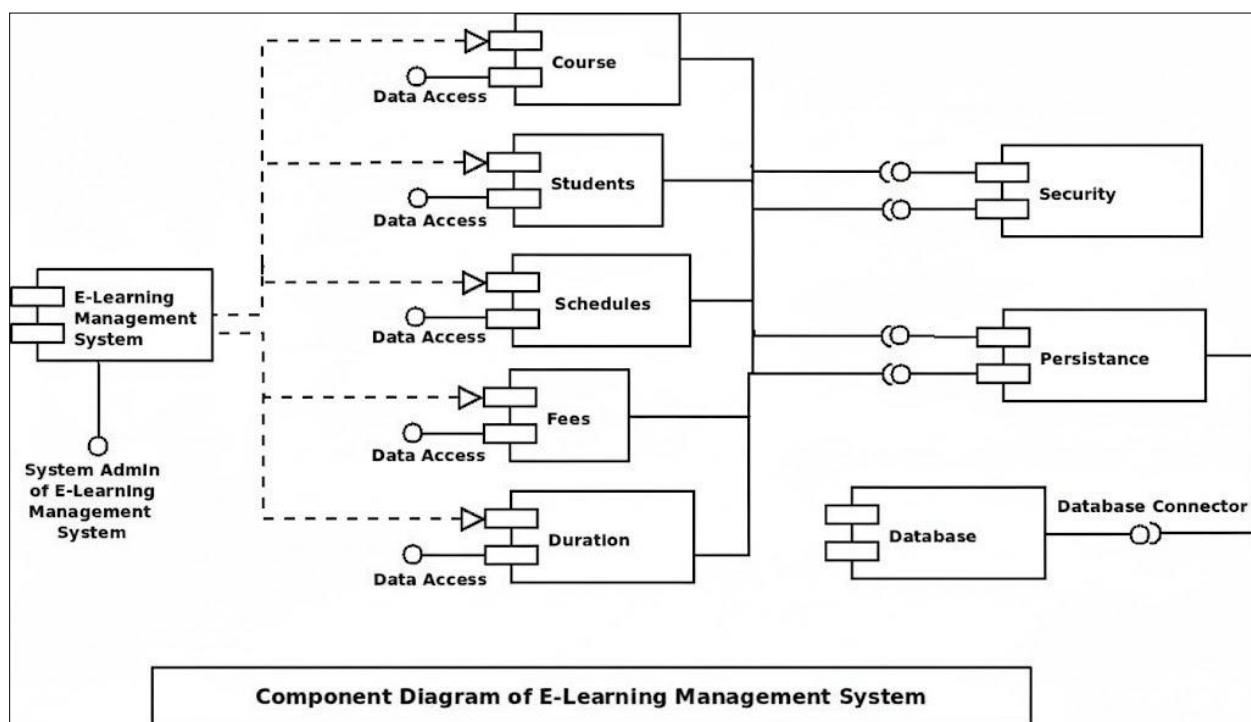


Figure 2. Components of electronic management. Source: Yassin (2005, p. 24)

Electronic management comprises integrated components: hardware, software, networks, and human expertise working together to automate administrative processes. This study examines how these components interact to create an electronic management environment at Mutah University and their impact on employee performance effectiveness (Hawash et al., 2023).

2.6 The Contribution of Electronic Management to Administrative Work Development

Electronic management has brought significant administrative transformations, including the shift from physical to virtual work, from direct to remote management, and from hierarchical to flexible, network-based organizational structures. These changes emphasize technology-driven information flow, enhance administrative flexibility, and improve organizational efficiency. While some scholars argue that electronic management redistributes management functions through technological systems, others suggest that core management principles remain unchanged. Nevertheless, electronic management represents a substantial administrative transformation that improves employee performance, collaboration, and institutional effectiveness at Mutah University within a higher education context (Atieh et al., 2023; Abu Alhaija & Alkshali, 2024).

2.7 Administrative and Security Aspects of Electronic Management

Electronic management is an integrated system that combines technological, organizational, legislative, and human components. Successful implementation requires strategic planning, appropriate infrastructure, continuous training, supportive regulations, and secure information systems (Ziemba et al., 2016).

At Mutah University, adopting electronic management as a comprehensive system provides a solid foundation for improving administrative performance and employee effectiveness.

3. The performance

3.1 The concept of performance

Performance refers to the efficient and effective completion of work tasks and is a key indicator of organizational success and sustainability (Al-Dawi, 2009; Drucker, 2007). In this study, performance is viewed as a multidimensional concept that includes task quality, efficiency, and effectiveness. Employee performance at Mutah University is examined in relation to electronic management implementation (Atieh et al., 2023).

3.2 Performance Measurement

Performance measurement involves evaluating employee performance to identify strengths, weaknesses, and development opportunities, and it represents a critical factor in organizational success (Becker & Huselid, 1998; Abu Hatab, 2009; Abu Libdeh, 2003). This study examines how electronic management enhances the accuracy, objectivity, and efficiency of performance measurement processes at Mutah University (Karim et al., 2024).

3.3 Performance Evaluation Steps:

Performance evaluation includes identifying tasks, setting performance criteria, selecting data sources and evaluation methods, implementing evaluation procedures, and providing feedback (Maher, 2006; Moser, 2000; Shawish, 2005).

Electronic management improves these steps by facilitating accurate data collection, standardized evaluation criteria, and efficient feedback mechanisms, leading to more objective performance assessments.

3.4 Theoretical Background and Research Context

This study provides a theoretical foundation for understanding performance measurement within electronic management systems at Mutah University. Performance is defined as the quality, efficiency, and effectiveness of task execution and is considered a key indicator of organizational success (Al-Dawi, 2009). Based on the reviewed literature, electronic management enhances performance measurement through a structured evaluation process that includes work identification, criteria development, data sources, evaluation methods, implementation, and feedback. The adoption of electronic management systems improves objectivity, accuracy, and data availability, thereby supporting goal-oriented performance evaluations and enhancing human resource practices within higher education institutions.

4. Methodology

This study has been conducted according to the quantitative data which was collected through questionnaire, and subjected to statistical analysis by SPSS 20.

4.1 The study population and study sample

The study population consists of the Administrative staff in Mutah University, number 2000 employees. A questionnaire was distributed at rate 10% from study population, so the sample was consisting of (200) and 190 questionnaires were analyzed (10 questionnaires uncompleted data).

4.2 Data Collection

Data included in the study were obtained from Administrative staff in Mutah University by questionnaire designed for examine the hypothesis of study.

4.3 Sample Characteristics:

Table (1) shows the characteristics of the study sample as follows:

The largest number of respondent's comes from employee's rate (71.1%) and Qualification bachelor rate (82.1%), the highest participation rate of those years of experience more than 20 years (46.3%).

Table (1): Demographic Characteristics of the Study Sample

Measure	Category	Frequency	Percent
Functional	Manager	16	8.4
	Head section	39	20.5
	Employee	135	71.1
Experience	<10	66	34.7
	10 - 20	36	18.9
	>20	88	46.3
Qualification	Diploma	10	5.3
	Bachelor	6	82.1
	Postgraduate	24	12.6

5. Test hypotheses

5.1 Validity and Reliability Test

To calculate the reliability of the study tool, Cronbach's alpha was used for all variables. The Cronbach's alpha was **0.876**, which clearly indicates that the results are reliable. Table 2 shows the reliability statistics.

The validity test is determined through an accurate measurement process, while the reliability test is used to measure the items in a questionnaire, which act as indicators of the variables or constructs. Nunally (1978) suggested that the Cronbach alpha coefficient of a scale should be above 0.7. This ensures the reliability of the study tool, as it was adopted from previous studies and reviewed by experts.

Table (2): Reliability Test Results Using Cronbach's Alpha

Cronbach's Alpha	N of Items
0.876	4

5.2 Arithmetic Means and Standard Deviations of Sample Characteristics:

Arithmetic means and standard deviations were calculated for the demographic characteristics of the study sample, including educational qualification, years of experience, and job title. The results are presented in Table (3).

Table (3): Arithmetic Means and Standard Deviations of Sample Characteristics

variable	Mean	Standard deviation
Qualification	2.12	0.526
Experience	2.12	0.895
Functional	2.77	0.534
Total	7.01	1.955

As shown in **Table (3)**, the arithmetic means for educational qualification was **2.12**, years of experience **2.12**, and job title **2.77**. The overall arithmetic mean for the sample was **7.01**, with a standard deviation of **1.955**, indicating an acceptable level of dispersion among respondents at a significance level of **0.05**.

5.3 Arithmetic Means and Standard Deviations of Study Variables

The arithmetic means and standard deviations for the independent and dependent variables were calculated to determine the level of respondents' perceptions. The results are shown in Table (4).

Table (4): Means and Standard Deviations of the Study Variables

Variables	Mean	Standard Deviation
Electronic Planning	4.35	0.432
Electronic Documents	4.33	0.340
Electronic Services	4.31	0.440
Performance	4.33	0.383

As illustrated in Table (4), the highest arithmetic mean among the independent variables was for Electronic Planning (4.35), while Electronic Documents recorded the lowest standard deviation (0.340), indicating a high level of consistency in responses.

The arithmetic mean for the dependent variable Performance was 4.33, with a standard deviation of 0.383, reflecting a high level of perceived performance effectiveness among the study sample at a significance level of 0.05.

5.4 Multiple Regression Analysis:

Based on simple regression analysis results, electronic planning, electronic documents, and electronic services have a statistically significant effect on employee performance at Mutah University. The results indicate a positive relationship between each electronic management component and employee performance, as reflected by the R and R Square values presented in Tables (5), (6), and (7). These findings confirm the role of electronic management practices in enhancing employee performance.

Table (5): Simple Regression Analysis Results of Electronic Planning on Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F
1	0.478 ^a	0.228	0.224	0.338	55.57
Predictors: (Constant), Electronic Planning					

Table (6): Simple Regression Analysis Results of Electronic Documents on Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F
1	0.551 ^a	0.303	0.330	0.321	81.76
a. Predictors: (Constant), Electronic document					

Table (7): Simple Regression Analysis Results of Electronic Services on Employee Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F
1	0.560 ^a	0.313	0.310	0.318	85.75
a. Predictors: (Constant), Electronic Services					

5.5 Coefficient Table and Test hypotheses

Table 6 presents the standardized coefficients, t-values, significance levels, correlations, and collinearity statistics for the three independent variables in relation to employee performance. This table is used to test the study hypotheses and determine the strength and significance of each predictor.

Table (6): Regression Coefficients and Hypotheses Testing Results

Model	Standardize d		t	sig	Correlations			Collinearity statistic	
	coefficient	Beta			Zero-order	Partial	Part	Tolerance	VIF
(Constant) Electronic Planning	0.478	7.45 4	0.00		0.478	0.478	0.478	1.000	1.000
(Constant) Electronic document	0.551	9.04 2	0.00 0		0.551	0.551	0.551	1.000	1.000
(Constant) Electronic services	0.560	9.26 0	0.00 0		0.560	0.560	0.560	1.000	1.000

5.6 Discussion of the results

- 1- The results of the statistical analysis revealed a statistically significant effect of electronic planning on the effectiveness of employee performance at Mutah University at a significance level of (0.05). The correlation coefficient (R) reached (0.478), and the coefficient of determination (R^2) indicated that electronic planning explains a meaningful proportion of the variance in employee performance. The F-value was statistically significant ($F = 55.57$, $p < 0.05$), which confirms the existence of a significant relationship. Accordingly, the null hypothesis was rejected, and the alternative hypothesis was accepted.
- 2- The findings also demonstrated a statistically significant effect of electronic documents on employee performance effectiveness. The results showed a correlation coefficient (R) of (0.551) and a coefficient of determination (R^2) of (0.303). The F-value was significant ($F = 81.76$, $p < 0.05$), indicating that electronic document management plays an important role in improving employee performance. Therefore, the null hypothesis related to electronic documents was rejected, and the alternative hypothesis was accepted.
- 3- Furthermore, the results indicated a statistically significant effect of electronic services on the effectiveness of employee performance. The correlation coefficient (R) reached (0.560), while the coefficient of determination (R^2) was (0.313). The F-value was statistically significant ($F = 85.75$, $p < 0.05$), confirming the positive impact of electronic services on employee performance. Consequently, the null hypothesis was rejected, and the alternative hypothesis was accepted.
- 4- Overall, the results confirm that the application of electronic management components has a positive and statistically significant impact on improving the effectiveness of employee performance at Mutah University.

6. Conclusion and Recommendation

6.1 Conclusion:

- 1- The results indicated a statistically significant relationship between electronic planning and the improvement of employee performance effectiveness at Mutah University, as the significance level was less than (0.05). This result is consistent with the findings of previous studies such as (Salem & Alrahahle, 2014) and (Israa, 2013) studies.
- 2- The findings showed a statistically significant relationship between electronic document management and the effectiveness of employee performance, as the significance level was less than (0.05). This result supports earlier studies that emphasized the role of electronic documents in enhancing administrative efficiency and employee performance. This result is matched to results of a study (Salem & Alrahahle, 2014) and (Israa, 2013) studies.
- 3- The results also revealed a statistically significant relationship between electronic services and the improvement of employee performance effectiveness, where the significance level was less than (0.05). This finding is consistent with the results of studies described by Salem & Alrahahle (2014) and Israa (2013).

4- Overall, the study results confirmed that electronic management has a positive and statistically significant impact on employee performance effectiveness, with a strong and positive relationship between performance and the dimensions of electronic management.. This result is matched to the results of (Zoubi, 2006) and (Attia, 2012) studies.

5- The results further indicated that there were differences in the impact of electronic management on job performance attributable to demographic variables, particularly years of experience and educational qualification. Employees with more than 20 years of experience were more positively affected compared to others, followed by those with higher educational qualifications. This result is matched to the results of a study (Zoubi, 2006) and (Lozi & zahrani, 2012) studies.

6.2 Recommendations:

1. Strengthening the technological infrastructure at Mutah University by upgrading internal communication systems, improving internet speed, providing modern computer equipment, and adopting specialized human resource management software. In addition, establishing a unified and integrated database for all university departments is recommended, along with implementing a comprehensive data security plan.
2. Implementing comprehensive and continuous training programs in electronic management for employees' at all administrative levels. Training should be mandatory and structured according to employee skill levels, with a minimum of 30 training hours per year, supported by technical assistance teams and electronic user guides.
3. Designing and developing an integrated electronic performance evaluation system that includes clear and measurable performance indicators for each job position. This system should incorporate electronic dashboards for employees and supervisors, as well as automated feedback mechanisms to support performance improvement.
4. Linking incentive and promotion systems directly to electronic performance evaluation results. Financial incentives and promotions should be based on employees' digital competencies and recorded performance levels within the electronic management system.
5. Developing a comprehensive and time-bound digital transformation plan for administrative processes at Mutah University. This plan should include continuous monitoring and evaluation, prioritization of performance-related administrative processes, and the establishment of a permanent committee to oversee implementation and address operational challenges.
6. Enhancing integration and communication among electronic systems by developing a centralized platform that connects all administrative systems, creating a unified employee portal, and establishing an internal electronic communication system to facilitate information sharing and knowledge transfer.

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