

The Role of Electronic Management in Improving Job Performance

دور الإدارة الإلكترونية في تحسين الأداء الوظيفي

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Abstract:

This study aims to determine the significance and role of electronic management in improving employee performance, as the emergence of modern communication technologies is considered the technical foundation for advancement into various areas of life. These technologies represent a vital asset in administration due to the transformations they bring to administrative methodologies. Furthermore, modern administrations increasingly rely on electronic communications of various kinds. These means are essential for improving employee performance, providing opportunities to develop skills, and showcasing professional competencies. They also contribute to facilitating all types of administrative processes; therefore, it is necessary to transition from traditional management and expands the use of electronic management.

Keywords: Electronic Management; Technology; Performance Improvement; Management; Change.

ملخص:

تهدف هذه الدراسة إلى معرفة أهمية ودور الإدارة الإلكترونية في تحسين أداء العامل، لأن ظهور التكنولوجيات الاتصالية الحديثة تعتبر بمثابة القاعدة التقنية للانطلاق في مختلف مجالات الحياة. وهذه التقنيات هي ثروة حقيقية في الإدارة نظرا لما تحدثه من تغييرات في أسلوب العمل الإداري، كما أنه لا يوجد إدارة في أي مؤسسة لا تستعمل الرسائل الإلكترونية بمختلف أنواعها، كما أن هذه الوسائل ضرورية في تحسين أداء العمال وإعطائهم الفرص في تنمية مهاراتهم وإبراز كفاءتهم وقدراتهم.... وتساهم أيضا في تسهيل العملية الإدارية بمختلف أنواعها، فلذلك يجب التخلص من الإدارة التقليدية وتوسيع استعمال الإدارة الإلكترونية.

الكلمات المفتاحية: الإدارة الإلكترونية؛ تكنولوجيا؛ تحسين الأداء؛ الإدارة؛ التغيير.

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1. Introduction

Electronic management is considered one of the defining technologies of the contemporary era, especially following the global shifts which have affected many aspects of various types of institutions. Because technological means have become indispensable in modern administration, they have come to dominate the interactions within and between institutions. This is intended to improve services while reducing time and cost.

This study seeks to understand the importance of electronic means and how they influence the job performance of individuals in the work environment. The employee is the cornerstone of a successful investment. The task of Human Resources management is to identify employees' skills, abilities, and inclinations, and to work on enhancing them by creating an atmosphere suitable for optimal performance. The success of any institution, regardless of its type, depends on the efficiency of the workforce and the extent to which appropriate mechanisms and techniques are applied to create an atmosphere of creativity and innovation. The question we must ask is:

Do Algerian institutions effectively seek to improve the performance of their workforce through the use of modern electronic means?

2. Defining Concepts

2.1 Definition of Electronic Management

Electronic management is an administrative term referring to the process of automating all administrative tasks and activities within an institution, relying on information technologies to achieve the goals of modern administration. It is a set of operations linking beneficiaries, information sources, and information resources via electronic means to achieve the institution's goals regarding planning, operation, production, follow-up, and development (Lamine Alouti, p. 144).

2.2 Procedural Definition:

Electronic management is defined here as one of the organizational processes that rely on modern technological means for administration, transaction processing, and communicating with various departments.

2.3 Concept of Job Performance:

Good (1973) defines performance as the effort an individual makes to accomplish a task according to their ability and potential. Ashour (1989) views it as the execution of the various activities and transactions that constitute an individual's work (Nada Abdel Baqi, 2015, p. 541).

2.4 Procedural Definition of Job Performance:

It is the effort exerted by the employee to accomplish specific tasks within the administration or institution to which they belong.

3. Importance of Electronic Management:

The importance of electronic management lies in its ability to keep pace with the massive qualitative and quantitative developments in information technology. It can be described as a productive information revolution or a continuous information and communication technology revolution. Furthermore, electronic management represents a robust response to the challenges of the twenty-first century. Its effects are not only technological but also administrative, represented by the development of administrative concepts that have accumulated over many decades. Administrative methods that were successful under past conditions may not be effective in a rapidly changing environment. In this regard, Yassin and Al-Alaq highlight the importance of electronic management in achieving added value through (Hamed Karam Al-Hadrawi et al., 2018, p. 69):

1. The ability to penetrate new markets and expand the institution's operations.

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2. Improving the institution's performance by providing electronic communication channels and functional integration.
3. Reducing the cost of executing administrative and non-administrative work.
4. Managing customer relationships efficiently using e-business systems.
5. Providing high-quality services to customers continuously at a lower cost.

4. Requirements of Electronic Management:

4.1 Administrative Requirements:

Administrative requirements include a comprehensive restructuring of all organizational sectors to accommodate the transition to electronic work. This is because the shift from a paper-based world to an electronic world requires new administrative procedures, starting with optimizing the workforce (**Ibid, p. 72**) and ending with reducing the number of physical offices. This is likely to meet significant challenges and resistance from individuals resistant to change. Hence, appropriate administrative procedures conducive to this change must be provided, in addition to preparing documents for digital data entry, which can pose a significant organizational burden, especially given large historical administrative accumulations (**Al-Hadrawi et al., op. cit., p. 72**).

4.2 Human Requirements:

Providing skilled human resources and cadres across all administrative levels, whether service or production-oriented, is essential for implementing change. Furthermore, the chances of successful change are greater when efficient human resources capable of operating in an electronic work environment are provided, enabling them to handle job burdens efficiently, leading to improved productivity (**Ibid**).

4.3 Material Requirements:

This includes providing sufficient financial resources to prepare the technological and technical infrastructure required for electronic management. Dealing with a large amount of data in a short time requires high-performance hardware, equipment, and software that suit the scale of operations, as digital workflows require tools capable of efficient management (**Ibid**).

5. Transition from Traditional Business to Electronic Business:

If the physical company represented capital during the industrial age, then e-business serves as its counterpart in the digital economy by providing business opportunities in a rapidly expanding sector. Since the mid-nineties, the importance of physical assets, production, marketing, and distribution has declined in relation to value creation, in contrast to the rapid expansion of e-business in its virtual and digital dimensions. The virtual value chain develops in the business space and virtual markets more rapidly than in the physical business world. This involves moving from companies operating from a single physical location to e-business companies that rely on geographically dispersed operations through computer-based telecommuting (**Al-Hadrawi et al., op. cit**).

6. Dimensions of Electronic Management (Mustafa Youssef Kafi, 2011, p.8):

Electronic management is a means to raise the level of management performance to achieve efficiency and effectiveness; it is not a substitute for management and does not aim to end its role. The application of electronic management will lead to:

6.1 Paperless Management:

Consisting of electronic archives, email, electronic directories, voice messages, and automated follow-up systems.

6.2 Placeless Management:

Represented by mobile communication, electronic conferences, and telecommuting through virtual institutions.

6.3 Timeless Management:

Operational 24/7. The traditional constraints of time and season are neutralized in the digital world. Continuous operation is necessary to maintain global connectivity and interests.

6.4 Management without Rigid Organizations:

Operating through networked and smart institutions that rely on the knowledge industry. Electronic management requires an infrastructure capable of accommodating developments, in addition to employees with adaptable mindsets. It is necessary to employ skilled elements, promote a culture of training, and spread digital literacy. Conversely, citizens or clients must be empowered to use modern technologies to complete their transactions via the Internet or mobile devices.

7. Foundations of Electronic Management (Rabie Rahmani, 2018, p.4):

Electronic management is based on principles that can be extracted from the aforementioned definitions, which include:

First: Providing superior services to citizens: Electronic management utilizes modern technology and human expertise to provide high-quality services at the lowest costs. It also minimizes partiality resulting from nepotism and favoritism, because automated systems treat all users equally.

Second: Ease of Use: Electronic management can be accessed by any individual from their home, public places, or the workplace.

Third: Cost Reduction: Every citizen seeks to obtain services at a cost that reflects their quality. The government focuses on providing high-quality public services without burdening the citizen. When citizens access services from their own environment, they save significant time and money.

8. Principles of Electronic Management (Kafi, op. cit., p. 48):

- ✓ Bridging the organizational gap between top-level management and workers.
- ✓ Revising traditional evaluation methods.
- ✓ Restructuring roles and functions.
- ✓ Integrating automation into professional functions and using software to manage relationships and work completion digitally.
- ✓ Exchanging data electronically across all employees, suppliers, and customers.

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9. Forms of Modern Communication in the Institution:

Technological development and its rapid spread have integrated technology into all spheres of life, including the economic, political, and cultural sectors. Among the most important technological means used in the institution are:

9.1 Email (Al-Qaseer Mohamed, 2018, p. 45):

Email is one of the most important means of electronic communication. It facilitates the exchange of official correspondence and the sending of reports and documents with speed and accuracy. It also contributes to documenting internal and external communications.

9.2 The Internet:

It is a vast network connecting millions of computers or computerized systems worldwide. Users can retrieve information or share files available on the network, regardless of the type of computer used (Amer Qandilji, 2012, p. 139).

10. Electronic Management in the New Business Environment:

Proposing the philosophy and concepts of electronic management requires identifying the technical and operational stages for its implementation through a scientific methodology. It also requires identifying the difficulties facing the progress towards electronic management and developing proposed solutions (Abdul Rahman Tawfiq, 2008, pp. 21-22).

Success Factors in Electronic Management (Lamine Alouti, op. cit):

Officials wishing to transition to electronic management must take into account several factors:

10.1

- a) Clarity of strategic vision and a comprehensive understanding of electronic management, including planning, implementation, and development.

10.2

- a) Direct and comprehensive sponsorship by senior management.
- b) Continuous development and clarification of work procedures.
- c) Ensuring employees comprehend organizational goals, with an emphasis on documenting and employing them.
- d) Achieving transparency and practical application.

11. Job Performance:

11.1 Nature of Job Performance:

Job performance is defined as the level of achievement attained by the individual through carrying out assigned tasks. It reflects the extent of their efficiency in using knowledge, skills, and abilities to achieve organizational goals according to specific criteria including quality, speed, accuracy, commitment, and cooperation (Al-Salami Ali, 2001, pp. 230-231).

11.2 Elements of Job Performance (Aisha Ben Ahmed Al-Mani, 2012, p. 84):

1. **Knowledge of Job Requirements:** Includes technical and professional skills and general background regarding the job.
2. **Quality of Work: Represented by the individual's understanding of the work, and their inventiveness, organizational ability, and execution skills.**
3. **Quantity of Work Accomplished (Ibid):** The volume of work an employee can accomplish under normal conditions and the speed of completion.
4. **Perseverance and Reliability:** Includes seriousness and dedication to work, the employee's ability to bear work responsibility and complete tasks within their specified time, and the extent of this employee's need for guidance and direction from supervisors.

12. Electronic Management and its Impact on Job Performance

The nature of work is intrinsically linked to technological advancement. As technology evolves, job roles undergo transformation across all organizational strata; it may depreciate certain roles while elevating others or rendering some redundant. Even minor technological shifts can have complex psychological and operational impacts on the workforce. While some positions may be displaced, others require a transition to new functional roles. Consequently, management must proactively anticipate these shifts and implement mitigating strategies. This transition is often accelerated when automation is integrated into production expansion or new infrastructure. Therefore, it is imperative to facilitate employee re-skilling and professional development to prepare them for these emerging roles (Lamine Alouti, *op. cit.*, p. 145).

12.1 Advantages and Risks of E-Business

Internet-based e-business offers numerous strategic advantages. However, the creation of value inevitably incurs associated costs. Achieving economies of scale often involves a trade-off with organizational uniqueness or established logical frameworks. While the introduction of technology drives higher productivity, it also presents a complex landscape where businesses must balance the duality of operational benefits and the associated burdens through strategic trade-offs (Tawfiq, *op. cit.*, p. 22).

12.2 The Relationship between Job Performance and Electronic Management:

Based on the aforementioned analysis, it is evident that electronic management significantly enhances job performance. This improvement is primarily achieved through the rapid dissemination and accessibility of information, which streamlines cognitive tasks and eliminates the need for physical movement between departments. Furthermore, electronic management modernizes administrative workflows, effectively removing communication barriers and reducing reliance on paper-based transactions.

This transition ensures that operations run seamlessly, which can lead to a reduction in unnecessary working hours. By fostering a more ergonomic and efficient work environment, employees can maintain higher levels of focus and perform their duties with less administrative pressure. Additionally, proficiency in these technologies augments the technical skillset of the workforce and may even facilitate multilingual competence. Ultimately, electronic management serves as a catalyst for improving performance and

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elevating organizational competencies through targeted motivation and technical training. As a result, employee morale is bolstered, enabling the workforce to effectively realize the strategic objectives of the organization.

13. Discussion and Analytical Perspectives on Electronic Management and Employee Performance

The analysis presented in this study confirms that electronic management has become a fundamental driver of administrative efficiency and employee performance in contemporary organizations. The integration of information and communication technologies into administrative processes contributes significantly to reducing procedural complexity, accelerating decision-making, and improving coordination across organizational units (Heeks, 2006; Laudon & Laudon, 2020).

Electronic management enhances organizational performance by automating routine administrative tasks, which allows employees to redirect their efforts toward more strategic and value-adding activities. This shift positively influences job quality, productivity, and overall performance levels. According to Dunleavy et al. (2006), digital-era governance replaces traditional bureaucratic models with integrated digital processes that emphasize efficiency, responsiveness, and service quality.

Moreover, electronic management strengthens transparency and accountability within institutions through real-time monitoring, digital documentation, and traceability of administrative actions. These mechanisms reduce discretionary behavior and administrative corruption, while promoting fairness and equality in service delivery. Such transparency positively affects employee morale and job satisfaction, which are key determinants of job performance (Reddick, 2011).

Another critical dimension of electronic management is its role in enhancing employee competencies and professional development. The continuous use of digital systems necessitates ongoing training and skill acquisition, particularly in information systems, digital communication, and data management. Venkatesh et al. (2012) argue that employee acceptance and effective use of technology are closely linked to perceived usefulness and ease of use, which directly impact performance outcomes.

However, despite its benefits, the implementation of electronic management often encounters resistance to change. Employees may fear job displacement, increased surveillance, or lack confidence in their technological abilities. Therefore, institutions must adopt participatory change management strategies that emphasize training, communication, and organizational support to ensure successful digital transformation (Heeks, 2006).

In the Algerian context, the effectiveness of electronic management depends largely on institutional readiness, infrastructure availability, and human resource capabilities. While progress has been made in several sectors, disparities remain between institutions, highlighting the need for comprehensive national strategies to support digital administrative reform.

14. Future Directions and Strategic Implications for Electronic Management

The future of electronic management is closely associated with the evolution of digital government and smart administration models. Institutions aiming to sustain performance improvement must move beyond basic automation toward integrated digital systems that leverage data analytics, artificial intelligence, and decision-support technologies (**OECD, 2020**).

One of the most significant implications of electronic management lies in its impact on organizational culture. Digital transformation encourages a shift from rigid hierarchical structures to more flexible, network-based organizational models that prioritize collaboration, innovation, and knowledge sharing. Employees are increasingly required to adapt to continuous change, making flexibility and digital literacy essential performance indicators (**Brynjolfsson & McAfee, 2014**).

Electronic management also enhances institutional interaction with stakeholders by enabling faster service delivery, improved communication, and greater responsiveness to citizen needs. Digital platforms facilitate feedback mechanisms and service personalization, thereby strengthening trust and institutional legitimacy (**Reddick, 2011**).

From a human resource management perspective, electronic management necessitates redefining performance evaluation systems. Traditional evaluation criteria must be complemented by indicators that assess digital skills, innovation, adaptability, and collaborative behavior. Aligning employee performance objectives with organizational digital strategies ensures coherence and long-term effectiveness (**Laudon & Laudon, 2020**).

Furthermore, ethical and security considerations constitute a major challenge in electronic management environments. Protecting personal data, ensuring cybersecurity, and maintaining confidentiality are essential to sustaining trust among employees and service users. Institutions must therefore adopt robust legal and technical frameworks to govern digital operations responsibly (**OECD, 2020**).

In conclusion, electronic management represents a transformative approach that enhances employee performance and administrative effectiveness when implemented strategically. Its success relies on an integrated framework that combines technological infrastructure, human resource development, organizational culture, and ethical governance. Through such an approach, electronic management can serve as a sustainable driver of performance improvement and institutional excellence.

15. Conclusion

Based on the foregoing, it is evident that electronic management is critical, especially in administration. Technological means have become a standard by which the quality of administrations and services is measured. Therefore, the state has endeavored to provide these means and connect administrations to the Internet to keep pace with the digital era. These electronic systems provide opportunities for employees to improve their performance within the organization.

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16. Recommendations:

- ✓ Digital culture must be disseminated across all administrative levels to foster a technology-driven environment.
- ✓ It is essential to transition away from traditional paper-based methods in favor of modernized administrative performance.
- ✓ Managers and senior officials should be incentivized to adopt technological tools within the administration to lead the digital transition.
- ✓ The institution should establish specialized training courses, particularly in administrative software, for both current employees and new recruits.
- ✓ Strategic workshops should be developed in the field of electronic management to sensitize personnel to the necessity and benefits of using these electronic means.

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