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The implementation of Electronic-Administration and digital transformation in Algeria: between reality and expectations

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Abstract:

This article discusses Algeria's experience in implementing e-administration and digital transformation, focusing on the current situation and the desired outcome of e-government in the public sector. The research highlights the challenges facing e-management, including incomplete digital infrastructure, limited internet penetration, a shortage of skilled personnel, poor digital awareness and inadequate regulations, all of which have contributed to the delay in the full digital transformation of public institutions. On the other hand, the article presents the potential available to Algeria, such as qualified human resources and material capacities, and the opportunities offered by digital transformation to enhance the effectiveness of public services. The findings indicate that the success of e-government is linked to effective investment in digital infrastructure, human resource development, the enactment of regulatory laws, and the intensification of awareness programmes for citizens. The research concludes that e-government and digital transformation are not merely technical tools, but rather a comprehensive strategy for re-engineering public services, improving the quality of administrative performance, and enhancing digital interaction with citizens, thereby achieving the desired goals of digital government in Algeria.[1]

Keywords: e-administration, digital transformation, digital public services, challenges, reality, prospects

Introduction:

In recent decades, the world has witnessed rapid digital transformations affecting various economic, social and administrative fields, with information and communication technology playing a prominent role in bringing about these transformations. This development has given rise to modern administrative models that have surpassed traditional methods based on routine and bureaucratic complexity. Digital transformation has become a strategic option for countries seeking to improve the performance of their public administration and enhance the quality of their services.

In this context, e-administration has emerged as one of the most important trends in digital transformation, as it relies on the use of digital tools and information networks to facilitate public facilities and deliver public services efficiently and effectively. It employs digital tools and information networks to manage public facilities and provide public services efficiently and effectively, thereby enhancing transparency and bringing the administration closer to citizens. Based on this, this study aims to answer the following question: To what extent does digital transformation through e-administration contribute to improving public administration in Algeria?

The importance of this topic lies in its connection to administrative reform efforts and the achievement of sustainable development, particularly in light of Algeria's efforts to modernise its public administration and keep pace with global digital transformations.

To answer this question, I addressed the following topics:

Section I : The conceptual framework of e-administration and digital transformation in Algeria

Section II: Objectives and requirements of e-administration

Section III: The Impact of the implementation of e-administration and digital transformation in Algerian public administration

Section I: The Conceptual framework of e-administration and digital transformation in Algeria

Digital transformation and e-adminstration are the use of ICTs to improve efficiency transparrncy ,public service delivery.in Algeria ,they drive administrative modernization and stronger citizen engagement .

The First Requirement: The Concept of e-administrationE-administration is the management of information resources based on the Internet and business networks, and tends to abstract things and their associated elements to the extent that intellectual knowledge capital has become the most effective factor in achieving its objectives and the most efficient in using its resources ( ).E-administration is an administrative term that refers to the set of organisational processes that connect beneficiaries and information sources through electronic means to achieve the objectives of the institution in terms of planning, production, operation and development, whether the institutions are government departments or commercial companies. E- administration is a concept that encompasses all electronic activities, whether in business organisations or public administration.

Based on the impact of e- administration applications on government bureaucratic agencies, especially service agencies, definitions of e-government have attempted to link it to rationalised public service. Researcher Saeed Al-Omari believes that e- administration ‘represents a fundamental shift in the concept of public service, reinforcing the values of public service and making the public beneficiaries of the service the focus of attention for state institutions. It also goes beyond the concept of excellence in service delivery to include communication with the public through information and strengthening its role in participation and oversight by developing better communication between citizens and the state.

The prevailing concept of e- administration in many countries is ‘the use of technological capabilities to improve the performance of government agencies, increase their efficiency, and enhance their effectiveness in achieving their desired goals.Based on the above definitions, the most important features of e-administration are evident in the following points:

- Adopting information and communication technology as a key tool in the hands of technology administration.

- Employing this technology in the accomplishment of the tasks and functions of the administrative apparatus.
- Utilising information technology to improve modern administration services, linking them to all new developments and raising their performance effectiveness.
- Automating all administrative activities, ensuring that they are constantly updated and simplified for all users, thereby guaranteeing efficiency and speed in the completion of transactions.
- Relying on modern technology programmes to rationalise time and effort and reduce them as much as possible.
- Add speed to the quality requirement in delivering the final output of administrative organisations.

Thus, e- administration, with its procedures, elements and profound concepts, becomes a lifeline for those societies that have spent decades waiting for a breakthrough, in a reality burdened by traditional routine administrations.

The second requirement: The concept of digital transformation and its relationship to e- administration:

Digital transformation is the change associated with the application of digital technology in all aspects of society. Digital transformation is an urgent necessity imposed by the rapid development in the use of information technology, and it achieves the transition from paper-based government to digital government. This transition to new information technology systems or the implementation of digital services is by no means a simple process. It often requires and involves digital conversions, retraining for new jobs within institutions, and government reorganisation.

In this regard, some define digital transformation as: "a transformation in business or government, i.e. a procedure,radical changes affecting the business model, procedures and processes. The transformation may involve changing the product or the way

the service is delivered entirely, and may be strategic, affecting all functions of the organisation from sales to supply and information technology,and the entire value chain. Kuny Terry defines it as the process of converting information sources in various forms (books, periodicals, audio recordings, images, moving images, etc.) into a form readable by computer technology via a binary system

(bits, which are the basic units of information in a computer-based information system). Converting information into a set of binary numbers can be called 'digitisation', and this process is carried out using a set of specialised technologies and devices. A distinction must be made between the concept of digital transformation and digitisation. It has also been described as digitisation in some research, as it refers to the changes arising from digital technologies, while digitisation refers to the conversion of information from analogue to digital form and the automation of processes through information technologies. It includes

The term transformation refers to the ability to understand and take the necessary actions when organisations encounter new technologies. It should not be confused with simple change. Some view digital transformation as the use of all available digital technologies to improve business performance and contribute to raising the overall standard of living.

The Third requirement: Characteristics and functions of e- administration:

E- administration has a number of characteristics, the most notable of which are reliance on digital technology, structuring administrative procedures, speeding up transactions, improving public services, and rationalising time and costs. In terms of functions, e- management performs planning, guidance, and control functions, but in a digital manner that relies on data analysis, electronic communication, and immediate performance monitoring. We will explain these functions in more detail below:

The First Sub -Paragraph: Planning

Planning involves attempting to foresee and predict the future and prepare for it. Planning is a mental process that relies on creative thinking through the crystallisation of facts and information about a particular situation, based on which the manager decides what he wants to do, what needs to be done, when, and what materials are needed to accomplish it. Planning is based on a fundamental pillar that includes setting goals, developing strategies, drawing up policies, determining procedures and rules, and then preparing timelines for implementing the goals.

The Second Sub-paragraph: The organizational Function:

This function involves identifying the activities and tasks that need to be accomplished to achieve the objectives previously defined in the planning function, then dividing and segmenting them into the effective performance of these activities and tasks. This function also includes determining the nature of organisational relationships and building an organisational structure that reflects the nature of activities and organisational relationships in their various forms and at their various levels.

The Third Sub-paragraph: The Directing Function:

This function aims to guide, advise and motivate employees in a way that contributes to ensuring the best results through daily interaction between managers and subordinates at various administrative levels. It is therefore linked to communication, leadership and motivational skills.

The Fourth Sub- paragraph:

This function aims to ensure that actual performance is in line with the plans set out in a manner that confirms the extent of progress towards the goal. It then corrects the course by detecting deviations, identifying weaknesses and working to avoid their causes by taking appropriate corrective measures and addressing them in an appropriate manner.

Section II: Objectives and requirements of e- administration

E-administration seeks to modernize public service delivery through the use of digital technologies.its main objectives focus on improving efficiency, transparency,and accessibility within public administration.

The First Requirement 1: Objectives of e- administration:

-E- administration aims to achieve several objectives, the most important of which are simplifying administrative procedures, speeding up the completion of transactions, and improving the quality of public services.
– Developing the work system in different departments, which ultimately leads to the completion of all tasks and functions required to be performed on time.
– Providing employees with the opportunity to discuss, interact, and exchange views via the Internet.

– Eliminating excessive expenses incurred by senior administration as a result of following traditional methods.
– Encouraging employees to use the internet to gather ideas and modern methods and propose them for implementation in practice.
– Facilitating access to information, which is now available online instead of being stored in papers and notebooks.
– Increased ability of companies to compete with others and improve their economic status.

The Second requirement: Requirements for implementing e -dministration

The implementation of e- administration requires the creation of an environment conducive to its launch so that it can carry out its assigned tasks. The implementation of e-government must take into account several requirements, including:

The First Sub paragraph : Administrative and security requirements:

The administrative and security requirements that must be taken into account when implementing e- administration are limited to the following elements:

- Developing a strategy and establishment plans, which may include a national-level administration or body with functions of planning, monitoring and implementing e-government projects. At this stage, it is essential to secure the support and backing of senior management in the administrative hierarchy, along with sufficient financial allocations to carry out the required transformation.
- Provision of e- administration infrastructure: It is necessary to work on developing various communication networks in line with the transformation environment, which requires a wide network capable of handling the enormous volume of communications, without neglecting
other technical equipment, devices and computers, and to try to make them available to individuals and institutions.
- Developing administrative organisation, services and transactions in line with gradual transformation by reorganising structural aspects and determinants and various government functions, bringing them into line with the principles of e-administration.

The second Sub paragraph: Specialised skills requirements:

The need for a qualified workforce with knowledge of the principles of technological progress and the necessary legal legislation to implement e-administration

The Third Sub paragraph: Political requirements:

which translate into political will to support the e-transformation strategy and e-administration projects by providing material and moral assistance to overcome obstacles and develop e-transformation and e- administration programmes.

The fourth Sub paragraph: Economic and social requirements:

These include working to create a supportive social environment that understands the need to transition to e-administration and is sufficiently aware of the advantages of applying technical means in electronic administrative systems, and sufficiently aware of the advantages of applying technical means in administrative bodies with the help of the media, with the need to provide sufficient financial allocations to cover spending on e-government projects without neglecting investment in the field of information and communication technology and finding a source of funding for it that is characterised by permanence at the central and local levels.

The Fifth Sub paragraph: Communications infrastructure requirements,

which are linked to the provision of computers, integrated data systems, electronic kiosks in public places, telephones and fax machines. The communications infrastructure serves to increase interconnectivity between the various administrative bodies within the state. E-administration requirements vary from one e-initiative to another, depending on e-transformation programmes and the size of the project, which aims at the total or partial automation of the functions and activities of administrative organisations.

Section III: The impact of e- administration and digital transformation on improving the performance of the Algerian public administration:

E-adminisration and digital transformation are reshaping Algerian public administration by improving efficiency,transparency,and service delivery .they enhance institutional performance and bring public services closer to citzens

The First requirement – The reality of e- administration implementation in Algeria

Algeria's move towards implementing information and communication technology represents a major shift in the culture and practice of government work, ensuring more efficient administration of its resources and thus enabling it to implement its policies and plans with greater efficiency. The spread of the Internet as a key technology in the e-transformation strategy represents an important stage in the transition to information and communication technology, the shift to e-services in Algerian government institutions, and the adoption of the concept of e- administration as a tool for developing and reforming public service organisations. Algeria has sought to take advantage of the services of the Internet and various related technologies since connecting to the Internet in March 1994 through the Scientific and Technical Research Centre (CRIST), which was established by the Ministry of Higher Education and Scientific Research in March 1986. One of its main tasks was to set up a national network and connect it to regional and international networks ( ). With the launch of the Internet connection, Algeria experienced significant growth and progress in the field of Internet subscription and use, with an estimated 130 organisations subscribing in 1996 and 800 organisations subscribing in 1999.

Starting in 2008, Algeria launched the 'E-Algeria 2013' project, by enacting various legislative texts and promising the basic rules to ensure this, in order to prepare various sectors for such development. The document issued in December 2008 is the first official document to outline the features of an integrated e-government programme in Algeria, which aims to build an information society, stimulate the economy and make it digital, in addition to reducing bureaucracy and speeding up decision-making. This is partly reflected in the e-services provided by the Ministry of the Interior and local authorities.

The First Sub paragraph: Types of e- administration

E- administration takes different forms and shapes depending on the nature of the work of the institution in order to achieve its objectives. These types include the following:

First: E-Government

E-government is one of the types of e- administration, which refers to the management of public affairs by electronic means to achieve social, economic and political objectives and eliminate routine and centralised tasks with a high degree of transparency. This can be represented in the provision of government services between different entities, such as: The relationship between the government and the government. The relationship between the government and individuals. The relationship between government and companies. The relationship between government and employees.

Second: E-commerce

E-commerce is the exchange of information and services via the Internet to achieve rapid economic development. Payment can be made through bank cards. E-commerce is considered the first application of e- administration.

Fourth: E-health

E-health provides medical consultations, services and information to patients via electronic means. Patients can follow up on the results of medical examinations, laboratory tests, information and services via the hospital's local network or the Internet. Surgical operations can also be performed in one country while the consultant is in another. Waiting times for patients can also be reduced. When patients leave the doctor's clinic and go to the pharmacy, their medication will be waiting for them because the doctor has sent the prescription electronically to the pharmacy.

Fifth: E-learning

In e-learning, lectures, written exams and discussions of scientific papers can be conducted via the institution's local network or the Internet. Free lessons published on the Internet can also be utilised.

Sixth: Electronic publishing

Through electronic publishing, it is possible to follow breaking news and economic and social bulletins, view the latest publications, take advantage of various search engines, and quickly access information from its original sources.

The Second Sub paragraph: The Results of the implementation of e-management in the Ministry of the Interior and Local Authorities:

The Ministry of the Interior and Local Authorities has worked to modernise the services provided to citizens and keep pace with economic and social changes by launching a major project to modernise central government and local authorities

through the gradual introduction of a secure identification system. To this end, the Ministry of the Interior and Local Authorities has worked at the level of municipalities and government departments on new procedures to process applications for biometric and electronic identity cards and electronic and biometric passports.

The national biometric and electronic ID card is a completely secure document with a more flexible format in line with the latest technological developments in the world. It contains an electronic chip and a digital image that allows citizens to quickly complete various daily procedures due to its reliability and diverse uses in the context of interconnection with other sectors. As for the electronic and biometric passport, is a secure, machine-readable identity and travel document. It contains a special contactless electronic chip containing the Algerian state's electronic certificates and information on the applicant's civil status and digital biometric information, including their digital image, signature and fingerprints. It complies with the standards set by the International Civil Aviation Organisation, which set 1 April 2010 as the deadline for the launch of electronic and biometric passports for all its members, and 2015 as the deadline for the final withdrawal of non-electronic and non-biometric passports worldwide. in addition to other arrangements such as single-person passports even for minors.

The ministry did not stop at these measures, but opened up registration via a website at the end of 2016, where registration for biometric documents was opened on the website. A total of 87,230 applications were registered on the website between 18 and 25 December 2016, with registrants being notified electronically. The administration is responsible for reviewing and following up on each application. Municipalities in Algiers have begun issuing biometric passports within 24 hours. The ministry claims that these procedures will be extended to biometric national identity cards, and that the procedure will cover all provinces by the end of 2017.

The Second requirement: Prospects for the implementation of e-administration and digital transformation in Algeria

With the aim of establishing the principles of e- administration, the Ministry of the Interior is working to implement the concept of e- administration at the local level through the implementation of ‘e-municipality’ Its information systems will be developed and implemented in various fields starting in 2017, with the first

pilot phase scheduled for early 2018 in the municipality of Central Algiers, after which it will be rolled out nationwide. alongside its efforts to create a unified electronic portal for various administrative services, which will save time in processing requests and simplify procedures at the level of all municipalities. It will also enable the provision of remote services to citizens without them having to visit municipal offices, thanks to the electronic signature of administrative documents. The Ministry also aims to establish a unified electronic portal covering all public services, which will make it easier for citizens to obtain information at the click of a button, as well as developing administrative services that will make the administration more credible and flexible.

The First Sub paragraph: Positive effects of implementing e- administration

- e-administration offers a number of distinct advantages, the most notable of which are:

* Availability of the information needed to make the right decisions at the right time.
* Elimination of bureaucracy and routine regulations, which are a major cause of disruption to customer services.
* Improving the level of employees and increasing their ability to face challenges.
* Speed of completing customer-related work and tasks.
* Removal of geographical barriers and elimination of distance.

The Second Sub paragraph: Negative Effects of Implementing E-administration

First: The spread of electronic espionage:

This is one of the most widespread problems in this type of administrative system, which leads to a lack of confidentiality of documents and archival data. This is because information related to the administration or the institution is exposed to espionage by competitors with the aim of sabotaging it or gaining insight into the plans followed by the administration in organising the work of the institution. Temporary suspension of management work, which is linked to the difficulty of managers or administrative staff getting used to or understanding electronic administration tools, leading to a reduction in administrative efficiency.

Second: The challenges encountered by the electronic administration

Electronic administration faces many challenges, including:

* The unwillingness of some companies and institutions to keep pace with change.
* The lack of financial resources necessary to support electronic administration.
* Problems encountered by employees when dealing continuously with the Internet, such as the need to be proficient in English.
* Lack of awareness and understanding among employees of the need to rely on electronic administration.
* Lack of modern technological equipment and tools necessary for e-government.
* Employees' inability to operate electronic equipment and tools, and the need to train them, which imposes financial burdens on the company.

Conclusion:

This study concluded that digital transformation through e- administration is the cornerstone for improving the performance of Algerian public administration, given the efficiency, transparency and quality it brings to service delivery. However, achieving the desired goals of this transformation remains linked to the completion of the digital infrastructure, the training of human resources, and the provision of an appropriate legal and regulatory framework. Therefore, the adoption of a comprehensive strategy for digital transformation will contribute to the modernisation of public administration and the achievement of sustainable development.

Through studying the role of digital transformation in improving the performance of Algerian administration, e- administration in Algeria: between reality and prospects, I have reached a set of conclusions and proposals as follows:

First - Findings:

-E- administration t is a natural outcome of accelerating technological developments, with information and communication technology playing a pivotal role in transforming traditional administrative processes into a unified electronic model, thereby enhancing performance efficiency and keeping pace with digital transformation.
- Digital transformation contributes to achieving multiple e- administration objectives, most notably simplifying administrative procedures, enhancing

transparency, speeding up transactions, and ensuring the accuracy of data and information used in decision-making.

- Implementing digital transformation in administration requires an integrated infrastructure that includes communication networks, computers, high-quality internet coverage, as well as the enactment of laws and regulations and the training of human resources to deal with technical challenges and digital transformation.
- Digital transformation efforts face several obstacles, most notably a lack of infrastructure, weak awareness and sensitisation programmes on the benefits of digital transformation, sub-optimal knowledge administration, and the high cost of electronic devices and equipment Limiting the full utilisation of digital capacities.
- Algeria's e-government project, launched more than three years ago, faces obstacles related to incomplete communications infrastructure, limited internet penetration, and delays in the issuance of regulatory laws, which are slowing down the digital transformation process in the public sector.
- The development of information and communication technology has led to the emergence of the concept of e-government, one of the most important tools of digital transformation necessary to improve the quality of public services and keep pace with global progress.
- The Algerian e-government initiative included clear objectives and specific implementation mechanisms, but delays in implementation within the planned timeframes reflect weak control over digital processes, which has affected the success of the digital transformation strategy.
-Despite efforts to provide infrastructure, the failure to complete major projects such as the rollout of broadband, securing the legal framework, and training qualified personnel has delayed the progress of digital transformation in Algeria.
-Some public institutions offer limited e-services to citizens, such as financial services from the Algerian Post Office, judicial services, and educational services. However, citizens and the business sector are looking for more advanced and comprehensive services in line with the requirements of digital transformation.

Algeria has the human and material resources that can be invested to support digital transformation, provided that there is proper planning and effective resource management.

Algeria has focused on building an information society by promoting the use of the internet and information technology through programmes such as fibre optics and high-speed broadband, but delays in implementing these projects have contributed to the slow pace of digital transformation.

- The delay in completing the infrastructure and the prevalence of computer illiteracy have widened the digital divide, which is one of the main obstacles to digital transformation.

Second: Recommendations for promoting digital transformation

-Effective investment in information and communications technology and development of the digital infrastructure necessary to build a strong e-government, ensuring high-quality internet coverage, enacting regulatory laws, and training human resources to deal with the technical challenges of digital transformation.
-Working to raise awareness among citizens of the advantages of digital transformation and e-services, and providing them with support and facilities to acquire the necessary electronic devices and equipment.
-Encourage all economic sectors to take advantage of digital transformation and engage in the digital economy, given the speed and ease it offers in conducting local and international transactions, with minimal effort and cost.
-The need to find urgent solutions to technical and administrative obstacles, especially in light of Algeria's expected accession to the World Trade Organisation and its aspirations for European and regional partnerships, thereby enhancing the integration of digital transformation.
-Designing an e-government project based on a clear digital strategy that takes into account the specificities of society, its needs and available resources, rather than blindly imitating other projects, in order to ensure the success of the digital transformation.
-Intensifying efforts to combat digital illiteracy, as it is one of the biggest challenges hindering digital transformation in Algeria.
-Strengthening the information security of public institutions through cooperation and coordination, and drawing on international experience, in addition to protecting citizens' data and information to gain their trust and support the success of digital transformation.
-Widespread availability of high-speed internet to ensure quality and speed of connection, and improve the quality of digital services, with the possibility of providing free internet in the education and health sectors to promote comprehensive digital transformation.
-Intensifying awareness campaigns on the importance of digital technology and its benefits for individuals and institutions, to raise the level of digital culture in society.

-Focusing on the human element as the key factor in implementing digital transformation projects, through intensive staff training programmes and training and awareness-raising for administrative leaders and citizens, to ensure their full engagement with digital government and the success of the project.

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