

Readiness of the Higher Education Sector for Implementing E-Governance

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Abstract:

The world has witnessed rapid technological development that has affected all sectors, including the education sector in general, and higher education in particular. This advancement has compelled universities to enter the digital realm in order to keep pace with global developments. As a result, they have adopted electronic governance as a modern mechanism for managing and organizing higher education and scientific research. This approach enables effective control over institutional functions, ensuring long-term performance efficiency by promoting participation, accountability, and coherence—factors that foster creativity and excellence. Additionally, e-governance contributes to saving time and effort. In light of this, our study focuses on assessing the readiness of the higher education sector to adopt and implement electronic governance within universities, aiming to maximize the benefits of the digital world and advanced technologies.

Keywords: Electronic governance, readiness, university education.

Introduction:

The higher education sector is striving to integrate the digital world into its administrative system, following the same path as other sectors driven by the pressing need imposed by technological advancement. University governance has become an inevitable necessity. While prestigious international universities have made significant progress in establishing governance principles to strengthen their institutional frameworks and regulate their performance—based on a tri-dimensional process of participation, transparency, and accountability—many Arab universities have yet to recognize their need for governance as a means to reinforce the

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management of academic and research processes. Instead, their focus has primarily been on implementing quality assurance standards and restructuring efforts aligned with those standards. This highlights the urgent need for systems that regulate relationships and define responsibilities in order to achieve the objectives of educational institutions in general, and universities in particular. This can be realized through the adoption of electronic governance principles, which are essential for the effectiveness of the educational process.

A. Conceptual Framework

1. Readiness

Terminologically:

Readiness is defined as the extent to which universities are prepared to transition from one stage to another by providing the necessary resources and ensuring that human capital is receptive to change and innovation within a supportive environment for development (Al-Sanea, 2006, p. 41).

It can also be defined as the institution's prior preparedness for anticipated challenges it may face in the future while striving to achieve its planned objectives (Al-Mahamid, 2014).

Furthermore, readiness encompasses a set of criteria used to measure the institution's progress, particularly in relation to available technologies and the technological culture of its human resources (Abu Samaha, 2019, p. 96).

Equation:

Readiness = Human Resource Readiness

+ Material Resource Readiness + Senior Management Support

Operational Definition: The readiness or capacity of a university to transition into the digital world and generalize its use across institutional operations.

2. Higher Education

Higher education refers to the education provided in colleges or university institutes after obtaining a secondary school certificate. The duration of study in such institutions ranges from two to four years and represents the final stage of formal education (Global Arabic Encyclopedia, 1999, p. 25).

Operational Definition: The higher education sector in all its forms, including universities, higher schools, and institutes.

3. E-Governance

Governance:

Governance refers to sound administration based on integrity, transparency, accountability, and anti-corruption, aiming to achieve justice without discrimination and applying the law equally to all, with effective internal and external oversight. It can be applied in any organization, whether public or private, and at local, regional, or international levels (Al-Qurashi, 2017, p. 27).

The concept of **government** differs from **governance**. While the former refers to the formal institutions of the state within which decisions are made under defined legal and administrative frameworks, using resources under financial accountability, governance encompasses both government and other public and private actors

working together to achieve desirable outcomes (Al-Alwani, 2006, p. 78).

As noted by Annan (1999, p.1), governance refers to the methods and strategies employed by governments in managing their interactions, affairs, and activities.

Similarly, Kaufmann (2010, p.4) defines governance as the way in which organizations exercise authority in a country.

Operational Definition: Governance, in its simplest sense, means accountability and good governance.

B. The Nature of E-Governance

This research seeks to highlight the concept of **electronic governance**, which represents a starting point for utilizing information and communication technologies (ICTs) in scientific research institutions. The aim is to assess the compatibility of these advanced systems with the operational structure of academic educational institutions by reorganizing administrative priorities in light of the digital technologies provided through e-governance. This requires educational leaders to understand the importance of transitioning to the digital realm.

According to a study by the **World Bank** and the **Organisation for Economic Co-operation and Development (OECD)**, effective governance and enhanced performance in the higher education sector can only be realized if significant attention is given to the principle of autonomy. The study distinguishes between two types of autonomy: **substantive (objective)**

autonomy and **procedural autonomy** (World Bank & OECD, 2010).

E-governance is a modern and strategic mechanism that relies on ICT to ensure the efficient use of governmental resources by providing targeted services to all stakeholders in the educational process—including deans, professors, students, and administrative staff.

Although the term **governance** dates back to the 13th century, its application in the political and economic spheres has only recently gained clarity in the context of changes in the form and nature of the state. Practically speaking, the state is no longer the sole actor in the formulation and implementation of public policies. Other players have emerged, such as organizations, the private sector, and civil society organizations. Terms like **governance**, **governability**, or **governmentality** are all translations of the French term *gouvernance*, which refers to the methods and mechanisms governments use to manage their affairs and interactions. It also refers to the system that governs relationships among key stakeholders that influence institutional performance, incorporating elements that strengthen institutions over the long term and define responsibility and accountability (Abdullah Jawhar, 2014, p. 206).

1. Components of E-Governance (Al-Obaidi et al., 2021, p. 19)

a. E-Administration: This refers to the conscious and strategic use of information technology tools in executing administrative functions within organizations, particularly within the

context of continuous organizational change.

b. E-Services: E-services involve providing electronic services and information access to the public. Government investment in this area includes the following aspects:

- **Access to Information Technology:** Ensuring internet connectivity to promote the use of IT by all citizens, including those in remote areas.
- **Provision of Internet Access Services:** Investing in technology to support the digital transformation of information made available online to citizens.

c. E-Participation: This aims to engage target audiences in decision-making by enabling participation through suggestions, feedback, and opinion-sharing using modern technologies and interactive tools. It also seeks to enhance the interaction between institutions and individuals to develop better policies and provide high-quality, efficient services.

2. Objectives of E-Governance

E-governance aims to deliver a range of services to employees that facilitate their performance, encourage positive interactions, improve efficiency, and enhance opportunities for more transparent and accountable information auditing.

E-governance also emphasizes the establishment of guiding legislation and principles that require acceptance and readiness for implementation within the academic and scientific fields. These principles manifest in participatory

decision-making with supervisory bodies and help build institutional trust.

Its objectives include:

- **Transparency:** Ensuring clarity and accuracy of information within government institutions.
- **Inclusion and Participation:** Through structured media programs or the use of social media platforms.
- **Performance Improvement:** Enhancing employee productivity.
- **Efficiency:** Reducing time, effort, and administrative costs while simplifying procedures.
- **Accuracy:** Increasing the precision of information.
- **Facilitated Communication:** Enhancing flexibility and speeding up service delivery.
- **Technological Advancement:** Preparing digital administration to address current challenges.
- **Competitiveness:** Creating a supportive environment for research development and encouraging innovation.
- **Knowledge Production and Dissemination:** Leveraging technological advancement to generate and share knowledge.

C. The Higher Education Sector and Its Readiness to Adopt E-Governance

One of the most significant challenges facing various societal institutions in general—and the higher education sector in particular—is the confusion surrounding decision-making processes. This confusion

often results in time-consuming discussions that fail to yield effective outcomes, primarily due to the diversity of ideas and orientations. Such divergence is frequently caused by the absence of clear regulations and standards governing the academic process, as well as the lack of constructive criticism and a shared sense of the common good among stakeholders involved in decision-making—whether they be funders, investors, faculty members, or students. These deficiencies ultimately undermine the competitive advantage necessary for achieving quality within the academic education system. This context has created an urgent need to implement e-governance in universities to alleviate pressure on decision-makers by promoting participatory governance.

Amid the rapid technological advancements permeating all sectors of society, universities have sought to adopt technological governance and proceed with its implementation through various communication channels.

1. Internet Use in Education

"The internet is one of the technologies that can be effectively utilized in the educational process, as it plays a pivotal role in transforming traditional instructional methods currently employed by educators. The 21st century will undoubtedly be the era of information, in which fiber optics will offer the excitement and engagement lacking in conventional classrooms" (Al-Mousa, 2002, p. 177).

Digitization refers to the transition from traditional, paper-based, or manual systems to modern, digital-based ones that rely on computers and information-sharing

mechanisms. As such, information technology and digitization are indispensable elements in the implementation of e-governance, serving as a critical step in keeping pace with the accelerating technological transformations—particularly in the field of education, where transparency and efficiency are key attributes of the digital system.

The integration of e-governance within universities aims to enhance widespread student participation to achieve high-quality education at all levels. It also seeks to reduce the time and cost associated with academic procedures, making services more flexible and accessible. The successful implementation of e-governance in higher education institutions requires effective monitoring of academic standards, guiding principles, and regulatory frameworks. Moreover, incorporating digital data and advanced technological developments as strategic tools can revolutionize traditional educational practices, improve teaching and learning processes, and support services that promote learner participation in decision-making.

2. Governance in Higher Education Institutions

"The discourse on applying governance in higher education institutions—whether public or private—relies on setting standards and regulatory mechanisms for the performance of all university stakeholders by implementing

transparency, performance measurement methods, accountability of officials, and involving stakeholders in both decision-making and management and evaluation processes" (John V. Lombardi, 2002, p.13).

According to **Marginson and Considine**, "University governance defines the value system within universities, decision-making structures, resource allocation, roles and objectives, authority models and their hierarchical flow, and the university's relationship with other academic institutions, supervisory bodies, the labor market, and society" (**Meredith Edwards, 2002, pp. 4–5**).

Thus, governance acts as a set of regulatory standards to ensure organizational continuity within universities, aiming to achieve effective scientific outputs that contribute to society and foster innovation. These goals are pursued through a governance strategy that aligns institutional objectives, as:

“The objectives of university governance consist in preparing qualified human resources trained and specialized in various fields of knowledge to meet societal needs and in providing a research, academic, and social environment that supports creativity, excellence, innovation, and talent development” (**Al-Shabatat, 2007**).

Creating a supportive theoretical and practical environment for students enhances academic achievement and promotes a culture of excellence and innovation.

3. Reasons for the Emergence of Governance in Higher Education Institutions

(**Barqaan & Al-Qurashi, 2012, p.11**)

- Increased pressure on higher education institutions due to growing social demand driven by population growth, coupled with limited capacity to accommodate all applicants.
- The emergence of new types of education introduced by various public and private institutions, influenced by ICT and the rise of open and distance education models.
- The growing internationalization of higher education and the escalation of global competition.
- Greater importance placed on decision-making mechanisms in administrative and academic matters.
- Weakness in research infrastructure and limited opportunities for scientific research.
- Poor research culture within both public and private sector institutions.
- Weak connection between ongoing university research projects and national development plans or issues affecting other sectors.
- Transition in most global universities from traditional administrative models to more modern ones since the mid-20th century.
- The rise of new providers of educational services, increased academic mobility of students and faculty, and the growing influence of student organizations and faculty unions. This also coincides with globalization, the proliferation of the Internet, and the emergence of e-commerce.

4. The Importance of Implementing E-Governance in the Education Sector

- Enhancing efficiency.
- Providing innovative educational tools that enrich learning.
- Increasing transparency and accountability in administrative and educational activities.
- Easier and faster access to services such as report generation.
- Reduced costs of administrative services.
- Participation in decision-making processes.
- Access to centralized information.
- Provision of high-quality electronic services.
- Availability of educational and informational content through digital platforms.
- Overall improvement of the educational system.

5. Conditions and Requirements for Implementing E-Governance in Universities

- **Promoting a Governance Culture :** Promoting a culture of governance across all public and private institutions is essential. From this perspective, universities must serve as role models by first applying governance internally. Only then can they contribute to the governance of other institutions using a scientific methodology. Universities also play a critical role in establishing this culture and knowledge by incorporating it into academic curricula at the undergraduate, master's, and doctoral levels. In this sense, the university becomes the launchpad for governance—still largely absent in most institutions across Arab countries. (**World of Culture, 2020**)

Challenges such as the limited availability and dissemination of digital infrastructure, along with the lack of training across

university personnel (faculty, administrators, students), have slowed progress toward adopting governance and benefiting from its services. Ensuring a robust technological infrastructure—including modern equipment, high-speed internet, and qualified human resources in digital fields—is essential. Proper training, digital literacy, and financial support to cover digitization costs are also crucial for embedding and accepting governance in higher education while minimizing its challenges.

- **Establishing a Strong Electronic Infrastructure :** “A strong e-infrastructure should be capable of providing comprehensive data about the university and its activities and enabling effective interaction among the board of trustees, the deans' council, faculties, departments, and administration. This must be supported by an underlying structure for governance, including informational, foundational, ethical, and value-based components” (**Same Source**).

- **Developing Implementation Plans and Governance Standards :** Detailed procedural plans must be drawn up for the implementation of governance standards, along with mechanisms for monitoring and evaluation.

- **Implementing an Electronic Archiving System :** “A comprehensive e-archiving system for all university activities will provide the public with access to necessary information for administrative transactions. It will also enable broader browsing and service accessibility” (**Al-Dahshan, 2020, pp. 20, 44**).

- **Developing Governance Manuals :**

Developing manuals that outline step-by-step procedures to adopt governance standards has become imperative. Without this, universities may fail to qualify for international rankings, which are tied to their true value within their national contexts. As institutions of high importance in modernization, development, and national advancement, universities must embrace governance as a strategic necessity (Al-Dahshan, *ibid.*, p. 44).

Universities, in particular, are centers of scientific advancement, excellence, and innovation—especially when supported by technological awareness and practice that reduce effort and time while contributing to development.

“The call to adopt e-governance in our universities is a strategic and modern choice, driven by numerous justifications, including keeping pace with technological advancements, spreading knowledge of ICT, qualifying IT management, enhancing staff performance, simplifying administrative procedures, improving data accuracy, facilitating data exchange and storage, and increasing productivity.”

“Applying information technology in various aspects of governance implementation leads to improved efficiency and effectiveness in achieving policy goals and program outcomes. This involves a set of rules, procedures, and methods through which wise institutional management can be achieved.” (Omran & Al-Jarrah, 2014, p.13)

5.1. Requirements for Implementing E-Governance in Universities

Several essential requirements are necessary for transitioning to e-governance. According to Abdel Hamid El-Fattah El-Maghrabi (Ben Qayed, 2021, p.6):

1. Commitment from top management to support and adopt the e-governance initiative.
2. Strategic planning for digital transformation.
3. Establishing a comprehensive communication plan across all departments and entities.
4. Focusing on user needs and ensuring their satisfaction.
5. Valuing and supporting staff delivering e-governance services.
6. Conducting comprehensive studies on procedures and performance metrics.
7. Emphasizing the integration of service systems.
8. Focusing on the technical and technological capabilities of various departments.

Summary of Requirements for Implementing E-Governance in Universities

The key requirements for implementing e-governance in universities can be summarized as follows:

1. Availability of Technological

Infrastructure: This includes computers, modern software, and digital learning platforms. In the Algerian university context, platforms such as **Moodle** and **Progress** are widely used due to their popularity among students. These platforms facilitate direct digital communication between learners, instructors, and educational content.

2. Legislative and Regulatory Framework:

A set of laws and principles must guide the educational process within the digital space. These regulations must be clear, accepted, and agreed upon by all parties, and should promote transparency and trust—core elements of digital governance.

3. Qualified Human Resources: This refers to IT engineers as well as academic and administrative staff who receive training related to digital tools. These qualified individuals can in turn conduct training sessions for students, helping to alleviate their anxiety and hesitation toward engaging in the digital environment.

4. Financial and Administrative Funding: The availability of sufficient budgets to cover digitization costs—such as high-speed internet access—greatly supports the effectiveness of e-governance in the education sector.

5. Information Privacy Protection: This entails the establishment of secure and robust central databases. Algerian universities have begun implementing such systems by providing institutional email accounts to students and faculty, allowing them to communicate securely within digital learning platforms.

6. Awareness and Sensitization: Promoting a culture of digital literacy and encouraging its use among all stakeholders in the educational process—faculty, students, administrators, deans, institute directors, and university presidents—is essential. Efforts should also be made to

reduce resistance to change, especially from those who suffer from a fear of digitization and remain attached to traditional learning methods.

Conclusion:

In light of the above, e-governance is considered an inevitable strategic approach to keeping pace with scientific and technological advancement and to enhancing the quality of education and administration in the higher education sector through its emphasis on transparency and efficiency. However, the challenges and obstacles to implementing e-governance in universities remain present on the ground, particularly in the form of weak infrastructure, limited funding, and resistance to change. Nevertheless, the implementation of e-governance is a **necessary decision**, not an optional one subject to cancellation.

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