



---

# THE MAIN OBSTACLES TO DIGITAL KNOWLEDGE IN HUMAN RESOURCE MANAGEMENT- THI -QAR GOVERNORATE HEALTH DEPARTMENT - A CASE STUDY

Sattar Awad Dhmaid

Southern Technical University, Iraq

Shatrah Technical Institute, 2026

Email: [sattar.awad@stu.edu.iq](mailto:sattar.awad@stu.edu.iq)

---

## Abstract

This research aims to diagnose and address the main obstacles to digital knowledge in human resource management at Thi-Qar Health Directorate. To achieve this objective, personal interviews with decision-makers were used as the primary data collection tool, in addition to reviewing information and data available in the personnel departments of various divisions and sections within the directorate. One of the most significant findings was the absence of strategic visions for adopting digital knowledge in personnel management. The research concludes with several recommendations, the most important of which is the necessity of developing strategic plans based on establishing a comprehensive infrastructure for digital programs, including digital programs for human resource management.

**Keywords:** Digital knowledge, obstacles, Human Resources Management.

## 1. Introduction

Undoubtedly, the emergence of the digital age has been accompanied by tremendous transformations across the globe in various fields. This emergence has had both positive and negative repercussions on life. Among the positive repercussions of possessing digital knowledge are its contribution to maximizing economic, social, and security development, providing free learning



---

opportunities for anyone who seeks them across geographical boundaries, and impacting all areas of human activity.

Despite the benefits derived from possessing digital knowledge in terms of operational efficiency, improved performance quality, and gaining a competitive advantage, there are several drawbacks. One of these drawbacks is the heavy reliance on e-management in some public and private institutions. This has led to the redundancy or elimination of the need for many employees in these institutions who previously performed their work in traditional ways. These traditional methods and approaches are no longer compatible with the demands of the digital age and the highly dynamic nature of digital business.

Since possessing digital knowledge has become a criterion by which countries are evaluated based on their resources and production capacity in the field of digital knowledge, thus placing them among the ranks of developed nations and achieving civilizational superiority. Therefore, there is a clear need to possess as much digital knowledge as possible to achieve a flexible and rapid response across various fields. There is also a need to develop methods and tools for dealing with digital knowledge through electronic technologies and tools, and to employ artificial intelligence to provide everything required in digital transactions (Makawi, 2019).

Based on the above, this research relied on a review of previous literature that addressed the concept, methods, and tools of digital knowledge. Furthermore, personal interviews were conducted with employees at various levels to identify the most significant obstacles to adopting digital knowledge in successful digital human resource management.

## **2. Research Methodology**

### **2.1. Problem Statement**

In the age of globalization and amidst tremendous technological advancements, the methods and means by which people communicate have changed. Similarly, the way state institutions are managed, as well as the educational methods employed by students, have also been transformed. In this era, particularly within government institutions, adopting digital knowledge has become essential to address digital knowledge among employees and expedite task



completion more efficiently. In Iraq, for example, the digital knowledge gap is significant among staff at all levels. The vast majority of employees are unable to research modern communication methods or utilize advanced technologies relevant to their work. Consequently, this issue is among the obstacles facing both administrations and individuals, hindering scientific and technological development and progress.

Since this research focuses on the transition from traditional to digital human resource management, it necessitates a certain level of digital knowledge among the employees of the Thi -Qar Health Department working in human resource management. Therefore, the research problem lies in identifying a digital divide among individuals working in the department's divisions and administrative units, and exploring how to address this divide.

## **2.2. Research Objectives**

The main objective of this research is to explore how digital management can be implemented in human resource management. This objective is achieved through the following sub-objectives:

1. To assess the level of digital knowledge utilization in human resource management within Thi-Qar Health Directorate,
2. To provide a clear and in-depth understanding of digital knowledge,
3. To identify the obstacles and challenges hindering the application of digital knowledge at both the national and individual levels,
4. To determine the requirements for digital knowledge and how to bridge the digital divide among staff within Thi-Qar Health Directorate,
5. To diagnose the various challenges impeding the digital management of human resources within the Thi-Qar Health Directorate,
6. To discuss and clarify the obstacles preventing the application of digital knowledge and to identify the most significant ones.

## **2.3. Importance of the Research**

The importance of this research stems from the following:

1. Digital knowledge and digital transformation have become an urgent necessity and a civilizational advantage that nations compete to acquire.



2. Delving into this field of digital knowledge and reaching specific conclusions can enrich intellectual discourse and open new avenues for other researchers to contribute their insights.
3. The necessity of providing special protection for employees from a digital technology perspective.
4. Digital knowledge plays a crucial and distinctive role in the acceptance of digital transformation.
5. Providing solutions and remedies for negative administrative practices in digital human resource management.

#### **2.4. Research Methodology**

The descriptive approach was used to identify and understand the obstacles preventing the adoption of digital knowledge in digital human resource management at the Thi-Qar Health Directorate. These obstacles were discussed and analyzed to develop fundamental solutions. Personal interviews with human resource management specialists at the institution were also used to gather as much of the required data as possible.

### **3. Digital Knowledge & Digital Human Resources Management**

#### **3.1. Digital Knowledge**

Given the complexities of life at all levels—economic, social, political, cultural, security, and health—and the multitude of human needs and requirements, it has become difficult to manage and fulfill these desires and demands using traditional methods. This has led to the need for a new type of knowledge based on advanced electronic programs and technologies that meet these requirements. This new technology is known as digital knowledge. The world today is managed through digital means and methods, including social media platforms such as Facebook, Twitter, Instagram, WhatsApp, and others. Therefore, definitions of digital knowledge have varied depending on the environment in which a person works and the digital medium used.

Some define digital knowledge as the ability and capacity of a person to understand and interact with electronic devices and equipment to achieve specific goals (Information and Decision Support Center, 2010). It is also



defined as the ability to demonstrate proficiency in digital reading and writing and optimal digital use in electronic communications within a digital environment (Henry, 2009).

Digital knowledge can also be defined as knowledge of electronic information, the acquisition of digital skills, and the ability to effectively use technological tools. This is achieved through access to digital knowledge and information sources and the ability to analyze and categorize that digital information in a way that allows for the production of digital solutions to any problem that arises.

### **3.2. Digital Transformation**

There are several definitions of digital transformation, some related to business, some to economic matters, and others to administrative matters. Makki (2021, p. 17) defined it as "the process of using digital technology to achieve excellence in the performance of institutions and companies, and to enhance their competitiveness by facilitating the implementation of strategic business plans". Others have defined it as "adopting and integrating digital technologies into the various activities of a company or organization in order to achieve a competitive advantage by improving processes and productivity, achieving a better experience for customers and employees, managing company risks, and controlling costs".

### **3.3.: Digital Human Resources Management**

This means an integrated electronic system that seeks to transform manual administrative work related to employee affairs into electronic work using computers and their various applications with high accuracy, in record time and at the lowest cost. In other words, it is the completion of administrative transactions and obtaining the most accurate results using modern digital technologies (Al-Farhati et al., 2021).

## **4. Obstacles to Digital Transformation & Digital Knowledge**

### **4.1. Obstacles to Digital Transformation**

The digital transformation process helps provide numerous opportunities and advantages that lead to societal development and improved conditions in various



fields. However, this process is not without obstacles and challenges that arise during the transformation phase. Since the objective of this study focuses on identifying the main obstacles that prevent the use of digital knowledge in human resource management, it will concentrate on the obstacles related to the challenges facing the digital transformation in human resource management from traditional to digital management. The General Organization for Technical and Vocational Training (2024) mentioned a number of challenges, including:

**1. Internal resistance from employees**

Upon closer examination of many Iraqi government departments, we find that the vast majority of the staff are digitally illiterate, or in other words, the staff do not possess the necessary skills and real qualifications to carry out the digital transformation process, which leads to differences in viewpoints between managers and employees regarding digital transformation, making it difficult to achieve future visions for adopting digital knowledge.

**2. Limited Technological Facilities and Modern Technologies, and Weak Infrastructure**

Due to insufficient financial allocations and inadequate resources for purchasing modern technologies, coupled with widespread financial and administrative corruption, most government institutions lack many modern electronic machines and technologies. This lack of modern technologies and the failure to train specialized personnel to manage and maintain them inevitably leads to the failure of digital transformation in most state institutions.

**3. Data Privacy**

The privacy of employee data is a cornerstone of job security, requiring extremely careful handling of this data and restricting access to authorized personnel only. Since obtaining real information and data from employees is a key component of digital transformation in government institutions, employees are constantly engaged with their departments regarding data management, data quality, confidentiality and privacy, and data security.



---

#### **4. Cyber security and Data Breaches**

Given the tremendous progress in digital knowledge achieved by major powers and the gradual development of knowledge in developing countries, cyber attacks have become a hostile tool used by these powers to undermine the security and independence of developing and impoverished nations. Therefore, when governmental or private institutions pursue digital transformation, they become more vulnerable to cyber threats and data breaches. The increasing reliance on digital systems without adequate protection exposes institutions to potential security risks. This necessitates the implementation of robust technical measures and procedures to ensure cyber security, along with regular audits and employee training on best digital practices.

#### **5. Organizational and Operational Changes Required for Digital Transformation**

Organizational and operational changes are among the most significant and impactful obstacles hindering digital transformation in many institutions. These changes include restructuring departments, divisions, and units, as well as redistributing tasks and responsibilities. This necessitates changes in administrative leadership and senior positions by the institution's senior management. Furthermore, most institutions lack a clear organizational strategy and vision for digital transformation. In addition, they often lack the necessary legal and regulatory frameworks, skills, and operational competencies to handle modern electronic technologies. This causes the digital transformation process to fail in its early stages

##### **4.1. Obstacles to Digital Knowledge**

Despite the industrial and technological revolution, developing countries generally still have low levels of the required digital knowledge and skills at various levels. These levels can be divided into three categories (Al-Hayis & Sabti, 2019-:(



---

### **Level 1: General Digital Knowledge and Skills**

General IT skills include internet research and online communication. Many professionals lack sufficient knowledge of how to use search engines effectively in their academic or professional work, and may also struggle to use social media effectively.

### **Level 2: Intermediate Digital Knowledge and Skills**

This refers to the ability to create digital tools, produce and consume digital content, or enhance digital tools using basic programming skills.

### **Level Three: Advanced Digital Knowledge and Skills**

This refers to the knowledge and skills required to develop, test, and analyze information and communication technologies. It encompasses technology development, including encryption, software, application development, network management, and learning. Therefore, the obstacles to digital literacy in Iraq can be divided into two categories

#### **First: Structural Obstacles (obstacles related to the country's overall digital infrastructure), which include: -**

Weaknesses in the Iraqi state's digital information infrastructure and the limited availability of modern electronic devices for employees to support their work electronically; deteriorating political and social conditions; a lack of digital literacy; inadequate educational systems; the general lack of electronic connectivity among state institutions for balanced participation in providing e-services across government sectors; the absence of a future vision for building a digital knowledge society for sustainable development; and the lack of a comprehensive strategy for establishing a national electronic network through which an integrated knowledge system can be built

**Second: Personal Obstacles related to the individual's (the employee's) capabilities, which include: -** Limited awareness of digital knowledge; inability to participate in digital training programs; and a weak ability to keep pace with technological advancements and optimize digital use.



---

## **5. Fundamental solutions and practical procedures for addressing digital Knowledge obstacles**

### **5.1. Fundamental Solutions to Address Obstacles to Digital Knowledge**

Despite the tremendous advancements in the field of digital knowledge globally, Iraq's use of digital knowledge in most of its government institutions remains below the required level. This necessitates intensified efforts and a renewed commitment to reach a pivotal stage where digital use is integrated into all its government institutions. Health institutions are among the most important and widespread sectors where digital knowledge should be effectively implemented. The Thi-Qar Health Directorate is one such institution lacking in the application of digital knowledge across all its areas, particularly in human resources management. Based on the above, the following solutions can be proposed to achieve a future vision for digital knowledge and address these obstacles:

1. Providing the necessary technical infrastructure, including computers and peripherals, connected to the internet.
2. Creating an electronic database for all employees, containing all personal and professional information, and linking it to all departments and units within the Thi-Qar Health Directorate.
3. Providing training facilities equipped with all necessary training materials and experienced trainers in digital literacy.
4. Enrolling all employees in human resources departments and units in training programs led by experts and specialists in information technology to acquire digital knowledge.
5. Regularly offering digital training programs to cultivate digital awareness and familiarity with digital content, electronic applications, and other modern technologies.
6. Promoting a culture of digital knowledge among all employees within health institutions, recognizing its essential role in their work.

### **5.2. Practical procedures for addressing obstacles to digital knowledge**

Human resource management is one of the most complex administrative functions within an organization's structure, characterized by its continuous and diverse dynamics and requirements, reflecting the multifaceted needs of the



organization's workforce. This necessitates the adoption of digital programs that keep pace with technological advancements. Therefore, it is worth mentioning the following frameworks that can be utilized when designing a digital program for managing human resource data, enabling the optimal digital use of employee data:

### **1. Employee Self-Service Portal**

The employee self-service portal is one of the most important gateways to administrative decentralization. Through this portal, employees have constant access to their job information around the clock, while also being linked to other portals (Al-Abdullah, 2022). According to personal interviews conducted with most of the staff at the Thi-Qar Health Directorate regarding how employees obtain accurate job information, such as the number of days of leave they have accrued, how they can access their attendance and departure records for the past period, who they should contact to obtain sick leave, and other related questions, the response was that it might take an employee a day or more to obtain some of this information.

Based on the above, through the digital transformation of human resources management, employees can obtain everything they need through the employee self-service portal in an easy, fast, and flexible manner. This portal includes a personal file for each employee containing their job information, in addition to the latest instructions issued by the relevant authorities.

### **2. Reporting Window**

Reporting is one of the most complex tasks in the operational process due to its impact on critical administrative and strategic decisions. Therefore, the reporting window serves as a tool that continuously and effectively reflects daily operational events in terms of accuracy, timeliness, comprehensiveness, and reliability (Al-Jabour, 2021). Given that daily operations in healthcare institutions and other organizations involve a massive volume of internal and external reports, correspondence, and official documents—not only concerning staff but also external stakeholders—detailed workforce reports, supported by accurate statistics and data, can be obtained within the context of the digital transformation of human resources management.



---

### **3. Performance Management Window**

Traditional performance management involves manual data collection, review of evaluation forms, and other conventional tools. This wastes human resources' efforts in completing the task. Automating this paper-based process, however, means increased productivity and better results. For example, employees can easily see the objectives to be achieved and track progress accurately within the performance management system, receiving notifications and reminders to complete key milestones in the performance cycle.

Therefore, when data about employee performance is readily and clearly available to managers in digital format, they will be better equipped to identify training needs and pinpoint areas of weakness in workflow.

### **4. Payroll Window**

The payroll window is a technical and procedural interface used to calculate and transfer financial entitlements to employee accounts, and to collect and transfer deductions and insurance contributions to the relevant accounts. The payroll system gathers all the necessary data for accurate salary calculation, including the number of working days and hours, advance requests, and overtime hours. It then processes and sends the payroll directly to approved payment methods with complete accuracy and minimal error. It also stores payroll data for previous months for easy retrieval when needed.

Since the digital transformation of payroll is one of the most prominent applications of digital transformation in human resources management, and requires collaborative effort with multiple entities such as attendance and leave departments, social security, and banks, the cloud-based payroll window is an ideal solution for processing salaries in the shortest possible time and with the highest required accuracy.

### **5. Attendance and Departure Window**

With digital transformation, the attendance and departure system can be integrated with the work schedule, payroll, and various work systems, whether in the office or remotely, and flexible working hours, so that it produces highly



---

accurate records without any manual effort from the human resources department.

## **6. Requests and Approvals Window**

Writing, submitting, reviewing, and approving requests consumes time and effort for both the requesting employee and the receiving manager. This is in addition to the numerous documents and signatures required. Examples of requests that overwhelm the HR department, especially with increasing staffing levels, include leave requests, resignation requests, advance requests, and other types of requests.

This is where the digital transformation of HR management addresses the backlog of requests and the lengthy approval processes. It provides a sequential request submission system that includes a field for the authorized manager responsible for approving that type of request, along with the required approvals and procedures. With the adoption of cloud storage technology, the authorized manager can access and process requests from anywhere, at any time, as long as they have an internet connection.

## **6. Conclusions and Recommendations**

### **6.1. Conclusions**

1. Based on information and data obtained from personnel department staff, it was found that digital management is not used in any of the personnel departments within the Thi-Qar Health Directorate.
2. There is a lack of digital awareness, weak motivation, and an inability among employees to keep pace with developments in digital knowledge and its application in personnel management.
3. There is a lack of strategic plans for digital training programs.
4. There is no integrated infrastructure for adopting digital programs in human resources management.

### **6.2. Recommendations**

1. It is necessary to urge department heads and human resources units to adopt digital management in personnel management, even if gradually.



2. Efforts should be intensified to develop the capabilities and skills of human resources managers and staff in order to keep pace with developments in the field of digital knowledge and adopt it in their work performance.
3. It is necessary to develop strategic plans that prioritize the creation of an integrated infrastructure for digital programs, including digital programs for digital human resources management

## **References**

- 1- Al-Abdullah, Muhammad Mustafa. (2021). "Electronic Human Resources Management: The Digital Approach to Modern Business Organizations." Dar Wael for Publishing and Distribution, Amman, Jordan.
- 2- Al-Farhati, Muhammad Atiya, Ramadan, Abdul Rahman, & Mutawadi, Kamil Edward. (2021). "Obstacles to Digital Transformation and the Use of Electronic Management and Management Information Systems in Raising Efficiency in Public Press Institutions." Journal of Architecture, Arts, and Humanities - Volume 6 - Issue 28.
- 3- Makki, Imad Nassif. (2021). "The Role of Digital Transformation in Improving the Performance of the Refining and Petrochemical Industry." Organization of the Petroleum Exporting Countries (OPEC).
- 4- Al-Hayis, Abdul Wahab Jawda & Sabti, Ubaida Ahmed. (2019). "The Digital Knowledge Society and its Role in Developing Scientific Creativity (Modern Visions for Education and Research)." Arab Journal of Arts and Humanities - Issue 6.
- 5- Al-Jabour, Yassin Kasib. (2021). "Human Information Systems: The Contemporary Technological Approach to Workforce Management." Dar Wael for Publishing Distribution, Amman, Jordan.
- 6- Information and Decision Support Center, Electronic Media in Egypt: Reality and Challenges (Information Reports), Cabinet of Ministers, Cairo, Issue 32, February 2011.
- 7- Makawi, Mahmoud Abdel Rahman, (2019). "Obstacles to Digital Transformation in Small and Medium Enterprises in Egypt: An Exploratory Study." 24th Annual Conference.



***Modern American Journal of Business,  
Economics, and Entrepreneurship***

**ISSN (E):** 3067-7203

**Volume** 2, Issue 8, August, 2026

**Website:** usajournals.org

***This work is Licensed under CC BY 4.0 a Creative Commons  
Attribution 4.0 International License.***

---

8- General Organization for Technical and Vocational Training

<https://bakkah.com/ar/knowledge-center/%D9%81%D8%B4%D9%84->

[D8%A7%D9%84%D8%AA%D8%AD%D9%88%D9%84-](https://bakkah.com/ar/knowledge-center/%D9%81%D8%B4%D9%84-)

[D8%A7%D9%84%D8%B1%D9%82%D9%85%D9%8A](https://bakkah.com/ar/knowledge-center/%D9%81%D8%B4%D9%84-)

9- Enkins, Henry (2009). Confronting the Challenges of Participatory Culture: Media Education for the 21st Century (PDF). Cambridge, MA: The MIT Press. (PDF) 13-12-2113