

Ade Digitization Of Algerian Manuscripts And Its Role In Achieving Knowledge Intersections And Benefiting From Them -The Humanities And Social Sciences As a Model

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Abstract

Algerian manuscripts represent a symbol of civilizational and cultural advancement, as they reflect the roots of our Arab and Islamic identity and signify Algeria's scientific standing throughout the ages. Although Algerian libraries possess a number of these manuscripts, many of them remain stored in global treasures and libraries.

Activating the element of digitization is the means to overcome the difficulty of accessing these manuscripts in global treasures and to facilitate their availability to researchers and those interested. Benefiting from modern technologies and artificial intelligence can reduce the gap between the manuscript and its confinement for intellectual property reasons, and between accessing it and making use of it.

The utilization of Algerian manuscripts by researchers cannot be confined to one science or specialty; rather, the scope of sciences that benefit from them expands. A single manuscript in one field of science will certainly benefit other sciences; and each science has its way of drawing benefit from it.

Therefore, we worked in this paper to highlight the role of digitizing Algerian manuscripts in achieving knowledge intersections among the sciences on the one hand, and in benefiting from this intersection on the other hand. We strengthened this research by presenting an example of knowledge intersection between the humanities and the social sciences when it comes to benefiting from a specific manuscript, and what this intersection can offer as a scientific contribution.

Keywords: digitization, Algerian manuscripts, knowledge intersection, humanities, social sciences.

1. Introduction:

The digitization of manuscripts at the global level, or at the Algerian national level, is an indispensable necessity, and this necessity stems first from the importance of the manuscript in establishing and strengthening the national cultural and civilizational identity. It also stems from the importance of digitization and its effective role in improving the operations related to the manuscript, such as authentication, preservation, enumeration, ... We intend to benefit from combining digitization with the existing Algerian manuscript in achieving knowledge intersections and enhancing integration between them in serving the civilizational and cultural reality. For this reason, the title of our paper is: Digitization of Algerian Manuscripts and Its Role in Achieving Knowledge Intersections and Benefiting from Them. In order for research on this topic to be practical and modeled, we chose the humanities and social sciences as a model for the study.

The problem of this study is: To what extent does the digitization of Algerian manuscripts contribute to establishing knowledge intersection and integration between the humanities and

social sciences?

The sub-questions that emerge from this problem are:

- What is the reality of the Algerian manuscript? And what is its cultural and historical value?
- What are the most prominent challenges facing the Algerian manuscript?
- What is the importance of manuscript digitization?
- How can the digitization of Algerian manuscripts achieve knowledge intersection and integration between the humanities and social sciences?

The importance of this study is that it reveals ways to harness the Algerian manuscript and its digitization to serve the achievement of interdisciplinarity among sciences and integration between them to serve the human and social phenomena in Algeria. That is, we seek to confirm two interdisciplinaries; one between digitization and manuscript studies, and another between the humanities and social sciences. The benefit from this is trans-disciplinary, toward achieving both cognitive and functional benefits at the same time.

The nature of the topic and its methodological requirements imposed on us the use of the descriptive method, which enabled us to monitor the reality of the Algerian manuscript and reveal its condition and the extent to which it is characterized by the employment of digitization and technologies, as well as to clarify the ways of using the combination of digitization and Algerian manuscripts in assessing the integrative reality between sciences, which has become an urgent demand for intellectual systems and political orientations.

With this topic, we open a research horizon for everyone who wishes to focus on employing digitization and what it provides in terms of technologies and audiovisual means, and artificial intelligence for the purpose of developing interdisciplinary studies of all kinds, including the manuscript and its effective impact on humanistic and social studies.

2. Algerian Manuscripts:

Manuscripts, regardless of the specialty of their content, are among the elements of building and supporting cultural identity, given their historical and cultural importance. Therefore, before working to confirm the role of Algerian manuscripts and the importance of digitization in reviving and activating them, we must define the manuscript, highlight its historical and cultural importance, and examine the current situation of Algerian manuscripts in terms of their quantity, distribution, and specializations; leading to the most prominent challenges facing manuscripts in general and the Algerian manuscript in particular.

2. 1. Definition of the Manuscript and Its Historical and Cultural Importance:

Before we address the role of manuscripts in terms of scientific contribution and their impact on enhancing the interdisciplinarity of sciences, especially the humanities and social sciences, we must first define the manuscript in terms of language and terminology, and clarify the historical and cultural value of the manuscript.

2. 1. 1. Definition of the Manuscript:

The term "manuscript" in the Arabic language is derived from "khat" with a pen or other instrument, meaning to write or represent a word with letters of the alphabet. ⁱIn Arabic dictionaries, especially the old ones, the term "manuscript" was not mentioned, and it seems that this designation was not in circulation or known before the age of printing. We find Ahmad Shawqi Benin saying: "The term 'manuscript' is modern in Arabic; it seems to have appeared with the emergence of the printed book. Before that, they would say: composition or compositions; foundational books, mother books, or basic books, because they contained the fundamentals of science." ⁱⁱ

As for the Latin language, the term (Manuscriptum) appeared since the third century AD. It did not mean then what it came to mean as the counterpart of the printed in the Renaissance era, because it meant the copy that the author writes with his own hand, not by someone else's hand; which today in the West is called an autograph (Autographe), and for us in Arabic it means the original copy.ⁱⁱⁱ

As for terminology, we find the Arab World Encyclopedia defines the manuscript as any document written by hand or machine.^{iv} This definition widens the circle of manuscripts to include all written works regardless of the means of writing them.

While the Encyclopedia of Library and Information Science Terms defines the manuscript book as the book written by hand, especially books written before the emergence of mechanical printing, and thus the manuscript is distinguished from correspondence, paper, or any other document.^v This definition specifies the manuscript to include only what was written by hand before the emergence of printing.

2. 1. 2. The Cultural and Historical Importance of the Manuscript:

The manuscript carries cognitive and scientific provisions, but the value of the manuscript does not stem from this provision that benefits a specific specialty, but rather represents cultural and historical values. In fact, there are some manuscripts that are considered a tributary of national identity. Therefore, we will work to enumerate the historical and cultural values of the manuscript of all types and languages.

If we start with the historical importance of manuscripts, it stems from the valuable information they contain that helps researchers to learn about many news from the past, and they are considered a documentary and informational source, especially if they are provided with illustrative images of the text written in them.^{vi} What this benefit carries is a cognitive benefit, because the news of the past and the conditions of the ancients cannot be documented without referring to manuscripts that date back to that period or are close to it. That is, the historical cognitive value of the manuscript increases with the proximity of its writing time to the time period concerned with the study and historicization.

Among the other historical benefits that we obtain from reviving and studying scientific heritage is enriching the historical approach in teaching sciences and correcting the history of science by revealing cases of intellectual fraud issued by some historians or the additions of Orientalists concerning heritage.^{vii} This benefit is the rooting of sciences by referring to their sources without accepting them and taking them as axioms.

Arabic manuscripts represent the eternal heritage of the nation, indicating scientific and cultural sophistication, and they confirm its authenticity in building Islamic and human civilization. Because manuscripts are the vessel for this heritage.^{viii} The Arabic manuscript does not represent value from its content alone, but rather represents a foundation for Islamic and Arab identity and civilization. Attention to manuscripts: exploration, digitization, and preservation is at the heart of strengthening this identity and taking pride in it.

2. 2. The Situation of Algerian Manuscripts:

Algeria, like other countries, has a reservoir of manuscripts, which represents its cultural and civilizational landmarks and enhances its position among nations. This stock has great importance in the fields of writing and intellectual and scientific creativity, which is considered an identity card for Algeria's civilizational and cultural past since the emergence of Algerian literature in the Middle Maghreb in the middle of the second century AH 2 AH.

^{ix} What interests us more is describing its current reality in terms of quantity, quality, distribution, and specializations.

Regarding the distribution locations of Algerian manuscripts, the southern provinces are full of them and retain a large percentage of them in their treasuries. For example: the Ziyaniya Qandousiya Treasury located in the province of Bechar, specifically in the old palace west of the city of Qenadsa, and most of these manuscripts belong to some families and travelers who visited the region at that time.^x There are other places at the national level where Algerian manuscripts are located, but in terms of number, the southern provinces and the zawaia, mosques, and ancient families they contain have a large share of Algerian manuscripts. In this regard, Azzedine Mihoubi, former Minister of Culture, had clarified according to what was published by the Algerian News Agency that the number of manuscripts in the private treasuries of the Algerian south is between 35 and 40 thousand manuscripts in addition to 5 thousand manuscripts counted in the National Library.^{xi} While this number is subject to increase due to the efforts of researchers in searching for some forgotten or undeclared manuscripts, in parallel it should not decrease due to factors of damage and loss.

This is what made the Algerian manuscript in dire need of attention and efforts to preserve and revive it, especially in light of what modern technologies provide in terms of technical means, programs, and applications... That is, Algerian manuscripts cannot maintain their quality or scan the dilapidated ones and identify their content, as well as explore manuscripts of unknown location in national or global treasuries and libraries without being armed with the products of scientific and technological development.

2. 3. The Most Prominent Challenges Facing the Algerian Manuscript:

The Algerian manuscript faces a set of challenges, whether from the material aspect of it, from the human aspect, or related to the digital technical aspect.

The material challenge facing the Algerian manuscript is the exposure of a large number of them to factors of damage, fungi, and moisture, which has led to poor quality of its pages, especially the first and last pages that contain the thresholds of the manuscript with essential information and introductions. Therefore, it is necessary to use archaeology and various physical, technological, and biological supplies to save manuscripts from the damage of their papers and the decline of their size, as well as to attempt to retrieve the content of pages that have been partially or completely damaged through modern reading and scanning devices.

As for the human challenge to the Algerian manuscript, it faces a set of obstacles that place it before a real challenge, which is the need to intensify efforts and coordinate between them. "Among the effective methods in reviving the Algerian manuscript heritage and protecting it from decline, decay, and extinction is the intensification of efforts between the official authorities responsible for protecting manuscripts in Algeria and various actors and researchers in this field in activating the process of indexing and authenticating the manuscript, provided that mechanisms and mechanisms are put in place to serve this process."^{xii} What can give the Algerian manuscript the energy to perform its role effectively is to provide human capital represented either in institutions that care for the manuscript, such as universities, libraries, ministries, ... or in local individual efforts because some manuscripts are located at the level of Algerian families. These efforts alone are not sufficient to serve the Algerian manuscript, because they need functional coordination and cooperation to facilitate and ease their tasks.

The digital challenge facing Algerian manuscripts stems from the totality of Algerian political decisions that call in their entirety for the digitization of certificates, documents, and contracts, ... in order to facilitate individual and collective demands. Consequently, Algerian manuscripts face the challenge of responding to these decisions, especially in light of the

widespread proliferation of modern technologies, the Internet, and its various programs and media.^{xiii} The digital challenge sought by Algeria's political will is not just for the sake of singing about digitization, but for what digitization provides in terms of facilitating improvements in operations that affect the manuscript in terms of preservation, storage, and authentication. Work on digitization should be studied, directed, and planned from the beginning of the work to its end.

3. Digitization and the Manuscript:

Enhancing Algerian manuscripts and working on them with the outputs of modern technologies - as we mentioned earlier - is an urgent necessity, in order to increase the productivity of efforts that are concerned with working on the Algerian manuscript in some way. Therefore, we will first discuss the concept of digitization, and then move on to manuscript digitization and its advantages.

3. 1. The Concept of Digitization and Its Objectives:

The process of digitizing manuscripts is not a boast about employing digitization and singing about it, that is, employing it just for the sake of employing it, but rather carries functional and useful objectives, including:

- Preserving manuscripts from damage and loss.
- Communication and dissemination of knowledge and cultural exchange information networks.
- Highlighting the scientific, artistic, and historical value of manuscripts.
- Improving library services and providing different information containers for users.^{xiv}

Therefore, digitizing manuscripts is considered an extremely important process, especially if it adheres to technological controls and is bound by ethics and controls of scientific integrity in exploration, implementation, and publication. Then manuscript digitization performs what is required of it with all quality and effectiveness.

3. 2. Advantages of Manuscript Digitization and Its Functions:

Manuscript digitization has added and qualitative value because it provides a set of advantages resulting from the functions it performs. Manuscript digitization and its effective role cannot be understood without examining these functions.

Among the functions performed by manuscript digitization are the following:

- Preservation or documentation: Documentation goes beyond the direct concept of preservation, which is keeping something, to a higher concept, which is keeping, caring, and maintaining from damage and ensuring continued existence and non-disappearance in the future. Digitizing manuscripts and heritage in general allows for the preservation of the memories of peoples.
- Availability: With digitization and electronic media, it has become possible for the beneficiary to know where the manuscript is located, to copy it himself through the computer, or to pay the price for this image while sitting in front of the computer.
- Support for research and authentication: Digitization has provided programs that rely on the digital image of manuscripts and compare between copies, which saves the researcher effort and saves him time.^{xv} There are other functions and benefits performed by manuscript digitization that we enumerate in the following:
- Saving money - saving space - saving effort - saving luxury - saving dissemination.^{xvi}

All these mentioned functions and others make manuscript digitization a necessary requirement in working on manuscripts and ensuring quality in that, and this challenge is

especially directed to institutions and individuals who work on the manuscript in some way.

4. Digitization of Algerian Manuscripts and Knowledge Intersections:

Preserving cultural identity is not the responsibility of one specialty without others. When it comes to reviving heritage and benefiting from it through attention to the Algerian manuscript, all specializations are concerned with this according to what their subjects, nature, and research methods allow. This is what we see confirms the necessity of mutual benefit between the digitization of Algerian manuscripts on the one hand and the interdisciplinarity of cognitive specializations.

4. 1. Definition of Knowledge Intersections and Their Dimensions:

Rooting the phenomenon of knowledge intersection leads us to "the fact that the intersection of sciences is not an emergent subject in the philosophy of science and its methods and epistemological issues, but rather is a historical datum as old as the sciences themselves."^{xvii} Because the origin of science is to address and understand phenomena, and phenomena in their origin are of an integrative nature. We cannot find a phenomenon that is the subject of science without finding it connected to other phenomena. The separation between phenomena in the field of science came only so that each phenomenon could be studied with some focus, especially if these phenomena have a common interest, as is the case in the humanities and social sciences.

We point to the epistemological background behind the call for integration between sciences, where "the research on cognitive integration in the field of classification of sciences came in order to criticize the inherited divisions that weigh heavily on the breath of sciences, which were often placed in a sympathetic framework verbally and opposite in opposition under the name of rational sciences and transmitted sciences, or praiseworthy sciences and blameworthy sciences, or religious sciences and worldly sciences, or other designations."^{xviii} While we do not deny the need for the existence of specializations in making intellectual efforts focus on a specific type of phenomena and thus the study is deeper and more effective, on the other hand we call for the urgent need to make these sciences and specializations meet whenever necessity calls for it, when there are urgent problems that require the intervention of more than one specialty to address, understand, or explain them.

4. 2. Knowledge Intersection Between the Humanities and Social Sciences:

Integration specifically in the humanities and social sciences largely corresponds with the concept of integration, because there is no integration between knowledges without the existence of bridges between them in terms of their subjects, methods, and interests. Researchers in the field of social sciences use the term integration to transcend the separation between different branches of science and to establish intersection and integration between them.^{xix} The purpose of humanistic and social sciences knowledges is not to fragment the human and social phenomenon but rather to serve it. So that the humanities and social sciences have become intersecting and complementary in order to understand the human alone (humanistically) or to understand him while interacting with others (socially), and to crystallize this understanding into strategies serving the human and his interactions.

4. 3. The Role of Digitizing Algerian Manuscripts in Achieving Integration Between the Humanities and Social Sciences:

- **Overcoming temporal and geographical obstacles:** Integration between the social sciences and humanities needs to overcome the difficulty of accessing the mutual knowledge origins between them, and this is what the process of digitizing Algerian manuscripts provides.

Where the location of the manuscript and the time to obtain it are available to them more easily and in less time. Digitization does not make for each of them a place specific to its manuscripts, but rather expands the circle of benefit to include everyone who wants it, whatever their specialization.

- **Strengthening national identity and culture:** Because building national identity and preserving it requires the concerted efforts of sciences and specializations, that is, integration and cognitive intersection between the humanities and social sciences is necessary to enhance our Algerian national identity. This is what manuscript digitization does by activating the integrative dimension in building national identity and culture. And making manuscripts more functional in serving the requirements of the nation.
- **Diversifying comparative research:** Comparative research cannot crystallize in isolation from interdisciplinary integrative studies between the two studied phenomena, and the benefit is great from comparative studies between human and social phenomena given that the human and his interactions are at the heart of their concerns. Digitization of Algerian manuscripts comes to improve this comparative research and make it more beneficial and effective.
- **Improving research in terms of quality and quantity:** Work on manuscripts used to suffer from difficulties in moving and obtaining manuscripts and even reading and examining them, but with the emergence of digitization and its activation for studying manuscripts, research increased in terms of quality and number, which formed bridges for integration between the humanities and social sciences.
- **Programming joint databases.**
- **Emergence of trans-disciplinary studies and research.**

These are the benefits resulting from the digitization of Algerian manuscripts in achieving and serving cognitive integration, especially between the humanities and social sciences. We do not deny the existence of other benefits from this digitization, and what should be noted is that the benefits are more extensive the more serious manuscript digitization is and the more it uses advanced software made available by scientific and technological progress. With the best use of this software.

5. Conclusion:

After studying this topic, which relates to the digitization of Algerian manuscripts and its role in achieving knowledge intersection and integration between the humanities and social sciences, we reached a set of results represented in the following points:

- The manuscript has a great position in strengthening the national and cultural identity of nations, by linking the history of nations with their present, and then envisioning their future.
- Algeria possesses a stock of manuscripts, and this stock faces a set of material, human, and technological challenges. These challenges must be confronted in order to advance the Algerian manuscript and make it efficient and effective in serving studies and research, as well as serving the lived reality.
- Digitization constitutes an indispensable pillar for the manuscript in terms of authentication, exploration, and investment.
- In Algeria, manuscript digitization performs added value in achieving interdisciplinarity and integration between the humanities and social sciences, and makes the outputs of integration between them have a positive return in serving the Algerian citizen and his daily interactions: politically, socially, civilizational...

We cannot end this study except by presenting some functional suggestions that would improve the Algerian manuscript and make it serve solid scientific studies. Among these suggestions are the following:

- Forming multidisciplinary workshops whose task is to care for and explore the Algerian manuscript, because the nature of work on the manuscript attracts more than one specialty.
- Benefiting from modern digital programs in the field of manuscripts and programming platforms for manuscripts that facilitate the task for researchers in obtaining the manuscript and employing it in building a civilizational, scientific, cultural edifice.
- Integration and intersection between the humanities and social sciences cannot be achieved except by employing digitization and technologies, because if researchers are isolated from the scientific and technological space, they are exposed to geographical and functional obstacles by virtue of their specialization. As for their reliance on digitization, they thereby reduce the gap between them and engage in effective integrative studies.

With this study, we open a research horizon that anticipates the future of interdisciplinary studies of the humanities and social sciences, relying on a common basis of Algerian manuscripts, employing in that what digitization provides in terms of programs, applications, and platforms that facilitate their task.

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^x See: Same reference, same page.

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