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The Use of Information and Communication Technologies in Algerian Public Libraries : The Public Library of Annaba as a Model

استخدام تكنولوجيات الإعلام والاتصال في المكتبات العمومية الجزائرية: المكتبة العمومية بعنابة نموذجا

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Abstract:

Adapting to new inputs is an inevitable necessity reflected through the process of adoption. Western libraries have been pioneers in introducing modern information and communication technologies, and Algerian libraries have also not been immune to this development, as modern communication technologies have entered the core of their daily activities. From this perspective, our study aims to delve into the reality of the actual use of these technologies in our libraries.

In conducting this descriptive study, we relied on a survey method, and within this method, we used an "analytical survey" approach, which involves analyzing quantitative results and adding qualitative interpretation to the quantification. Given the limited number of units in the research population, we preferred to make the survey comprehensive for all employees working in the offices equipped with the modern communication technologies under study (computers and communication networks). We utilized on-site observation to gather information in order to uncover certain facts, such as usage conditions and habits. This tool helped us build the main research instrument, the "questionnaire."

Keywords: usage ; information and communication technologies ; public Library.

الملخص:

إن التكيف مع المدخلات الجديدة حتمية لابد منها تعبر عنها عملية التبني، وقد كانت المكتبات الغربية السباقة في ميدان إدخال تكنولوجيات الإعلام والاتصال الحديثة، والمكتبات الجزائرية أيضا لم تكن بمنأى عن هذا التطور إذ دخلت تكنولوجيات الاتصال الحديثة إلى صلب نشاطاتها اليومية، ومن هذا المنطلق توجهت دراستنا هذه إلى التعمق في واقع الاستخدام الفعلي لهذه التكنولوجيات في مكتباتنا.

واعتمدنا في إجراء هذه الدراسة الوصفية على منهج المسح، وضمن منهج المسح استخدمنا "المسح التحليلي" الذي يفيد تحليل النتائج الكمية، حيث لا يكتفي بالتكميم بل يضيف له التفسير الكيفي، ونظرا لمحدودية عدد مفردات مجتمع البحث، فقد فضلنا أن يكون المسح شاملا لجميع الموظفين العاملين في المكاتب والمزودين بتكنولوجيا الاتصال الحديثة المدروسة (جهاز الحاسوب والشبكات الاتصالية)، مستعينين في جمع المعلومات بالملاحظة في عين المكان وذلك لكشف بعض الحقائق كظروف الاستخدام وعاداته، وقد ساعدتنا هذه الأداة على بناء أداة البحث الأساسية "استمارة الاستبيان".

الكلمات المفتاحية: الاستخدام؛ تكنولوجيات الإعلام والاتصال؛ المكتبة العمومية

Introduction:

Public libraries have become a strong point within modern societies that have been and continue to undergo various developments, affecting different fields in general and the cultural field in particular. The latter has become a fundamental pillar for any country seeking growth and progress by disseminating knowledge. Public libraries play a very effective role in rebuilding societies on all levels, whether political, social, economic, or especially cultural, to create an educated society.

This has led them to rely on what is known as the method of cooperation among libraries, which possesses reasons and goals that enable public libraries to reach their aspirations widely, regardless of circumstances or times. The method of cooperation has become imperative, especially with the enormous technological advancement and its impact on the objectives of public libraries, particularly concerning the culture of society itself, which holds significant importance in our present day.

It is a main driver for the development of human knowledge in all fields and provides unlimited support for various sciences and all aspects of life. The rapid progress and changes in information technology have affected all areas of economic, social, political life, and more.

Recently, we have witnessed many efforts made by the responsible authorities to make public libraries more effective and coordinated with one another by seeking better methods that positively reflect on them in all fields. This includes bringing the image closer to the community, which is always considered the primary link for these libraries that have become a key indicator for building a modern state, and what they can offer to society through the activities or mechanisms they implement among themselves to expand the cooperation process.

To reach the desired level and elevate the cultural standards of communities through a thorough study of the needs of beneficiaries and addressing them before any collaborative work, and afterward through a comprehensive evaluation of beneficiary or community satisfaction, this aims at developing and enhancing the culture of the community to which they belong.

Therefore, it is imperative for decision-makers in public libraries, in particular, and libraries in general, to keep pace with this technological and informational advancement in their libraries and services, as well as to attempt to bridge the digital divide and leverage the available resources, or to pursue that technology for their services.

Study Problem:

One of the most significant characteristics of our present time is its designation as the Information Age, a period in which information has taken a substantial part of human life. Therefore, it is essential to store and organize this information in a place known as the library, "the center of knowledge", which serves as a resource for every reader or researcher. Traditionally, libraries were tasked with providing information in conventional ways; however, with the exponential growth of knowledge production, the increasing volume of information, and the needs of researchers, it became necessary to employ new technological methods and tools to manage the vast amounts of information and make it accessible to users in the easiest, quickest, and most cost-effective ways.

This evolution has led libraries to enter the realm of technology, or what is referred to as information technology. Consequently, libraries, in general, are required to carefully select the appropriate equipment, collections, and qualified human resources that align with this modern technology to achieve their objectives. This can only be realized with the presence of a qualified librarian capable of navigating the information revolution. Thus, based on the above, we can frame our issue with the following main question:

What is the current state of the use of information and communication technologies in the public library of Annaba?

1) What is the ranking of the use of information and communication technologies among public library employees in Annaba?
2) What are the obstacles to the use of information and communication technologies by public library employees in Annaba?

3) To what extent does the use of information and communication technologies affect the effectiveness of the public library's performance in Annaba?

Study Objectives:

1) To identify the ranking of the use of information and communication technologies among public library employees in Annaba.
2) To reveal the obstacles to the use of information and communication technologies by public library employees in Annaba.
3) To understand the extent to which the use of information and communication technologies impacts the effectiveness of the public library's performance in Annaba.

Study Concepts:

Concept of Use:

The concept of use appears to be a clear and simple meaning from a general perspective, requiring no effort or activity to define it. However, any attempt to define its theoretical and practical meanings encounters a vague and diverse concept that encompasses many different interpretations depending on the social and technical aspects involved in this hybrid communication-internet structure itself. The ambiguity surrounding the term arises from its use in designating, determining, and analyzing a set of behaviors and phenomena associated with a nebulous meaning: communication technology(1).

The relationship between humans and the internet is a complex and intertwined one that almost cannot exist outside of continuous practice. This relationship ensures that usage as a communicative act-carries a social and technical meaning. The meaning may shift towards technical performance, becoming dependent on the control and management of various systems of this technology, including operation and navigation through the web and the ability to select content located behind contracts and links, as well as the ability to process it, whether through storage, retrieval, and/or content production, as well as its reproduction. In this case, the most suitable term would be "usage".

The concept can also be addressed as a social and cultural activity, integrated into the existing behavioral system. Thus, usage does not become merely a transient act detached from the psychological and material formation of the user's personality; rather, it takes the form of usage models that primarily manifest in repetition and continuity, which links it to habits that are integrated

with other daily practices of use[2], aiming to impose and practically integrate them within the framework of prior cultural inheritances. These may either merge with or diverge from them, in contrast to other competing or related practices[3].

Concept of Information and Communication Technologies:

To define the concept of information and communication technologies, it is essential to refer to the definition of communication technologies. "Robin and Brent" define it as: "any tool or means that assists in the production, distribution, storage, reception, or display of data"[4].

The term "modern" added to communication technology is relative, as it depends on the level of societal development and the time frame; what is considered modern at one time may be old at another. However, most definitions indicate that modern communication technologies are those that combine remote communication and computing.

It is defined in the media encyclopedia as: "the tools and systems that assist in communication, primarily represented by electronic computers." This aligns with the view presented by "Fodil Daliou" in his definition, where he stated that it: "mainly refers to those connected to computers, and has several implications covering various fields and applications, such as the diagnosis of knowledge in general and the organization of institutions in particular"[5]. Some have broadened the concept to include: "the electronic means used in electromagnetic Production and recording, culminating in the use of terrestrial networks that utilize high-efficiency fiber optics for carrying messages and information, in addition to the use of computers and their associated technologies"[6].

In this study, modern communication technology encompasses all technologies related to the processes of processing, production, and exchange of information, which combine three technical fields: informatics, communication, and audiovisual.

Concept of the Public Library:

The public library is a public institution with an administrative nature that enjoys legal personality and financial independence. It is established by an executive decree based on the proposal of the Minister of Culture, and the headquarters of each library is determined by the establishment decree. Public reading libraries may have extensions created by joint decisions between the Minister of Finance, the Minister responsible for Culture, and the authority

responsible for public service. Therefore, it can be said that they are cultural, educational, intellectual, and enlightening institutions established and funded by the state from its general budget, working to preserve cultural heritage in both human and intellectual forms to serve all social classes(7).

Study Methodology:

Given the nature of the study and in line with the topic, in our attempt to achieve its objectives and reach the desired results, this can only be accomplished by following a clear and defined methodology. Since our study falls within the descriptive methodology and after diagnosing the study indicators, it necessitated the use of the survey method, which means: the scientific approach that enables the researcher to understand the phenomenon under study through its constituent elements and the prevailing relationships within it, as they exist in the real space and under their natural, unartificial conditions, by collecting the necessary information and data to achieve this(8).

Data Collection Tools:

Questionnaire:

The researcher endeavored to ensure that the questionnaire questions were clear and reflective of the study's issues and inquiries, aiming to achieve a degree of balance in covering all questions. The questions were formulated into four sections, comprising 36 questions distributed among 20 respondents, with each section aiming to:

a. A section that focuses on identifying the order of technology use among public library employees.
b. A section that highlights the main obstacles faced by employees in using information and communication technologies.
c. A section that pertains to the level of impact that the use of information and communication technologies has on the effectiveness of the public library.
d. A section dedicated to sociodemographic data.

Discussion of Study Results:

Table 01: Illustrates the main communication tools used in the library[9]

Category	Frequency	Percentage
Computer	16	%19,28
Phone	14	%16,87
Facebook	17	%20,48
Email	11	%13,25
Intranet	10	%12,05
Internet	15	%18,07
Total	**83**	**%100**

The reading of the data in this table clearly illustrates the overlap and diversity in the use of communication tools. The majority of research subjects use Facebook at a rate of 20.48%, followed by the use of computers and the internet at 19.28% and 18.07% respectively. This is a natural occurrence, given that computers encompass many functions and tasks, in addition to being the primary driver for other networks; it is impossible to connect networks without this device.

Furthermore, the adoption of this innovation by the library is considered lengthy compared to other means, as this device was introduced at the beginning of its establishment. It is also noteworthy that this trio of modern communication tools has not eliminated classical means, as it is evident that each tool has its own role and impact on work. Experiences indicate that every individual or worker has preferred communication channels, which explains the high usage rates of some tools and the decline of others[10], Additionally, the process of adapting to new tools and accepting their use may also contribute to explaining the rise or fall in their usage.

Table N 02: Illustrates the difficulty or ease of using modern communication technology.

Category	Frequency	Percentage
Yes	15	%75
No	5	%35
Total	**20**	**%100**

From observing the table shown above, it is evident that 75% of the sample participants do not face difficulties in using modern communication technology, while 35% of the sample participants do encounter difficulties, which is a relatively high percentage. This explains why some respondents do not use certain modern communication technologies at all or use them only to a limited extent. In this context, Rogers and Shoemaker state: "The degree of relative difficulty of the idea in terms of understanding and use is one of the factors that determine the adoption process[(11)].

Table N 03: showing the types of difficulties faced by respondents in using technology

Category	Frequency	Percentage
Language difficulties	04	%20
Technical difficulties	16	%80
Total	**20**	**%100**

From observing the data in the table above, it is clear that all those facing difficulties have technical difficulties, while %20 of them face language difficulties. The high percentage of those experiencing technical difficulties is due to the fact that most of the information recorded in modern communication technologies is in French, which the employees of our institutions are very proficient in. However, technical difficulties and those related to usage methods remain the major obstacle in using modern communication technology in the institution.

Table N 04: Illustrates the extent to which the library provides training sessions for employees.

Category	Frequency	Percentage
Yes	00	%00
No	20	%100
Total	**20**	**%100**

The results presented in the table above indicate that the library does not provide training programs for its employees, despite being aware of the importance of assisting its human resources in keeping up with developments and responding to the demands of change, whether through programs or tools

that affect the performance of its activities, which take the form of meetings, training sessions, or conferences(12).

Therefore, training programs contribute to work flexibility by enabling individuals to better control modern technology and techniques, as well as modern working methods.

Table N 05: showing training methods

Category	Frequency	Percentage
Meetings	16	%40
Workshops	10	%25
Conferences	14	%35
Total	**40**	**%100**

It can be observed from the table above that meetings rank first with a percentage of 40%, but they are insufficient and do not meet learning needs. This method is resorted to in order to reduce costs. Meetings rank second with 35%, while the percentage of those benefiting from internships is 25%.

These internships take place outside the library as part of its contracts with some training centers and are relatively long in duration. However, the percentage of those benefiting from them is low compared to other percentages. The network manager also benefits from internships at the Computer Training Institute located in Bab El Oued - Algiers - which has 200 seats.

It can be said that the heavy reliance on meetings seems weak and unable to meet the learning needs of trainees. In this regard, Arab studies indicate that human resource management in Arab countries still relies on traditional methods in managing and developing its human resources.

Table N 06: Shows the factors for improving communication within the library(13)

Category	Frequency	Percentage
Ease of communication among staff	13	%30,95
Speed of access to information	15	%35,71
Elimination of information distortion	14	%33,33
Total	**42**	**%100**

It is evident from the table above that modern communication technology has facilitated access to information by 35.71%. Among these supportive means is the intranet, which provides information online, characterized by real-time participation as well as speed and ease of retrieval, effectively eliminating the elements of time and space. Additionally, 33.33% of the respondents believe that modern communication technology has improved internal communication, especially since it allows for file sharing, enabling library staff to access all the information they need at any time and to monitor changes as they occur. Furthermore, it facilitates the transfer and conversion of files from one department to another and from one branch to another. Most of them agreed that it has contributed to eliminating the rumors that were widespread with the traditional means that were previously used.

Table N 07: showing the extent to which respondents rely on the manual method

Category	Frequency	Percentage
Always	6	%30
Sometimes	11	%55
Never	3	%15
Total	**20**	**%100**

The abundance and complexity of tasks necessitate resorting to automated methods. Nevertheless, reliance on manual methods remains acceptable at times due to the inability of automation to handle certain matters, provided that this reliance does not overshadow automation. Accordingly, 55% of the study participants often use manual methods to complete some tasks, while 30% use them consistently. The percentage of those who do not use manual methods is estimated at 15%. However, the reasons for using manual methods vary from one participant to another, so we propose the following table to understand these reasons.

Table N 08: showing the reasons for using the manual method despite the presence of technological techniques

Category	Frequency	Percentage
The nature of the work requires it	17	%50
The computer stopped working	7	%20,59
Your lack of conviction in the usefulness of working with the computer	10	%29,41
Total	**34**	**%100**

The data in the table above shows that the main reason for using the manual method is that the nature of the work requires it, as expressed by 50% of the respondents who use it. Some tasks are difficult to complete automatically, such as writing urgent correspondence and announcements. Meanwhile, 29;41% of those using the manual method attributed this to their lack of conviction in the effectiveness of working with computers, indicating a margin of refusal and resistance.

Additionally, 20;59% of them stated that the reason for using the manual method is due to the computer stopping work because of power outages. Our sample respondents who use this method indicated that the necessity of using both methods and the speed of manual execution are among the reasons for resorting to the manual method.

In summary, the reasons for using the manual method are as follows, in order:

- The nature of the work requires it.
- Lack of conviction in the effectiveness of working with computers.
- The computer stopping work.

Study Results Presentation:

- The benefit that respondents gain from training programs affects their level of usage of modern communication technology, as we found that those who benefit from external training use modern communication technology more than those who do not.
- The use of modern communication technology has improved the performance level of the library under study, as it has contributed to enhancing both

internal and external communication, as well as improving productivity and the work environment.

- The use of modern communication technology in the library has facilitated and simplified access to information and eliminated rumors.
- The interest of the library officials in the study regarding modern communication technologies has contributed to improving both internal and external communication. This is evidenced by the high percentage of connections via the internet and intranet, which exceeded 80% of the library's departments and offices, as well as the activation and renewal of its website.
- The library's benefit from modern communication technology has enhanced its image and reputation, while also improving its public relations with employees and customers by focusing on the quality and type of internal and external communication.

Conclusion:

Information technology represents an important part of the public library. Technology offers many advantages, chief among them being the reduction of human intervention in repetitive processes, the enhancement of the library's image and performance, and the acceleration of information exchange through networks. From this perspective, the researcher aimed to uncover the actual reality of using modern communication technology in the public library under study.

The findings indicate that the application of information and communication technology has brought about fundamental changes in management, particularly aiding in making appropriate and swift decisions based on facts and information. It has also gradually transformed the library from traditional management to electronic management, increasing its efficiency and effectiveness.

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