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THE ROLE OF TECHNOLOGICAL CULTURE IN IMPROVING THE PERFORMANCE OF INFORMATION SPECIALISTS IN UNIVERSITY LIBRARIES: A FIELD STUDY AT THE CENTRAL LIBRARY OF MOHAMED BOUDIAF UNIVERSITY - M'SILA –

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Abstract: This study aimed to explore the role of technological culture in improving the job performance of information specialists at the central library of M'sila University. A comprehensive survey methodology was employed, and the study reached several findings, the most significant of which were: information specialists at the central library possess a technological culture that qualifies them to enhance their job performance. Moreover, the use of modern technology in the library leads to providing library services that align with the needs of beneficiaries.
The study also offered several recommendations, most notably the necessity of subjecting information specialists to training courses in modern library technologies and developing the linguistic skills of employees at the central library of M'sila University.

Keywords: Technological culture, information specialists, job performance, university libraries, M'sila University.

Résumé: Cette étude visait à explorer le rôle de la culture technologique dans l'amélioration des performances professionnelles des spécialistes de l'information à la bibliothèque centrale de l'Université de M'sila. Une méthodologie d'enquête complète a été utilisée et l'étude a abouti à plusieurs conclusions, dont les plus importantes sont les suivantes : les spécialistes de l'information de la bibliothèque centrale possèdent une culture technologique qui les qualifie pour améliorer leurs performances professionnelles. De plus, l'utilisation de la technologie moderne dans la bibliothèque conduit à fournir des services de bibliothèque qui correspondent aux besoins des bénéficiaires.
L'étude a également proposé plusieurs recommandations, notamment la nécessité de soumettre les spécialistes de l'information à des cours de formation sur les technologies de bibliothèque modernes et de développer les compétences linguistiques des employés de la bibliothèque centrale de l'Université de M'sila.

Mots-clés: Culture technologique, spécialistes de l'information, performance professionnelle, bibliothèques universitaires, Université de M'sila.

Introduction:

Technological culture is one of the fundamental pillars in enhancing the performance of information specialists in university libraries, especially in the era of digital transformation. Technology has become a critical factor in boosting work efficiency and delivering services that align with the changing needs of users.

The role of technological culture lies in understanding modern technical tools and their applications in libraries, such as digital databases, library management systems, and applications enabling quick access to information. Additionally, technological culture helps improve the analytical and communication skills of information specialists, enabling them to provide specialized services such as research guidance, organizing digital content, and ensuring easy access to electronic resources. By mastering technological culture, information specialists in university libraries can enhance their professional experience, achieve integration between traditional and digital resources, and develop new strategies that meet the aspirations of students and researchers. This, in turn, contributes to raising professional performance levels, improving the quality of services provided, and reinforcing the vital role of university libraries.

0.1.   Research Problem:

The importance of keeping information specialists up-to-date with advancements in libraries and modern information centers has become increasingly significant in the technological environment. These specialists are now regarded as the cornerstone for development, transformation, and the growth of information systems in knowledge societies. This shift has made information technology an integral part of library operations.

The transition from traditional library tasks to technology-driven processes has reshaped the nature of work in libraries and information centers. Many services have evolved from traditional formats to electronic ones, accompanied by the emergence of new types of electronic information resources. As a result, information specialists are now required to play a participatory role in producing, designing, and managing information resources, such as website development and database management. These tasks are considered essential in the digital environment.

This raises the central research question:
To what extent does technological culture contribute to enhancing the skills and capabilities of information specialists at the central library of Mohamed Boudiaf University in M'sila?
Sub-questions:

. Is the concept of technological culture clearly understood by information specialists at the central library of Mohamed Boudiaf University in M'sila?
. Are the library staff aware of the impact of technological culture on their performance?
. Do the employees of the central library possess the necessary technological culture to efficiently handle electronic services?
. What skills are essential for working in a technological environment?

0.2. Study Methodology:

The appropriate methodology for this study is the **descriptive-analytical approach**, which involves studying the phenomenon as it exists, describing its current state, and analyzing and interpreting it by identifying its characteristics, dimensions, and interrelationships. The aim is to achieve a comprehensive scientific description.

1. Theoretical Framework of the Study :

1.1Definition of Technological Culture:

The term *technological culture* is one of the most significant concepts frequently discussed in specialized intellectual productions. Among its key definitions are the following:
- Technological culture refers to the intellectual processes, capabilities, and inclinations individuals need to understand the relationship between technology, themselves, and society in general. It emphasizes developing individuals' awareness of the interconnection between technology and social systems, highlighting the inseparability of technological systems from political, cultural, and economic activities that shape these systems. (Mehidat, 2002)
- It is also defined as: "The utilization of the achievements of modern science and technology in the fields of communication and the contemporary information revolution, along with promoting scientific awareness through computers and the internet. This aims to keep pace with the modern era and contribute to the scientific and technological advancements that have become evident at the onset of the third millennium."   (EmadShawky, 2002)

1.2. Objectives of Technological Culture:
- Fostering Initiative: Develops individuals' spirit of initiative to present and implement new ideas by equipping them with a range of manual, social, and cognitive skills gained through technological concepts. (Abu Hassan Mohammed, 2014)
- Enhancing Cognitive and Creative Skills: Cultivates individuals' mental and creative abilities through knowledge of modern technology and its applications.

- Improving Essential Skills: Develops critical skills by increasing technological knowledge, such as data collection, analysis, and interpretation.
- Encouraging Boldness in Technology Use: Strengthens individuals' confidence to explore diverse technological fields and keeps them continuously updated on developments in their work environments.
- Problem-Solving Capability: Increases individuals' ability to solve problems by following specific, logical, and sequential steps leading to accurate solutions.
- Maximizing Knowledge and Adaptability: Equips individuals with maximum technological knowledge to help them adapt to life's evolving circumstances and address societal challenges.
- Keeping Pace with Technological Advancements: Enables individuals to track changes in technological knowledge and understand their impact on society and its members.
- Preparing for the Future: Prepares individuals for a future filled with rapid scientific and technological advancements, ensuring readiness for progressive and accelerating changes**. (SanaaMarzouq, 2017)

1.3. Definition of an Information Specialist:
An individual responsible for designing, operating, and managing information resource systems and services, utilizing all modern information technology tools. (YaminEmad, 2013)
A specialist who has received academic training in their specific field, along with sufficient knowledge of other disciplines such as communication science and computer science. (Badr Ahmed, 1995)

1.4. Roles of an Information Specialist in the Technological Environment:Providing Internet Access:
The library can offer internet connectivity to individuals who cannot afford the service due to financial constraints.

Information Discovery:
The vast amount of information available on the web is often unorganized and requires skills to structure, retrieve, and make it accessible to beneficiaries, assisting them in locating books, articles, programs, and news.

Education and Training:
Information specialists should act as educators, teaching internet technologies and imparting information retrieval skills to beneficiaries by organizing training sessions and preparing instructional guides.

Information Publishing:

Specialists can design websites for beneficiaries to publish information. Additionally, they can introduce new services, such as organizing activities like publishing stories and conducting competitions.

Mediation Role:

On behalf of beneficiaries, information specialists can perform complex operations that require explanation, such as advanced research or developing specific programs.

Information Evaluation:

While traditional publishers evaluate the information they release using specific standards, the internet allows anyone to publish without evaluation or verification. Here, the role of information specialists is critical in helping beneficiaries assess online information based on established criteria.

Information Organization:

Specialists can carry out technical tasks, such as cataloging and indexing all information resources owned by the library or available online. This includes cataloging parts of e-books or articles on specific topics.

Providing Consultancy:

Information specialists can advise decision-makers on planning and policy-making regarding various issues related to information services and the internet. (Al-MusnadSaleh, 2000).

2: Field Study Procedures

2.1. Spatial Scope:

The field study was conducted at the **Central Library of Mohamed Boudiaf University in M'sila.**

- Introduction to the Central Library:

The university library was established in conjunction with the creation of the National Institutes of Higher Education in M'sila in 1985. In 1989, it moved to the university center located in the city center, which is now the main campus. In 2013, the library was relocated to the academic hub, and in 2024, it was returned to its original location at the city center campus.

The library comprises four main departments: Acquisition Department, Processing Department, Bibliographic Research Department and Guidance Department.

The library boasts a significant and diverse collection of both traditional and electronic resources to meet the informational needs of its users. Its collection includes approximately 32,000 titles, comprising nearly 180,000 copies of various resources such as books, periodicals, encyclopedias, dictionaries, and academic theses. These theses cover all university levels, including (Master's theses, Magister's theses, and Doctoral dissertations).

2.2. Human Scope

- Study Population:

The study utilized the **comprehensive survey method** to collect data from the individuals comprising the study population. This method involves applying research tools to all members of the population or a relatively large sample to describe the phenomenon under investigation.

The study population consisted of **library staff members** working in the central library of Mohamed Boudiaf University in M'sila, spanning various professional ranks and departments. The field study aimed to provide accurate information about the population involved in the study.

According to statistics obtained from the head of the central library, the total study population, covering various ranks and specializations, amounted to 36 individuals, as detailed in the table below:

Rank	Frequency	Percentage
University Library Curator	00	//
Level 2 Library Assistant	08	%22.22
Level 1 Library Assistant	10	%27.77
Library Assistant	13	%36.11
Archivist Documentalist	03	%8.33
Assistant Documentalist	02	%5.55
Total	36	%100

Table 1: Professional Ranks of Employees at the Central Library

- Study Sample:

The study sample refers to the subset of the study population chosen to represent the whole. A well-chosen sample often allows researchers to obtain the required information with significant savings in resources, without deviating from the reality under investigation.

In this study, after collecting comprehensive information about the original population, the entire population of 36 individuals was included using the comprehensive survey approach, effectively making the sample identical to the total study population.

3. Data Collection Tools:
The researcher relied on several tools to collect data, including:

a. Questionnaire:
As part of the research project, a questionnaire was used as a primary tool for data collection. The questions were designed based on the research questions posed about the topic.

b. Observation:
This involved field visits and daily interactions within the study environment, enabling the researcher to gather reliable and unaltered information.

4. Analysis of Field Study Data:
4.1. Does the library have technological tools and resources?

Answer	Frequency	%Percentage
yes	36	%100
no	00	//
total	36	%100

Table 2: Availability of Technological Tools and Resources in the Library

From the table above, it is evident that the central library of M'sila University is equipped with technological tools. This was confirmed by the responses of the study sample, representing 100%. The availability of these tools aids librarians in performing their tasks effectively and providing optimal services to users.

4.2. If the answer is yes, what are these tools?

Answer	Frequency	% Percentage
Electroniccatalogs	36	%40.44
Internet connection	28	31.46%
Databases	25	%28.08
Others	//	//
Total	89	100%

Table 3: Types of Technological Tools Available in the Library.

The previous table highlights the varied responses of the study sample regarding the most important technological tools available in the library. A percentage of 40.44% indicates that electronic catalogs are considered an essential tool in the library, as access to information sources relies on search tools. With advancements in the technological environment, it has become necessary for the library to provide this service, enabling users to identify the resources available in various formats.

A percentage of 31.46% reflects the presence of an internet connection. Modern library operations largely depend on networks, which play a vital role in linking the library to the outside world. They also enable information specialists to stay updated on the latest developments in their field through constant access to new resources.

Finally, a percentage of 28.08% pertains to databases. The library offers access to numerous databases that serve both information specialists and users effectively.

4.3. Does the use of technology facilitate the library tasks you perform?

Answer	Frequency	Percentage %
Yes	31	%86.11
No	5	%13.88
Total	36	%100

Table 4: The Role of Technology in Facilitating Library Tasks

The table above shows that 86.11% of the study sample responded that the use of technology in library tasks facilitates their work. This is achieved through managing library collections using library management systems and various documentary programs. Information specialists can easily and accurately

classify, register, and update book data, as well as track borrowed and returned books. Additionally, information specialists can analyze user and library collection data using data analysis tools to make decisions about acquiring new books or improving services. Communication with users is also enhanced through email, chat, or social media platforms .

On the other hand, 13.88% of the study sample indicated that the use of technological tools does not make their work easier in the library, which may be attributed to difficulties in using such tools.

4.4. Are you aware of the concept of technological culture?

Answer	Frequency	Percentage %
Yes	29	%80.55
No	7	%19.44
Total	36	%100

Table 5: Awareness of the Concept of Technological Culture.

The results above show that 80.55% of the study sample expressed their awareness of the concept of technological culture. Awareness of technological culture among information specialists is crucial, as technology has become an integral part of their daily work in managing, processing, and delivering information to users. It contributes to enhancing their professional competence and helps them keep up with modern developments such as artificial intelligence and cloud computing, which improves their productivity and leads to the delivery of higher-quality services. On the other hand, 19.44% of the sample do not have sufficient awareness or information regarding technological culture and its importance for information specialists in libraries.

5. Do you use the internet to enhance your ability to work with technology?

Answer	Frequency	Percentage %
Yes	30	%83.33
No	6	%16.66
Total	36	%100

Table 6: Using the Internet to Enhance Capabilities for Working with Technology

The table above shows that a significant percentage of the study sample relies on the internet to improve their skills in dealing with various technological tools. This is reflected in the 83.33% of the sample, indicating that information specialists can benefit from the internet for training, continuous learning, accessing online courses, and attending lectures and seminars. They also use it to read articles and research on new technologies and how to use them in information management, as well as practical applications through experimenting with new tools and software available online to learn how to use them in their work. On the other hand, 16.66% of the sample responded that they do not use the internet to enhance their capabilities and skills related to their work. This may be due to a lack of awareness of the opportunities available on the internet for improving and developing their performance.

6 .If the answer is "Yes," do you use?

Answer	Frequency	Percentage %
Search engines	30	%47.61
Social media sites	25	%39.68
Communicating with specialists via the internet	08	%12.69
Total	63	%100

Table No. (7) shows the types of tools used to develop skills in dealing with technology.

The study sample shows that 47.61% use search engines to improve their abilities to deal with modern technology, while 39.68% use social media to gain new experiences and skills that help them perform their tasks in the digital environment. Additionally, 12.69% mentioned using communication with specialists to assist them in dealing with technological tools that contribute to improving the services they provide to beneficiaries.

7. Have you participated in training courses to increase your technological culture in the library where you work?

Answer	Frequency	Percentage %
Yes	12	%33.33
No	24	%66.66
Total	36	%100

Table (8) illustrates the participation of information specialists in training courses.

It is clear from the above that a small percentage of the study sample has attended training courses to facilitate dealing with technology. This is reflected in 33.33% of the responses. Training courses help improve the quality of library services, enabling the acquisition of technological skills to provide innovative services such as electronic indexing, searching in digital databases, and managing electronic resources. They also support scientific research and education by helping researchers and students learn how to systematically search for information in global databases and digital libraries, as well as cope with the shift toward digital libraries. On the other hand, 66.66% have not attended any training courses, which may be due to their possession of sufficient skills to handle technological tools in libraries.

8. If yes, was this achieved through?

Answer	Frequency	Percentage %
Guidance for dealing with technology by specialists.	08	%47.05
Training courses via the internet.	06	%35.29
Holding training sessions on the use of this technology.	03	%17.64
Total	17	%100

The table number (9) shows methods for conducting training courses.

From the previous table, it is clear that 47.05% of those who underwent training courses did so through guidance for dealing with technology by specialists in the field. Meanwhile, 35.29% attended training courses on how to use technology, which may have been provided by the library or external training courses. Training courses via the internet accounted for 17.64% of the study sample. The internet offers many training courses to enhance technological skills, whether free or paid.

9.Do you believe you have technological culture that qualifies you to improve your job performance?

Answer	Frequency	Percentage %
Yes	32	%88.88
No	04	%11.11
Total	36	%100

Table number (10) shows the role of technological culture in improving job performance.

From the previous table, it is clear that the majority of the study sample believes they have a high level of technological culture, as expressed by 88.88%. Information specialists must possess strong technological culture because, in today's digital age, technology plays a significant role in how information is collected, processed, stored, and shared. By having deep technological culture, an information specialist is able to use technological tools and adapt to rapid changes in technology. This means that the information specialist should be prepared to constantly learn new techniques to better understand how to protect and secure data from security threats. In short, technological culture is an essential part of the skills of information specialists in the modern era. On the other hand, 11.11% of the sample responded that they do not possess technological culture that qualifies them to improve their job performance, which requires them to put in more effort and undergo training courses to enhance their level in this field.

.10. **What are the problems you face in dealing with technology?**

Answer	Frequency	Percentage %
Language problems	21	%51.21
Financial problems	11	%26.82
Inability to control technology	08	%19.51
Total	41	100%

Table number (11) shows the problems faced by information specialists in dealing with technology.

The table indicates that information specialists at the Central Library of the University of M'sila face challenges when dealing with technology. The most prominent issue is language problems, with 51.21%, which can negatively impact their performance in the library, especially in relation to searching for and retrieving information. Most technologies rely on language for searching, so if there are issues with selecting keywords or understanding search results due to language issues, this can make it difficult to find accurate information. Moreover, handling multi-language software may face difficulties in supporting certain languages, such as right-to-left written languages like Arabic, which may lead to formatting or display issues.

%26.82of the study sample reported financial problems, indicating that economic factors pose a significant challenge, though they are less common than

language issues. The least common problem is technical issues, with 19.51% of the sample reporting a lack of control over technology.

General Study Results:
- The Central Library of the University of M'sila provides various technological tools, including computers, internet connectivity, documentary software, and online catalogs.
- The use of technology in the library's administrative tasks helps information specialists perform their duties efficiently, leading to better results.
- Library specialists at the Central Library are aware of the concept of technological culture and its importance in library work, which primarily leads to improving their professional performance.
- Library staff primarily use the internet, especially search engines and social media, to enhance their ability to handle technology.
- Most of the study sample has not undergone any training programs offered by the library to improve their skills in using modern technology, leading to their inability to keep up with recent developments in the use of technological tools in libraries.
- Information specialists at the Central Library possess technological culture that qualifies them to improve their job performance and provide better services to users.
- There are obstacles faced by information specialists when using various technological tools, the most significant of which are language-related issues.

Study Suggestions:
- University library administrators should place more emphasis on aspects that enhance the technological culture of information specialists in these types of libraries.
- It is essential to raise awareness about the importance of acquiring technological culture for specialists in the field of libraries.
- University library administrators should establish training programs to develop technological culture among information specialists.
- Enhance skills related to working in a digital environment through continuous self-study and training.
- Provide the necessary conditions and resources to improve the performance of information specialists in university libraries.
- Promote and improve the foreign language skills of library specialists, especially in English.

Conclusion:

Technological culture plays a pivotal role in enhancing the performance of information specialists in university libraries. It enables them to effectively deal with ongoing digital developments, contributes to improving the efficiency of managing informational resources, and develops the services provided to users. Additionally, it enhances their ability to cope with future challenges. Mastering the use of technology and continuous training are not just options, but an urgent necessity to ensure the integration of technical knowledge and library services. Therefore, investing in building an advanced technological culture is a fundamental pillar for elevating the role of university libraries in supporting education and scientific research.

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