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Modern Problems of Library and Information Resources Management

Abstract

In the 21st century, the formation of the information society, the rapid development of digital technologies, and the increase in global information flows have made the management of library and information resources more complex. In the modern era, libraries are no longer just spaces for storing physical resources but have transformed into extensive electronic information platforms. This transformation necessitates the application of new approaches, methods, and technologies in management. The aim of the article is to analyze the main problems encountered in the management of library and information resources in the modern period, to investigate their causes, and to propose possible solutions.

Keywords: Library and Information Science, Library and Information Resources, Library and Information Management, Document Management, Library and Information Services



Kütüphane ve Bilgi Kaynakları Yönetiminin Güncel Sorunları

Öz

21. yüzyılda bilgi toplumunun oluşması, dijital teknolojilerin hızla gelişmesi ve küresel bilgi akışının artması kütüphane ve bilgi kaynaklarının yönetimini daha karmaşık hale getirmiştir. Modern çağda kütüphaneler artık sadece fiziksel kaynakların depolandığı alanlar olmaktan çıkmış, kapsamlı elektronik bilgi platformlarına dönüşmüştür. Bu dönüşüm, yönetimde yeni yaklaşımların, yöntemlerin ve teknolojilerin uygulanmasını gerektirmektedir. Makalenin amacı, modern dönemde kütüphane ve bilgi kaynaklarının yönetiminde karşılaşılan temel sorunları analiz etmek, nedenlerini araştırmak ve olası çözüm önerileri sunmaktır.

Anahtar Kelimeler: Kütüphane ve Bilgi Bilimi, Kütüphane ve Bilgi Kaynakları, Kütüphane ve Bilgi Yönetimi, Belge Yönetimi, Kütüphane ve Bilgi Hizmetleri

Introduction

In the modern era, the development of the information society, the acceleration of digitalization processes, and the dynamic production, transmission, and use of knowledge have also significantly influenced the field of library and information services. As a result of these changes, the traditional concept of the library has gradually evolved into a more complex management system that encompasses the collection, organization, and dissemination of information resources to users. The proper and effective management of library and information resources is of particular importance for meeting users' information needs in a timely and high-quality manner. Information resources are no longer limited to printed materials; digital sources, electronic libraries, databases, and multimedia have become essential components of these resources. Therefore, the application of new technologies, the development of modern management strategies, and the establishment of systems in accordance with international standards are among the main priorities in the management of library and information resources. However, a number of challenges still exist in this area, such as the unequal distribution of resources, incomplete integration of information systems, a shortage of qualified personnel, and the need for improvement of the legal and regulatory framework. The article will present a systemic analysis of current problems in library and information resource management, make comparisons with international practice, and propose the necessary methodological, practical and theoretical approaches for advancement in the field of Library and Information Sciences and document management. In addition, the article will examine the current state and future prospects of reforms implemented in Azerbaijan in this area. The study of the theoretical foundations of library and information resource

management is of great importance for providing a scientific basis for this field. In management theory, the efficient use of resources and strategic planning are recognized as fundamental principles. Within this framework, the management of library and information resources encompasses processes such as the acquisition, classification, storage, access, and delivery of resources to users.

In general terms, management refers to the organization and coordination of purposeful activities. In the context of libraries, the management process includes the stages of planning, organizing, leading, and controlling. Each of these stages determines how effectively a library presents its information resources and how they are delivered to the user. Library and information resources refer to various formats and types of information carriers made available to users for scientific, educational, cultural, and other purposes - such as printed materials, electronic resources, multimedia tools, archival documents, and digital collections. Each of these resources requires a specific management approach and has its own technological demands.

Alongside traditional management models, new approaches to library management have become increasingly relevant. These include:

**Strategic Management*

This involves identifying long-term goals and mobilizing resources in an optimal manner to achieve them. Libraries apply this approach in the development of operational plans and technology policies;

**Project-Based Management*

This approach involves planning and implementing resources within the framework of projects intended to be completed within a specific timeframe. For example, digitization projects, the implementation of new services, and international cooperation programs are managed using this model;

**Technological Management*

This type of management focuses on the operation and updating of Library Information Systems (LIS), automated cataloging systems, databases, and other technological platforms. In this area, staff technical training and access to information technologies are essential requirements. In addition, methods and tools used in management include the analysis of information flows, resource evaluation, and the assessment of user needs - each of which plays a critical role in the process. These theory-based approaches create favorable conditions for the purposeful and user-

oriented management of library and information resources. In the management process, both organizational structures and legal-regulatory frameworks must be taken into account, and a management model aligned with the overall information policy should be established.

Digitalization and technological transformation have had a profound and multidimensional impact on the management of library and information resources. In the modern era, libraries are no longer institutions that merely preserve traditional textual materials; they now function as information centers providing access to a wide array of electronic and digital resources (Bayramov & Mahammadli, 2025). This transformation has necessitated the adoption of new approaches and technological solutions in library management. We would like to bring to your attention what we consider to be the most important of these below.

1. The Impact of the Digitalization Process on Management

Digitalization - the process of converting resources from physical formats to electronic ones - is of critical importance for the preservation of library collections, the expansion of access, and the provision of remote services. Effective management of this process requires the following components:

- *Development of Technical Infrastructure:* High-quality scanners, servers, data storage systems, and specialized software are essential for the digitization process;
- *A Standardized Digitalization Policy:* This includes the use of metadata, selection of file formats, and implementation of long-term digital preservation mechanisms;
- *Enhancing Human Resource Competencies:* Training specialized staff for the execution of digitization projects is crucial to ensure sustainability and quality.

2. Electronic Management Systems and Automation

Library Information Systems (LIS) and automated management software play a decisive role in the operation of modern libraries. These systems support functions such as cataloging, circulation, usage statistics, and the analysis of user activity. Platforms like “Evergreen”, “Invenio”, “Aleph” and etc. whether open-source or commercial, are widely used in library administration. These systems offer several advantages:

- *Real-time Resource Monitoring;*
- *Automation of User Services* (e.g., online reservations, renewals, and requests);
- *Efficient Reporting and Analytics Capabilities.*

3. Cloud Technologies and Data Security.

Cloud-based services have introduced new possibilities for storing, sharing, and processing information in libraries. Particularly for small and medium-sized libraries, cloud solutions reduce infrastructure costs and ensure uninterrupted service (Qardashov & Ahmedli, 2025). However, the use of these technologies introduces several management challenges:

**Data Confidentiality and Security*

Storing user data on third-party servers raises legal and ethical concerns.

**Inadequate Legal Frameworks*

The lack of clear local legislation regulating the use of cloud technologies leads to uncertainty in decision-making.

**Vendor Lock-in*

Dependence on a specific technology provider may pose strategic risks for long-term management.

4. Artificial Intelligence and Data Analytics

Artificial Intelligence (AI) and big data technologies are opening new avenues in the management of library resources. Through AI, user behavior can be analyzed, enabling the delivery of personalized information services. This includes:

- Intelligent recommendation systems based on user preferences;
- Predictive analytics to anticipate resource demand;
- Automation of repetitive tasks like metadata generation and content indexing (Rzayeva, 2025).

Overall, digital transformation in libraries is not merely a technological upgrade but a strategic shift requiring integrated management approaches, continuous training, and regulatory alignment to ensure sustainable and user-centered information services.

In addition:

- Search systems and recommendation mechanisms can be improved;
- Collection policies can be updated based on reader interests;
- Data-driven management decisions can be made.

The implementation of these technologies requires higher levels of technological literacy and strategic thinking from the administrative staff.

5. Licensing of Electronic Resources and Legal Management

Digitalization and technology-driven management necessitate the development of new legal mechanisms. The electronic databases, e-journals, and multimedia resources to which libraries subscribe are often accessed through international licensing agreements. This can present challenges in the following areas:

- Copyright restrictions and limitations on use;
- International legal requirements related to cross-border information flows;
- Lack of agreements concerning long-term preservation of resources.

In this context, library administrators must possess not only legal knowledge but also technological and strategic management competencies.

6. Impact of Technological Transformation on Organizational Structure

The rapid advancement of technology has made it necessary for libraries to establish new structural divisions such as digital resources departments, IT services, and electronic service management units. These changes in management have led to the following outcomes:

- Increased organizational specialization and functional division of labor;
- Emergence of new job roles (e.g., digital curator, technology manager);
- Greater emphasis on continuous training and professional development policies (Nadir & Sevda, 2022).

As a result, digitalization and technological transformation bring both opportunities and challenges to the management of library and information resources. To adapt to these processes, management strategies must be comprehensive and flexible, and technological developments must be integrated in harmony with legislation, human resources, and organizational culture. In the context of the rapid development of the modern information society and the increasing complexity of technological systems, human resource management holds strategic importance for the effective management of library and information resources. Against the backdrop of growing user demands and the dynamics of information technologies, the role of human capital becomes even more prominent. Human resource management is not limited to merely providing workforce; it also encompasses the processes of developing their professional potential, strengthening motivation, and continuously updating their knowledge and skills. Emphasizing the strategic significance of human resources in managing library and information systems, *Davenport notes* that in the modern digital environment, human capital is the primary source of innovation and competitiveness for

organizations. From this perspective, the technological literacy of library staff and their skills in modern information and communication technologies (ICT) are among the crucial factors for ensuring management efficiency. Technical knowledge such as managing digital platforms, implementing electronic catalog systems, and effective database searching must be regularly updated through continuous professional education courses for librarians.

Furthermore, employee motivation and the favorability of the work environment directly affect the quality of their performance and active participation in management. Based on Herzberg's motivation-hygiene theory, fair wages, social benefits, career development opportunities, and transparent internal communication mechanisms increase long-term motivation and organizational commitment among employees. Adherence of library management to democratic governance principles and involving employees in decision-making processes enhances the overall quality of management and positively influences the development of organizational culture (Khalilova, 2024b). In human resource management, diversity in age and experience, gender balance, and adherence to inclusivity principles create strategic advantages. Cox states that diversity leads to more innovative and creative solutions in management. This facilitates the combination of knowledge and experience from employees of different age groups, resulting in a richer and more dynamic work environment.

The organization of volunteer activities in libraries opens innovative opportunities in human resource management. In particular, involving the younger generation and students in these activities contributes to the improvement of library services and closer integration with the community (Khalilova, 2024a). Volunteer activities not only reduce the workload of library staff but also strengthen community relations.

Thus, considering all these aspects, it can be concluded that human resources play a decisive role not only at the operational level but also in the strategic development of management in the administration of library and information resources. Efficient management of human capital is essential for enhancing the innovativeness, adaptability, and overall competitiveness of library systems. The legal and normative framework holds significant importance in the management of library and information resources in terms of ensuring functional sustainability, transparency, and legal accountability. Legislative acts, which form the basis of management systems, define the directions of library activities, areas of responsibility, and user rights. In this regard, the existing

normative framework acts as a regulatory structure governing activity related to the collection, storage, preservation, and use of library and information resources.

In Azerbaijan, this area is regulated not only by the laws “On Librarianship” (1998) and “On Obtaining Information” (2005), but also by other legal acts, such as the laws “On Copyright and Related Rights”, “On Electronic Signature and Electronic Document”, “On Information, Informatization and Information Protection”. In addition, the main components of this legal environment are the statutes of the Azerbaijan National Library, instructions of the Ministry of Culture and other departments.

However, with the rapid development of technologies and the expansion of digitalization, it has been observed that some aspects of the existing legal framework do not respond adequately to current realities. For example, new challenges have arisen concerning the legal status of digital resources, archiving of electronic data, legal liability for cloud-based services, the use of licensed databases, and copyright issues. Cross-border information exchange and access to international scientific platforms also necessitate flexibility in legal regulations and compliance with international standards. At the same time, weaknesses in legal knowledge within library management structures, ambiguities in the enforcement mechanisms of normative documents, and ineffective application of legal responsibility cause problems in the management process. For this reason, the legal education of library managers and staff is of special importance. Organizing training on information law, copyright, digital law, and information ethics in professional development courses can help improve legal knowledge in this area.

International experience shows that the dynamic updating of the legal framework related to library activities and its adaptation to the digital transformation of library services is crucial for ensuring sustainable management (Ismayilov, 2022). Recommendations and guidelines developed by the European Union and UNESCO in this field serve as important examples for library administration.

In conclusion, the legal and normative framework in the management of library and information resources not only serves a regulatory function but also acts as a strategic tool aimed at applying innovations and improving management efficiency. Formulating legal mechanisms in line with modern challenges is an essential condition for ensuring effective management in this field (Ismayilov, Ismayilov & Mammadova, 2019). In the modern era, there are several pressing problems in the management of library and information resources. These problems encompass

technical, economic, and institutional aspects. For libraries to perform their functions effectively, it is essential to address these issues in a comprehensive manner:

**Limited financial resources*

The majority of public libraries face insufficient funding. Particularly, financial shortages cause serious difficulties in acquiring new technologies, licensing software, training staff, and subscribing to modern information databases;

**Weak material and technical base*

In many libraries, the infrastructure has not been updated, outdated computers and equipment are still in use, and the lack of high-speed internet negatively affects the quality of services. This leads to decreased user satisfaction;

**Shortage of professional staff*

The number of technologically literate and qualified specialists capable of working in a digital environment is insufficient. In addition to traditional librarianship knowledge, specialists familiar with modern information technologies are needed. This requires updating curricula and improving professional development systems;

**Normative and legal gaps*

The legal framework is inadequate for digitalization and international cooperation. There are gaps especially in issues related to copyright of digital content, the status of electronic archives, and users' information rights. Existing legislation should be adapted to rapidly changing technological realities;

**Insufficient user-oriented service models*

In many libraries, the process of studying user needs and building services according to these needs is carried out unsystematically. However, modern libraries should transition to a user-centered service model. This requires analysis of surveys, personalized information services, and development of digital platforms;

**Quality and reliability of information*

Although the abundance of internet resources creates information richness, the reliability and scientific value of this information is often questionable. Libraries must act as a reliable filter in the information ecosystem. This is possible through professional selection and classification of resources;

**Regional inequalities:*

While libraries in large cities are relatively better equipped with technical and human resources, regional libraries operate with weaker infrastructure. This creates problems in ensuring equal access to information (Askerova & Mammadov, 2025).

**Future Perspectives and Recommendations*

- Implementation of integrated management systems

Creating unified electronic platforms and centralizing management for all libraries can ensure more efficient use of resources;

- Public-private sector cooperation

Especially in digitization projects, involving private companies can reduce financial burdens and enable faster adoption of technological innovations.

- Professional development programs

Continuous training of staff, exchange of international experience, and certification systems can help strengthen human capital.

- Promotion of user-oriented services

Creating interactive platforms, personalized user profiles, and personalized approaches to information delivery can foster closer connections between readers and libraries.

- Improvement of the normative legal framework

Adoption of flexible and progressive laws adapted to new technological realities, and integration of international conventions and recommendations into local practice are essential.

- Development program for regional libraries

Strengthening library infrastructure, technical equipment, and human resource capacity in regions should be among the priority directions (Xələfova & Əliyev, 2022). The implementation of these proposals will increase the sustainability, innovativeness, and efficiency levels in the management of library and information resources.

Conclusion

Experience shows that time is the most valuable thing in the world. Therefore, every social institution providing information and document services must value the time of its consumers. This is the most important need of the universe. The management of library and information resources is a strategic and complex field of activity that responds to the information challenges of the modern era. Analyses show that the problems faced in this area are not only technological and

organizational but also related to human resources, the legal framework, and user culture. The acceleration of the digitization process and the application of information technologies create new opportunities while also requiring the improvement of management mechanisms. The effectiveness of management directly depends on the implementation of modern management models - such as strategic planning, project-oriented management, technological transformation, and human resource development. At the same time, the legal regulation of library and information systems, the protection of resources, and aligning their use with ethical principles are also of great importance. The proposed solutions - state support, international cooperation, enhancement of digital skills, improvement of the normative-legal base, and modernization of management technologies - can provide a foundation for the sustainable and efficient development of this field. In conclusion, the management of library and information resources is not only about organizing the flow of information but also a strategic activity that serves the intellectual development of society. In this regard, the future of libraries will depend on how flexible, inclusive, and innovative their management systems are.

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