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A General Perspective on a Digital Bibliographer as an Element of an Electronic Bibliography

Abstract

The paper gives a brief overview of the elements that make up the structure of bibliographic activity, a human activity. The bibliographer concept, which is the primary, central, and system-forming element of contemporary bibliographic activity, has been thoroughly explained. A general explanation of the notion of a digital bibliographer, along with an outline of its primary functions and contemporary requirements, is provided. In addition, a graphic representation of the arrangement and connections between the various parts of the bibliographic activity's structure is provided. The informational and professional development of users can be facilitated and improved by digital bibliographers. Still, not much research has been done to find out digital bibliographers' perspectives on the various methods they use to accomplish this. This study aims to investigate the current state of affairs for bibliographers working in the digital sphere.

Keywords: electronic bibliography, digital bibliographer, subject, profession, component

Elektronik Bibliyografyanın Bir Unsuru Olarak Dijital Bibliyografyacıya Genel Bir Bakış

Öz

Bu makale, bir insan etkinliği olan bibliyografik faaliyetin yapısını oluşturan unsurlara kısa bir genel bakış sunmaktadır. Çağdaş bibliyografik faaliyetin birincil, merkezi ve sistemi oluşturan unsuru olan bibliyograf kavramı kapsamlı bir şekilde açıklanmıştır. Dijital bibliyograf kavramının genel bir açıklaması,

temel işlevlerinin ve çağdaş gereksinimlerinin ana hatlarıyla birlikte verilmiştir. Buna ek olarak, bibliyografik faaliyetin yapısının çeşitli bölümleri arasındaki düzenleme ve bağlantıların grafik bir gösterimi sağlanmıştır. Kullanıcıların bilgi ve mesleki gelişimleri dijital bibliyografyacılar tarafından kolaylaştırılabilir ve geliştirilebilir. Yine de, dijital bibliyografların bunu başarmak için kullandıkları çeşitli yöntemlere ilişkin bakış açılarını öğrenmek için çok fazla araştırma yapılmamıştır. Bu çalışma, dijital alanda çalışan bibliyografların mevcut durumunu Araştırmayı Amaçlamaktadır.

Anahtar Kelimeler: *Elektronik Bibliyografya, Dijital Bibliyograf, Konu, Meslek, Bileşen*

Introduction

The information society provides a digital and electronic library-information service. As technology advances in our society, libraries' roles are evolving as well. These days, libraries and information centers strive to perform their duties by utilizing increasingly sophisticated work procedures. This is related to timely and proper awareness of new information and technologies. Without even needing to visit the library, consumers can obtain all the information they require at home, at work, or while traveling thanks to electronic services delivered by computers and the Internet. A model that offers network-based access to shared computer-online resources is known as an electronic service. Access to information resources from a single location is made possible by new services known as electronic services. Free use of online resources and the ability to access resources from any location, at any time, and on any device (mobile clients, portable devices, etc.) are two of these services' features.

Network information sources and services have become an integral part of everyday life. It is now possible to use bibliographic, full-text and multimedia databases via intranets, extranets and the Internet. ICT provides online services such as e-banking, e-government, e-education, e-entertainment, etc. However, despite some advanced information processing and network capabilities, there are difficulties related to searching, finding, collecting, organizing, processing and using information. One of the most optimal solutions to the problem of finding the necessary information from millions of electronic sources, and almost the main one, is the electronic bibliography. The end of the 20th century is characterized as the stage of evolution of electronic bibliographic culture based on new ICT and communication tools in the field of bibliography. The need for bibliographic products has grown even more as information relations move from a traditional to an electronic format.

The new situation in the global information environment has formed an information user profile that requires full and prompt satisfaction of large information needs (without time and space limitations) based on the electronic presentation of bibliographic information. From this point of view, there is a need to review the traditional bibliography processes and service to information users. One of the most important problems of the computerization of bibliographic processes is the application of innovative methods and technologies in practice, including the training of specialists and users to work in a modern bibliographic environment. Since the 1990s, libraries have begun to apply information technologies that lead to the transformation of many areas of library activity and reference-bibliographic service (Ismayilov, Mahammadli & Khudiyeva, 2022).
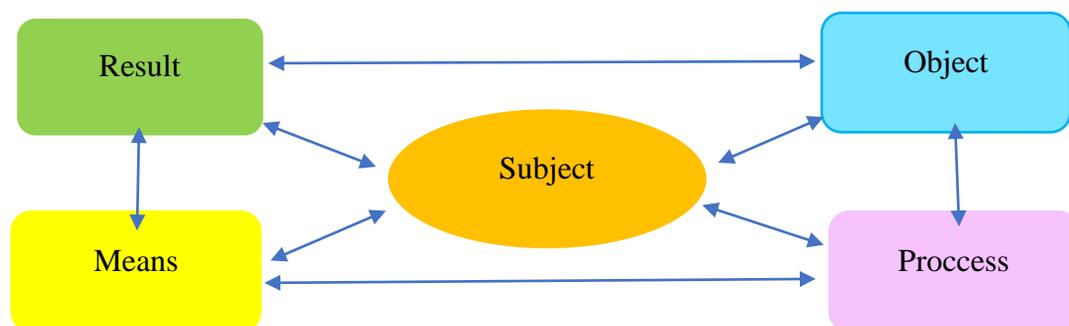
1.Discussion of the issue

The radical requirements of the digital age, the complex structure of the information society, impose new tasks on library and information institutions, such as forming an electronic service environment through computers and the Internet. Starting from the end of the 20th century, ICT enabled the formation of electronic bibliographic culture. The transition of bibliographic relations from traditional form to electronic form has accelerated. Libraries have begun to apply ICT, which has enabled the transformation of many areas of bibliographic activity. Formation of electronic environment in libraries, storage of information in electronic form, online search, transmission of information through telecommunication channels also had a significant impact on bibliographic product and service models. A new field of scientific and practical activity called "electronic bibliography" has already been formed. "Electronic bibliographic activity", "electronic bibliographic information", "electronic bibliographic resource", "electronic bibliographic service", "online database" etc. are concepts that express this modern direction of activity. Formation of internal and external electronic environment in libraries, storage of information in electronic form, search of information in machine-readable arrays, data transmission using telecommunication channels have also had an impact on the composition of bibliographic resources and service forms. As a field of professional activity, bibliography has its own special terminology system. With the introduction of computerization in the field of bibliography, the necessary concepts for the functioning of bibliography in the electronic environment have been formed. These concepts include "electronic bibliography", "electronic bibliographic activity", "electronic bibliographic information", "electronic resource", "database", "online search", etc.

The potential of electronic bibliography is enormous. It provides access to any bibliographic information at any time, anywhere with technical equipment. A characteristic feature of electronic

bibliography is that it has a global nature. It is a process that emerged at the same time as globalization, informatization and computerization, and is a means of their future development (Ismayilov and Khalilova, 2023). According to modern systematic ideas about human activity, the component structure of bibliographic activity includes the following main components: goals, subjects, objects, processes, means and results. Among them, only the goal is completely ideal. It acts as a mental model of the expected result, is formed as a stimulus motive for action and is in the subject's head (thought).

　　　Both traditional and electronic bibliographic activities follow the same structure. Components like object, subject, goal, process, means, and result make up the structure of an electronic bibliography. Each of these components has different and specific characteristics.

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　　　The subject of electronic bibliographic activity is the bibliographer and bibliographic collectives, as in traditional bibliographic activity. Subjects of electronic bibliographic activity have requirements such as professionalism, computer knowledge and skills, and information culture. The object of electronic bibliographic activity is document-communication systems operating in the electronic environment—documents and electronic information consumers in traditional and electronic form. An important component of the structure of electronic bibliographic activity is the result. Its specific results are the result of the electronic bibliography process and the electronic bibliographic service.

　　　Subject of electronic bibliographic activity: The main, central, "backbone" of bibliographic activity is its subject. The main driving force of the whole system is the subject. The subject of bibliographic activity is a very complex concept. In this context, a professional bibliographer; non-professionals temporarily engaged in bibliographic activity (scientist, teacher, writer, journalist, etc.); we can accept researchers engaged in scientific-research activities in the field of bibliography,

teachers teaching bibliographic subjects in colleges and universities, and organizers of bibliographic work as subjects. However, the main subject of practical bibliographic activity is a professional bibliographer. However, in our opinion, both traditional and electronic bibliographic activities should be performed only by subjects with education and experience in the field. Otherwise, unprofessionalism is evident.

He is a professional bibliographer who creates bibliographic information sources, delivers them to consumers and organizes their use. The quality and efficiency of bibliographic activity depends primarily on the level of theoretical and practical training of the bibliographer, and his equipping with advanced methods of bibliographic work. That is why the system of professional training and retraining of bibliographic personnel plays an important role in our country, and great attention is always paid to its improvement. However, the requirements that a professional bibliographer must meet have not yet been sufficiently developed. Not only that, electronic even traditional bibliographic professionalism is not adequately developed as an important branch of bibliographic research.

Computer science can contribute to library-information and bibliography just as it contributes to banking, medicine, aviation and many other fields. All digital librarian-bibliographers must understand the possibilities of ICT, have an idea of how they work and how to work with them, be able to communicate with computer scientists and technicians, and generally be proficient in all modern technologies. There is no doubt that today's information workers need technological skills, and this skill will become increasingly important, as these skills are necessary to perform their professional work. Digital bibliographers have a different goal, which is to fulfill their social responsibilities using ICT as a tool (Ismayilov and Khudiyeva, 2022). As an information specialist, the digital bibliographer plays a distinct and dynamic role in providing easy access to computer-stored digital information, including abstracts, full-text, reference and bibliographic databases, and audio and video recordings in digital formats. The information profession is knowledge-based and service-oriented. In some form, the role of the information professional has always been to assist others in their pursuit of knowledge. Currently, the role of the information specialist in society has become more relevant.

With new technologies for the creation of electronic information and bibliographic products, the potential and demand of the Internet space do not narrow the field of activity of the bibliographer but rather expand it, demonstrating the need for professional migration to new fields of activity (Ismayilov and Khudiyeva, 2023). Unfortunately, the bibliographer's transition to

another field of activity while retaining the elements of bibliographic technologies is often not sufficiently appreciated by the professional community.

It is quite natural that an important part of the professional resources of the bibliographic activity chose the consumer as a priority, not the information institution, because the essence of the bibliographic profession's social mission is to satisfy the need for information. A bibliographer who serves a "consumer," knows the characteristics of the required information thoroughly, anticipates his needs, and provides him with a wide range of information products deserves no less respect than a bibliographer who works "for everyone.". In this context, special attention should be paid to the professional resources of the information-bibliography activity, which is a part of the production potential of the society that performs professional activity through information-bibliography technologies. Taking into account the trends in the development of professional resources for bibliographic activity in recent years, it is possible to identify social problems related to the changes in the content and forms of interaction between this system and the social space surrounding it, which are manifested today.

It is primarily about the prestige of the bibliography profession in the modern world. The identification of bibliography with librarianship leads to the fact that the sovereignty of this type of activity, the bibliographic profession, is lost, and the natural migration of professional resources to other fields is hindered. The leading role in solving this situation should be played by the professional bibliographic community, its active social position, and participation in public processes, not only in tandem with the library community, but also independently.

Apparently, the problem of stratification of representatives of new bibliographic professions can become one of the most acute problems. On the one hand, there is reason to say that in the near future, it will become a group with a positive privileged status, as experts-sociologists say. On the other hand, the development characteristics of the professional environment in the information sphere allow us to anticipate negative changes.

According to the German sociologist Max Weber's theory, one of the determining factors affecting stratification is qualification (level of education). Thus, diplomas, scientific degrees, titles, etc. allow one to take a more favorable position both in the labor market and in the social space and to build a more stable and successful career. In addition, among the most significant changes in the professional resources of information and bibliographic activity, the loss and re-specialization under the influence of technological innovations, the personalization of information

technologies, the decrease in the effectiveness of social information technologies, etc. can be mentioned. In this regard, there is a kind of professional migration at the level of both specialties and types of professional activity. Often, the transition from the profession of a bibliographer to another information profession is not accompanied by official confirmation of qualifications in the second higher education, additional education, or higher education system. Mastering certain skills in a new profession is realized as a result of personal self-development efforts. Diplomas, scientific degrees, and titles that an information specialist received 20 years ago, in most cases, remain insufficient in today's "information market," even if the specialist is at the beginning of a new professional direction. Thus, we can talk about the emergence of social barriers to entering a new professional society. The problem of professional isolation among graduates of certain educational institutions or representatives of certain professions may become acute.

Serious attention should be paid to the retraining of information specialists, their professional development courses, additional education, and the development of internal corporate education programs that are effective in changing the activities of the entire organization (for example, computerization, the introduction of new technologies, changing goals and tasks, the formation of a new information product or service). This will lead to the social and professional awareness of any information specialist, especially the bibliographer. A digital librarian-bibliographer is an information specialist responsible for the design, development, or maintenance of a digital library, including its collections and the services it offers to its users. The digital bibliographer continues to mediate between users and bibliographic resources despite remote implementation.

Education and certification are essential qualifications for a bibliographer engaged in electronic bibliographic activities. It should be noted that digital librarians in the United States must have at least a master's degree in library science. Becoming a digital bibliographer requires some effort, but based on the experience of foreign countries, it can be said that their salary is also high. In our country, of course, the master's degree education of librarians is the main factor in increasing their rank and salaries across the state. Technology skills are of prime importance. Sometimes the work of an electronic bibliographer requires problem-solving skills and the initiative to update knowledge through continuing education.

A digital librarian-bibliographer works in a library and oversees its digital collections. Libraries are no longer just buildings full of dusty books, they have online collections to meet the needs of users. Digital bibliographers are responsible for acquiring new digital media for collecting and digitizing physical records. They should know MARC cataloging rules, which are the way

information is stored in online cataloging. In addition to being well versed in traditional methodologies, they must have excellent computer and internet skills to maintain digital collections, use appropriate software, and manage the library's digital presence on social media or websites. At the same time, soft skills such as initiative, interpersonal communication, and problem-solving skills are considered essential. Digital bibliographers are professionals responsible for organizing and preserving bibliographic resources so that they are accessible to the public via the Internet. They must accurately catalog and maintain records of their digital collections. They can gain hands-on experience with digital media through internships or training.

Today's information and communication environment facilitates the implementation of new types of cooperation between scholars, publishers, and librarian-bibliographers and leads to the emergence of new roles for libraries and librarians, which indicates the intellectualization of the librarianship profession. A new type of library and information specialist is capable of becoming a scientist who thinks like a scientist and provides real help to the public in knowledge exchange processes by acting as a carrier of a humanistic outlook. A clear proof of this is the staff of librarian-bibliographers who are engaged in scientific research activities and have received a scientific degree (Ismayilov and Khudiyeva, 2023). In the long term, the main tasks of library-bibliography specialists will include skills such as analytical and innovative thinking, inventiveness, and psychological skills. The skills and abilities required for a digital bibliographer in an electronic bibliographic activity are as follows:

. Internet navigation, browsing, and filtering;

. access; digital document analysis;

. digital reference services, electronic information services;

. searching network databases in a number of digital sources and websites;

. creating homepages, content conversion, and uploading techniques;

. archiving of digital documents, placement of digital resources;

. digital preservation and storage;

. electronic messaging, communication skills;

. cataloging and classification of digital documents and digital content;

. conferencing techniques, including teleconferencing and video conferencing.

. development of digital information sources;

. digitization of print collections;

. development of machine-readable catalog entries;

. database design and development;

. software design and development for digital libraries;

. conversion of print media to digital media;

. knowledge in digital knowledge structures.

As the professional organization for inquiry and user services, the Reference and User Services Association (RUSA) has developed and updated a model statement of competencies essential for successful reference and user services librarians. This statement is based on the American Library Association's Core Competencies for Librarianship. RUSA competencies are essential for excellent reference and user services. Thus, they identify the key behaviors that lead to successful performance in organizations that provide user reference and user services. Skills refer to the infrastructure of core competencies required by all professionals, such as communication, information technology, digital literacy, reading, writing, and math skills. Therefore, RUSA competencies focus on the abilities, skills, and knowledge that make reference and user services librarians unique among other professionals.

Conclusion

The aforementioned, i.e., the results of this study, suggest new aspects of the competencies of an emerging profession, but it should also be noted that, with the exception of some work done in Europe, comprehensive international research in this area has not yet been carried out. As of yet, no comprehensive body of research has been found that looks at digital librarianship from all angles and predicts what will be needed both now and in the near future. A major drawback of these studies is that they are all more or less retrospective, analyzing only the current situation, with minimal future research.

Appropriate training in digital technology skills, both in-house and through seminars, workshops, mentoring, train-the-trainer, conferences, and further education, is absolutely essential. Academic libraries and librarians of the 21st century must build a new roadmap by continuously learning new technologies, skills, and competencies. These will enable bibliographers to participate positively in the new technology-driven environment.

References

Agayeva, K., & Abbasli, V. (2023). Suleyman Rahimov's Role in the Development of Libraries in the 20th Century. *Akademik Tarih ve Düşünce Dergisi*, *10*(6), 2158-2165.

Ismayilov, N. & Khalilova, N. (2023). Novi vydy bibliohrafichnykh resursiv v elektronnykh nosiyakh. *Naukovo-teoretychnyy al'manakh Hrani*, *26* (5), 101-109.

Ismayilov, N. I., & Aliyeva, G. (2023). Creation and Formation of Document Flow in the Field of Library-Bibliography (on the Basis of Tazkiras). *Scientific and Theoretical Almanac Grani*, *26* (3), 165-170.

Ismayilov, N. I., Mahammadli, D., & Khudiyeva, V. (2022). Methods and Means of Information Search in the Digital Environment. *Scientific and Theoretical Almanac Grani*, *25* (5), 31-34.

Ismayilov, N., & Khudiyeva, V. (2022). Assessment of digital knowledge and research skills and overview of on going work at the national level, forecasting. Concepts of digitization. *Technium Social Sciences Journal*, *35* (1), 593–600. https://doi.org/10.47577/tssj.v35i1.7246

Ismayılov, N., & Khudiyeva, V. (2023). Conducting training and research, problem solving, creative thinking. *Akademik Tarih ve Düşünce Dergisi*, *10* (2), 643-649.

İsmayilov, N., & Khudiyeva, V. Analysis and Processing of Users' information and Research Requests. *Akademik Kitabxanalarin Yeni Fəaliyyət Istiqamətləri*, 36.