

# OPEN ACCESS AND LIBRARY: THE POSTULATES OF INTERACTION

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## Abstract

Modern technologies turn the librarianship into a large-scale branch of the information industry; new practices allow transforming traditional functions of libraries, and new content appears in their basic technological processes. Today it is not enough for a librarian to know the exact location of a particular document in the collection of his library, he is obliged to navigate in the electronic collections of the world space. The idea of equal access to information and text, which is familiar and natural for libraries, continues to work in the new conditions. The availability of free online collections only increases the resource potential of the library.

The article uses the bibliographic method, the bibliometric method, and the modelling method based on the analysis of publications on the topic and the experience of libraries to derive the main postulates of interaction between the Open Access initiative and library.

It is noted that Open Access for scientists is a form of communication and a way to share the results of their experiments and research. Open Access performs a kind of fund-forming function for libraries, allows to fill in the gaps existing in the funds by legally accessing external resources. There are also such directions in providing libraries with readers' access to open resources as systematization of information about open journals by library profile and providing the reader with links to open electronic platforms and journals; search for open articles in hybrid journals, etc.

Open Access documents and data are of interest to libraries and library professionals as resources of scientific, educational and cultural significance. Due to the large-scale distribution of Open Access e- resources, their quality is not always unambiguous, so the preparation of appropriate guides or navigators may become relevant in the activities of libraries of all types. Methodological features of such navigators are determined by the inseparability of the unity of the bibliographic and electronic nature of the e-resources and are characterized by such attributes as: formalized description of the object, structured information, abstracts, auxiliary pointers, illustrative materials, hyperlinks, search bar, indication of the date of the last update. Such navigators for Open Access e-resources will be especially in demand for information and bibliographic support and support of educational and research developments in individual areas of knowledge, case study. As an example, the demand for and methodological features of preparing such information products for Open Access e-resources in radioelectronics is shown. Methodological products of libraries (recommendations, memos, etc.) on the search and use of Open Access e-resources, various training events may also be in demand.

Undoubtedly, the Open Access initiative is a benefit for libraries and library specialists. The modern library accepts this phenomenon as a consultant, as a mentor and as a moderator.

**Keywords:** Open Access, librarians, navigators, information resources, e-resources

## INTRODUCTION

Modern open electronic publications have existed as long as the Internet itself. The abundance of free information with unlimited access, published by both professional publishers and private users, has served as the basis for such successful information projects as Google, Facebook,

Twitter, Wikipedia, etc. In turn, the rapid development of electronic services and publishing technologies, in turn, leads to an avalanche of electronic publications, although it is obvious that many open publications are private and not always reliable.

In the professional library environment, open resources have long been considered a source of fast, but low-quality information, which makes libraries lose their readers who are attracted by the speed and convenience of Internet services. Nevertheless, almost all aggregators of scientific, educational and professional literature use Internet technologies to provide access to their publications and exchange information with authors, readers and libraries.

At the same time, the problem of access to scientific knowledge is relevant for the world of science as a whole, since the most high-status and popular information resource, scientific journals of major publishers remain available exclusively on a paid basis. It turns out that many educational and scientific institutions are not able to pay for subscriptions to these resources, not to mention individuals who are offered the only opportunity to buy materials item by item for an impressive amount of money.

The Open Access idea was not proposed by librarians, but they were the ones who began promoting it actively long before scientists. Scientists were the real creators of the technology and the Open Access system and they were the first to use it for information exchange. Hence, the idea of providing free and prompt access to scientific publications and research results was born in scientific and library communities.

The basic principles of Open Access were first formulated on February 14, 2002 in Budapest at a meeting held by the Open Society Institute. By Open Access to [peer-reviewed research literature] we mean its free availability on the public internet, permitting any user to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited (Budapest Open Access Initiative, 2012). Open Access is provided in various forms, including the publication of free electronic journals, free access to publications in commercial databases, and the creation of individual, institutional, and industry-specific electronic archives and repositories. Today, it is no longer enough to create a network of open logs or green repositories. Open Access can and should fundamentally change the principles of scientific communication, become a platform for innovation that can use all the possibilities of the digital environment, those tools of new media that are not available to the traditional publishing industry.

Open Access for scientists is a form of communication and a way to share the results of their experiments and research. The Open Access initiative has great potential for the development of libraries, library and information services.

Today, in the context of widespread digitalization of all spheres of society's life, the opinion about the lack of demand for libraries with their document collections is growing. But modern technologies turn librarianship into a large-scale branch of the information industry; new practices allow transforming traditional functions of libraries, and new content appears in their basic technological processes. In this context, we should talk not about the library's mortality, but rather about new types of beneficial interaction with new practices, primarily with the Open Access initiative.

Since the announcement of the Budapest initiative, a large number of articles have been published on the forms, resources, positive and negative consequences of the initiative. Recently there have been contradictions and conflicts in the understanding of its essence and

consequences (J. Ashton, M. Beattie, etc.). The link between the Open Access initiative and the library is less frequently affected (S. Barr, C. Lux, E. Kroski, etc.), in Belarus these studies are carried out both in theory and in practice by V. Brichkovskij, A. Skalaban, etc. Nevertheless, this interaction continues to require its own special justification, summarizing, defining forms and prospects.

The research object of this article is the close link "Open Access – library". The article aims to define and justify the postulates of interaction between the Open Access initiative and the library, to determine the priority formats of this interaction. The objectives of the article are to analyze the array of publications on the topic, study the practical experience of libraries in interacting with aggregators of Open Access resources and using these resources in various areas of their activities, and model effective formats for such interaction.

## **METHODOLOGY**

The bibliographic and bibliometric methods were applied to identify and study publications on the topic, and the modelling method was used to derive the main postulates of interaction between the Open Access initiative and the library based on the analysis of publications on the topic and the experience of the largest libraries of Belarus.

## **RESULTS**

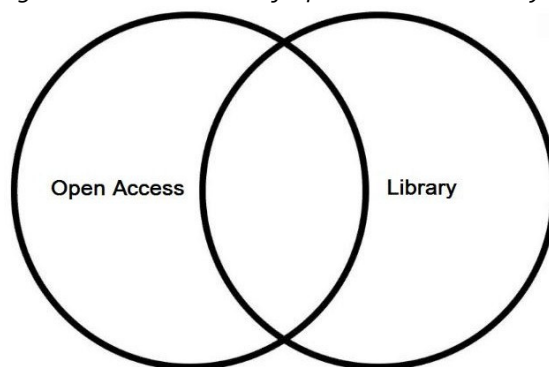
Librarians are among the most ardent supporters of Open Access, because the acquisition of information is the most important principle of their profession. Open Access removes both price and legal barriers that undermine the efforts of libraries to provide access to scientific and educational literature.

Today it is not enough for librarians to know the exact location of a particular document in the collection of their libraries, they are obliged to navigate in the electronic collections of the world. The idea of equal access to information and text, which is familiar and natural for libraries, continues to work under new conditions. The availability of free online collections only increases the resource potential of the library. For example, the new aspects of the Open Access technology are shown by A. Zemskov. The author considers both key functions of the Open Access systems, namely the dissemination of research information (here by virtue of the repository establishing in the library), and the provision of information to library users (here by virtue of navigation to Open Access journals and repositories) to be important for libraries (Zemskov, 2016).

Current publications and experience of libraries allow to determine the main postulates of interaction between the Open Access initiative and the library. As a result of the study, the following interaction formats were identified: fund-forming, systematization and search, navigation, support for placing documents in repositories, consultancy and methodological support, active participation in discussions on a wide range of issues of Open Access.

This interaction can be visualized using the Euler circles. On Fig. 1 circles (and their corresponding phenomena Open Access and library) are equivalent, and the above postulates of interaction lie in the overlay area.

Figure 1. The interaction of Open Access and library



This interaction is beneficial to both, while society receives double benefit. The contact area is obviously possible to increase over time.

### Fund-forming

Today several forms of the library collection acquisition process have been defined: 1) the acquisition of special, universal, mass collections of libraries with publications on traditional media based on the analysis of the current document flow; 2) the acquisition of funds with paid e-resources in the form of abstract, bibliographic, factual databases, full texts, documents on a stationary medium; 3) the purchase of access to resources, which can be temporary, renewable or not renewable; 4) the digitization of content based on traditional documents; 5) a new method of acquisition – creating collections in the form of electronic copying of Open Access e-resources or creating special search mechanisms that provide access to profile open remote resources. All forms of acquisition are developed on a single ideological and methodological platform.

The issue of including segments of Open Access e-resources in the form of documents in the fund is not fully resolved. Some experts call this part, which consists of cubes of world information resources used in remote access mode, a virtual part of the library fund, since the composition of this part is determined by the tasks, type and profile of the library. Other experts argue that open network documents cannot be considered as a library fund. In order to include them in the library fund, a special agreement with the copyright holder or distributor on the right of access to the resource is needed, which will allow transferring the content to a stationary data storage belonging to the library.

Open Access primarily performs a kind of fund-forming function for libraries, allows filling in the gaps existing in the funds by legally accessing external resources. Free access to Open full-text resources is always available to readers. Full-text electronic publications paid for by their authors can be considered as a long-term source of development and replenishment of library collections.

In this context, it is important for librarians to be able to identify the arrays of open full-text e-resources available to the user, study their potential, make decisions about the possibility of refusing paid access to certain available resources, develop strategies for reflecting current free access resources in the library's reference and search engine, and promote e-resources to users in order to meet their information needs.

Almost none of the libraries buy e-resources without joining the corresponding consortium or several consortia. Consortia are not just collective subscribers. Many of them conduct educational programs, seminars and symposiums on acquisition, copyright, the availability of alternative scientific journals and resources, and widely promote Open Access initiatives and institutional repositories. Thus, Open Access resources provide a unique opportunity for

libraries to make their collections richer, as well as for authors and publishers to widely disseminate their ideas and achievements.

### **Systematization and search**

There are also such directions in providing library users with access to open resources as systematization of information about open journals and resources based on the library profile and providing the reader with links to open electronic platforms.

There are a number of projects that systematize Open Access e-resources, including electronic libraries. Scientific libraries and libraries of higher education institutions also organize information about specialized open journals and publications. For this purpose, as well as for the formation of funds, a high-quality search for open resources is necessary.

One of the steps towards the transition to open science, taken in order to optimize the search and systematization of institutional repository resources, is the Union of all repositories on a single platform national aggregator (Brichkovskij et al., 2013).

N. Litvinova notes that it creates a situation in which library users entering the library website, were forced to search for the desired documents using a variety of different search boxes: in the electronic catalogue, revealing a mostly traditional print fund; in the electronic catalogue; in the Windows search in many licensed resources; global search services of the Internet through which you can find a large number of documents in free access (Litvinova, 2018). To create a single search space for diverse library resources, discovery services were developed in the early 2010-s, and now they are widely used in libraries around the world. Such discovery services are the kind of systematization and search of Open Access e-resources.

### **Navigation**

According to experts, the task of organizing scientific Internet documents in accordance with bibliographic standards is quite complicated, since the Internet contains a huge number of documents, including those published long ago. At the same time, there are no special structures that track the appearance, changes, and safety of new documents in the network, as well as their classification. To solve the problems of organizing Open Access documents, integrating them into the library information system and delivering them to users in convenient formats, it is necessary to create navigation tools that facilitate search tasks in the first place. Due to the large-scale distribution of Open Access e-resources, their quality is not always unambiguous, therefore the preparation of appropriate guides or navigators may become relevant for the activities of libraries of all types.

In general, navigators are a structured catalogue of links to both full-text Internet materials and reference and bibliographic materials. Most often, navigators indicate the name of the resource and its Internet address. The presence of annotations increases the information capacity of navigators, their practical and functional significance. Such navigators for Open Access e-resources will be particularly beneficial for information and bibliographic support of educational and research targets in individual areas of knowledge, case study.

In this context the development of a Navigator for Open Access e-resources in radioelectronics has become relevant for us. In the global economy, the development of radioelectronics is of great importance as a basis for ensuring the technological independence of the state, its economic security, and public health and safety. In the Republic of Belarus, the electronics industry receives considerable attention, as evidenced by the development and approval of concepts and state programs of the electronic industry development, the establishment of industrial parks and others. Information support for the radio-electronic industry and relevant specialized education is an essential condition for their successful advancement. E-resources

are the main source of data that allows getting fast access to up-to-date, timely updated documents, while a small proportion of them belongs to Open Access resources. The navigator is prepared primarily for the needs of the teaching staff of the Military Academy of the Republic of Belarus.

Methodological features of this navigator are determined by the inseparability of the unity of the bibliographic and electronic nature of the e-resources and are characterized by such attributes as: formalized description of the object, structured information, abstracts, auxiliary pointers, illustrative materials, hyperlinks, search bar, indication of the date of the last update.

Such solutions expand the information potential and significance of both Open Access e-resources and institutions that introduce search, analysis, systematization, and dissemination of these resources into their practice.

### **Support for placing documents in repositories**

Nowadays, the obvious function of library specialists in scientific and academic libraries is providing support for placing documents in repositories, promoting agreements on the transfer of copyright rights that would allow such placement.

Library specialists organize Open Access institutional repositories, promote scientific journals of the organization and publications of its employees in the world scientific and information systems, monitor access to and the use of Open Access e-resources, study the information needs of users and specialized areas of work of departments, organize training events for employees aimed at developing skills in working with Open Access e-resources, etc.

### **Consultancy and methodological support**

Sharing information resources demand from librarians to pay more attention to providing advice and methodological support to their users and their own employees.

Librarians see their key role in providing expert advice on various aspects, such as orientation and legal use of Open Access e-resources. In addition to navigators of Open Access e-resources, at these stage libraries create advertising materials, guidelines for the legal use of such resources, and conduct training events and workshops.

Events are held for employees, methodological products are prepared in order to improve the legal literacy of all those involved in scientific communication as they must understand the specifics of new media, open licenses and principles of Open Access. For example, in 2017, in Russia, within the framework of the Open Library Resource center project a methodological guide "Open Library" was prepared for library employees. It described the algorithm for publishing works, the principles of using open licenses, description of legal issues, as well as answers to questions frequently asked by librarians. Within the framework of this project, a competition is also held for libraries to place the public domain in Open Access and for Internet users. As part of the project, libraries hold a series of seminars where invited experts and participants of wikiprojects explain the specifics of copyright to library staff, speak about the possibilities of using Wikitec, Wikimedia Commons and other resources.

Thus, methodological products of libraries (recommendations, memos, etc.) on the search and use of e-resources of Open Access, as well as various training events are in demand.

### **Active participation in discussions on a wide range of issues of Open Access**

Participation of library specialists in discussions and debates on a wide range of Open Access issues, their interaction with scientific and educational organizations is no less important than the implementation of practical directions of Open Access initiatives. Library professionals

discuss issues relating to the development of Open Access in their countries, regional consultations of UNESCO on the problems of Open Access to scientific information and research the effectiveness of market development of scientific and educational publications, institutional repositories, the implementation of the requirements for the use of international standards describing different object types, the identification of standards and mandatory backup objects, as well as data transfer protocols for different elements of the Open Access infrastructure, interoperability and others. The transition to open science should be based not so much on the initiative of the state, but on the actions that can be taken by scientific organizations, scientists, universities, publishing houses, and libraries themselves.

## CONCLUSIONS

Open Access documents and data are of interest to libraries and library professionals as resources of scientific, educational and cultural significance. We have come to the conclusion that the organization of open resources in libraries can be defined as a process of fund-forming, systematization and search, support for placing documents in repositories, navigation, consultancy and methodological support, active participation in discussions on a wide range of issues of Open Access.

Thus, the study has confirmed that Open Access and libraries have more common ground than conflicts. For Open Access, this is a high-quality promotion of the dissemination of its initiatives. For libraries, this is an opportunity to be an information conglomerate while maintaining their traditional functions and tasks. From a practical point of view, this determines regular joint research, projects and unique information resources (full-text, methodological, metadata, etc.).

The Open Access movement seems irreversible. It has certainly led to some reduction in prices and to increased publishers' flexibility in drawing up contracts and providing access to their resources. Open repositories created through the efforts of information technology specialists and librarians produce positive results in the dissemination of scientific and educational information, its preservation and provision of fast access to it. In this context, librarians are a large group of intelligent consumers and Open Access providers who support authors, Open Access publishers, and holders of electronic repositories.

Future research on the topic should address the unification of the processes of interaction between Open Access initiatives and libraries, the creation of appropriate schemes and protocols, conducting an educational campaign to inform libraries about opportunities to participate in Open Access projects and the rationale for understanding that libraries, along with scientists and specialists, are direct participants in Open Access practices.

To ensure that librarians continue to be important participants in these processes, a creative approach is required: librarians should support users in new communications and help them master new technologies and tools. Changes in the worldview of librarians, new tools and infrastructure are needed in order to work not only with print publications, not just to store information and provide it intra muros the library, but to contribute to the saturation of the information environment with knowledge and cultural values.

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