

Problems and Solutions to Improve the Efficiency of Using Electronic Information Resources at Universities in Uzbekistan

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Abstract. The relevance of studying the needs of users of global information resources in scientific and educational institutions of Uzbekistan, access to which is provided as part of a National subscription, is due to several factors: despite the expansion of access to electronic databases of leading foreign publishers and aggregators and an increase in the number of universities in the republic, statistics on the use of these resources leaves much to be desired, the passive work of library staff to promote information resources in universities and research centers, the lack of interaction of information resource centers with departments for the training of scientific and pedagogical personnel and academic work, the low level of information culture of young scientists, teachers, researchers and applicants about current sources of scientific information in their organization and in public libraries of the country, the lack of knowledge and skills to work with international databases of scientific and analytical information. In order to receive feedback from users of global information resources and study their needs, a survey was conducted. Based on the analysis and generalization of the survey data, proposals are formulated to enhance the use of scientific and educational resources in universities and research centers: in each information resource center of the university and research center, select a responsible specialist for organizing trainings, master classes on working with electronic resources and their promotion, organize regular webinars on working with certified trainers databases and analytical systems in Uzbek for teachers, doctoral students, applicants and researchers.

Keywords: *access to information, databases, electronic library, electronic scientific and educational resources.*

I. INTRODUCTION

Nowadays, called the information age, it is impossible to imagine scientific research, student education, or even school education without powerful information support. Information support for the processes of education, scientific research, production, and business largely

determines the further development of society. The use of electronic resources significantly increases the effectiveness of education and research. Today it is already obvious that the development of scientific activity directly depends on the effectiveness of its information support. At all stages of planning and execution of research work, it is necessary to study and analyze domestic and international scientific experience. In-depth study of information on the subject of research allows you to eliminate the risk of unnecessary time spent on an already solved problem, study in detail the entire range of issues on the topic under study and find a scientific and technical solution that meets a high level. Therefore, it is necessary to provide wide access for specialists to huge streams of reliable scientific information and, above all, to electronic publications that allow them to quickly gain knowledge about new trends in science and society [1].

Many publications in foreign literature are devoted to the problems of working with electronic information resources (EIR). Thus, in the works of Russian authors E.M. Polnikova [2], [3], E.V. Avramova [4], S.A. Morozova, I.K. Razumova, etc., there are practical examples of organizing work to promote and popularize electronic resources in university libraries, the organization of effective work with EIR in the technical aspect is reflected in the publications of V.V. Pisyakov, N.N. Litvinova et al. A huge number of scientometric studies show that the level of publication activity in various countries is directly related to research funding [6]-[8], the level of information support [9], [10] and the amount of subscription costs [11]. Confirmation of this can be found in open data on the cost of subscription of universities in the UK, the Netherlands and Finland to databases of the world's leading aggregators of scientific information [12]-[15].

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The reforms carried out in Uzbekistan since the early 2000s in the field of science and education have also touched upon the urgent tasks of access to valuable information, databases of scientific and educational resources, electronic journals and books for researchers, doctoral students and students. To improve the quality of education and the effectiveness of scientific research, it is necessary to ensure prompt access to global arrays of scientific and educational resources. In this regard, in recent years, Uzbekistan has implemented projects of National subscription to electronic databases of leading publishers and aggregators such as EBSCO Information Services, Clarivate Analytics, Springer Nature, Elsevier, etc. Currently, universities and research centers of the republic already have access to the resources of the databases EBSCOhost, Web of Science, Science Direct, Scopus, Springerlink, Proquest, etc., which significantly increased the effectiveness of scientific research and the quality of the educational process [16], [17].

The information support system in Uzbekistan includes three main components:

1. Resources acquired as part of government subscription projects for global citation indexes, and full-text and abstract databases. Access to resources is paid for within the framework of projects of the Ministry of Higher Education, Science and Innovation and the National Library of Uzbekistan named after Alisher Navoi (NL), which is a subordinate organization of the Information and Mass Communications Agency under the Administration of the President of the Republic of Uzbekistan. Access is free for subscription-recipient organizations. Subscription is carried out at the consortium level for a fixed number of organizations, or at the national level when any organization that meets the conditions regulated by the Ministry or Agency can become the recipient of access. Since 2016, the NL has organized a National subscription to electronic databases of the world's leading provider of information resources EBSCO Information Services for 125 organizations, including universities, scientific institutes, and libraries, a Consortium subscription to the international database of dissertations ProQuest Dissertations&Thesis Global for large state universities, libraries and scientific institutes of the Academy of Sciences of the Republic of Uzbekistan has been organized during 2018-2021. As part of the World Development Bank project, all universities under the Ministry of Higher Education were given access to full-text and analytical databases of Elsevier Publishing House. Since January 2019, the Ministry of Higher Education, Science, and Innovation has organized a National subscription to the electronic resources of the Springer Nature publishing house for 105 scientific and educational institutions of the republic.

2. Along with this, information and library centers (ILC) play an important role in providing information to specialists, teachers, and doctoral students, whose library fund has been expanded with electronic databases of world scientific and educational resources with the support of the NL. The NL and its branches, the leading

ILC of the republic serve researchers, doctoral students, undergraduates, and students of universities and research institutes, and play a significant role in providing, acquiring, storing, and distributing scientific information, without which it is impossible to conduct scientific research. The NL pays great attention to the multidimensional study of users' information needs, a comprehensive analysis of the use of printed and electronic publications, coordination and cooperation in the acquisition of funds. A correct and methodically sound assessment of resources and a forecast of their importance will make it possible to develop a fund acquisition strategy, organize collective access to electronic publications, and meet users' information needs [18].

3. In recent years, some universities have begun to complete funds with specialized electronic resources at their own expense.

II. MATERIALS AND METHODS

The quality of information support for scientists and specialists depends almost entirely on what information resources are used in information service systems aimed at these tasks. Therefore, it is necessary to study the information needs of higher educational institutions and research centers in Uzbekistan and develop recommendations on relevant information sources according to their specifications. For this purpose, a survey was conducted among teachers and doctoral students of universities and scientific centers of the republic. The questionnaire includes the following questions: "What are the main sources of scientific and educational information for your scientific and pedagogical activities?", "What is the level of information support for your scientific work? The level of access to scientific journals in your scientific field", "Electronic full-text resources and analytical systems of which publishers and aggregators do you use for your research activities?", "What difficulties do you experience when working with these electronic resources?", "Which international databases of scientific and educational resources are currently subscribed to in your organization?", "Have you previously attended webinars, seminars, trainings, or master classes on working with these platforms, and in what format?", "What topics would you like to discuss on the webinars, master classes, and presentations on global information resources?", "What do you consider to be the most effective way to improve the level of scientific research, publications, and dissertation defenses?", "What is the role of plagiarism verification systems?"

II. RESULTS AND DISCUSSION

190 respondents participated in the survey, of which 85 were teachers, 83 were doctoral students and applicants, and 21 were researchers.

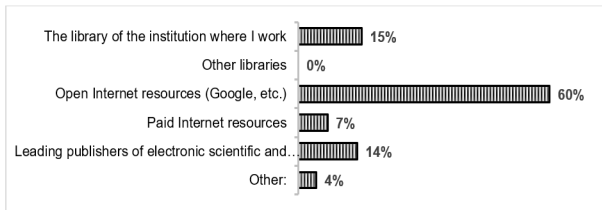


Fig. 1. Responses to the question “The main sources of scientific and educational information for your scientific and pedagogical activities?”

Fig.1. Based on the survey, it was revealed that despite the available access to reputable sources of scientific information, 60% of respondents use open Internet sources like Google and others, 14% use databases of leading publishers, 15% use the resources of the institution's library, 7% use paid Internet resources. Unfortunately, none of the survey participants visits other public and scientific libraries to obtain the necessary scientific and educational information. This suggests that the majority of users of scientific and educational resources are not aware of access to electronic scientific and educational resources in the National Library and its branches.

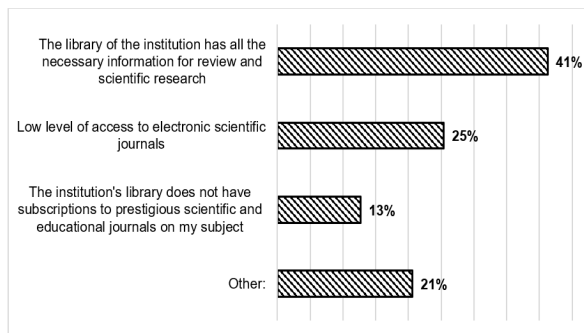


Fig. 2. Responses to the question What is the level of information support for your scientific work? (The level of access to scientific journals in your scientific field)

Fig. 2. 41% of respondents replied that the library of the institution where they work has all the necessary information for a review of the study, and this is not a bad indicator although it is not uncommon for doctoral students to use not entirely relevant sources when writing their scientific papers. 25% of the survey participants noted a low level of access to electronic scientific journals, and 13% stated that there was no subscription to prestigious journals in the institution's library.

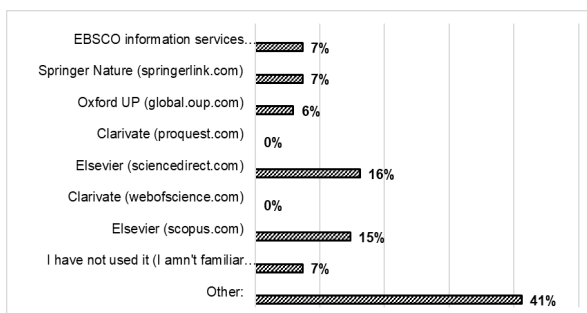


Fig. 3. Responses to the question Electronic full-text resources and analytical systems of which publishers and aggregators do you use for your research activities?

Fig. 3. The survey results showed that among the respondents, only 6% use Oxford UP electronic resources for their research activities, 7% - EBSCO, 7% - Springer Nature, 15% - Scopus, 16% - Science Direct, 7% - do not use resources at all, and 41% - use other sources of information.

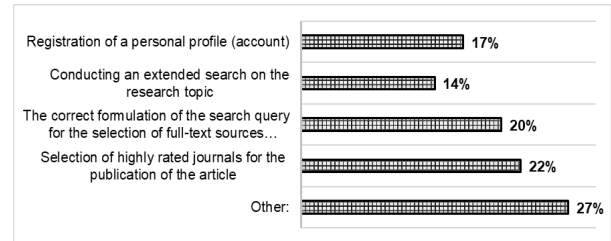


Fig. 4. Responses to the question What difficulties do you have when working with these electronic resources?

Fig. 4. When working with electronic resources, 14% of respondents find it difficult to conduct an extended search, 17% - register, 20% - have difficulties in correctly formulating a search query, 22% - cannot choose a highly-rated magazine for publication, and 27% choose another one.

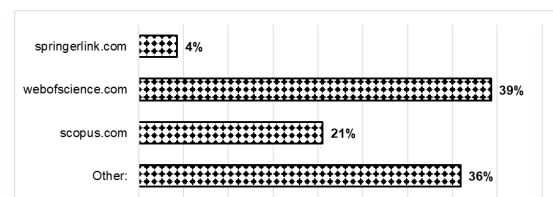


Fig. 5. Responses to the question Which international databases of scientific and educational resources are currently subscribed to in your organization?

Fig. 5. Currently, only 4% of respondents named Springer resources, 21% - Scopus, 39% - Web of Science, and 42% - chose another.

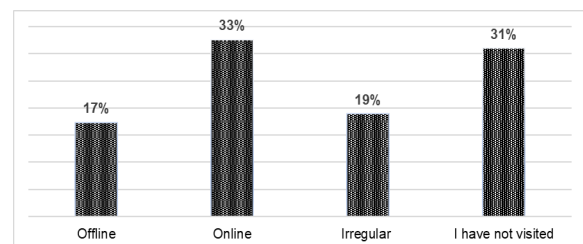


Fig. 6. Responses to the question Have you previously attended webinars, seminars, trainings, master classes on working with these platforms and in what format?

Fig.6. When asked about attending webinars and workshops on working with electronic resources, 33% of respondents participated online, 17% - offline, 19% - not regularly, and 31% - did not attend at all.

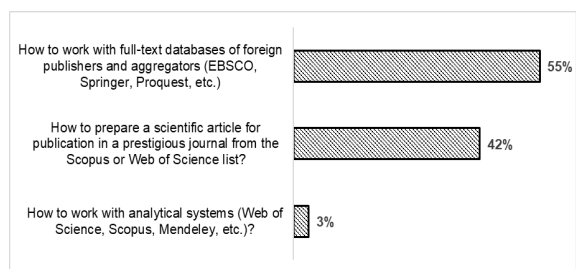


Fig. 7. Responses to the question What topics would you like to discuss in webinars, workshops and presentations on global information resources?

Fig. 7. When asked about the topics of webinars, master classes, and presentations on world information resources, 55% chose the topic “How to work with WIR databases”, 42% - “How to prepare a scientific article for publication in a prestigious journal” and 3% - “How to work with analytical systems?”.

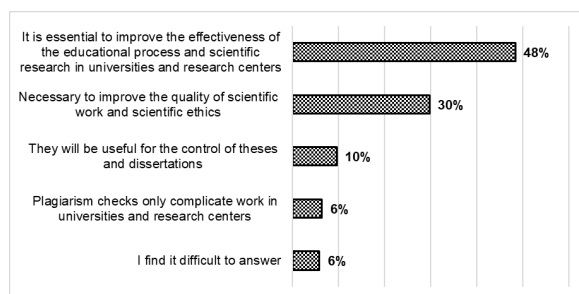


Fig. 8. Responses to the question What do you consider to be the most effective way to improve the level of scientific research, publications and dissertation defenses?

Fig. 8. It was interesting to know the respondents' opinion on the role of plagiarism verification systems: 48% said that such systems are extremely necessary to improve the effectiveness of the educational process and scientific research, 30% confirmed the need to improve the quality of scientific papers and scientific ethics, 10% - to control graduation and dissertation papers, 6% - noted that such systems only complicate the work in universities and research centers, and 6% found it difficult to answer the question.

IV. CONCLUSIONS

The main reason for the non-use or inefficient use of EIR is the lack of awareness of users about their presence in the organization or inability to work with them. Many other reasons contribute to this:

- lack of awareness of users about the EIR available in libraries
- lack of support and training for users on information retrieval issues
- low-quality websites of libraries of institutions;
- non-working usernames and passwords, links;
- uninformative or incorrect description of resources;
- incompetence of librarians in working with EIR.

All these shortcomings can be corrected by following some recommendations:

- regularly notify users about the availability of EIR in libraries (website, social network networks, etc.);
- information and library centers to establish cooperation with universities, research centers (scientific and educational departments, doctoral studies department, library) in order to promote EIR among end users and involve them in training webinars, master classes, etc.;
- regularly conduct training sessions, seminars, master classes on working with EIR for end users;
- it is necessary to work on the library website;
- use direct links to databases, their correct names and descriptions;
- make multiple access points to the resource in each information resource center of the university and research center, select a responsible specialist for organizing pieces of training, master classes on working with electronic resources and their promotion;
- organize regular webinars on working with databases and analytical systems in Uzbek by certified trainers for teachers, doctoral students, applicants, and researchers;
- the management of universities and research centers should ensure the participation of all employees in webinars organized by the coordinators of National Subscriptions;
- organize training seminars for young scientists and teachers on the preparation and writing of scientific articles for publication in highly rated journals.

We believe that such studies make it possible to study and identify user needs, introduce new forms of information and bibliographic services, and find ways to increase demand for information resources and services. They need to be continued, as the effectiveness of the use of electronic resources and the quality of end-user service depend on their results.

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