

A Study of the Views of Respondents on the Functioning of PRIMO. Information Retrieval System in Universities from Moldova

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Abstract

This article reflects the results of a survey of users' opinions about the PRIMO search system, which was implemented in seven universities in Moldova. The peculiarities of PRIMO system implementation in higher educational institutions of the country were revealed and recommendations for its promotion in the educational and scientific community of the Republic of Moldova were suggested.

Keywords: *Information retrieval system PRIMO, questionnaires, respondents, repository, scientific community, search algorithm, keywords, promotion, training.*

1. Introduction

The search platform PRIMO has become a new phenomenon in the information and educational space of the Republic of Moldova. Its launch and adaptation brought new opportunities in the information retrieval of university libraries, facilitating the receipt and processing of necessary information. However, the use of all the possibilities of the search engine requires careful preparation of the intermediaries in the transfer of information in the person of library specialists, as well as the training of the final/proper users.

The full potential of the PRIMO information product can only be used to the maximum by a trained user, and its preparation should become a systematic, well-thought-out process of the library specialists.

The users' training in the use of PRIMO information platform and institutional repositories should be based on the study of consumer information: their motivation, preferences, difficulties in using, suggestions and recommendations.

The study of the opinion of teachers, masters, doctoral candidates and students about the PRIMO search system was an important moment in the implementation of the project "Modern Information Services for Improvement Study Quality" and the report point for improving the functioning of this system and its promotion in the educational space of the Republic of Moldova.

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2. Results of the questionnaire

The study was implemented in September 2016 year among the seven universities-participants of the project.

The purpose of the study is to identify awareness and users opinions about the new search system PRIMO and institutional repositories.

The objectives of the study were:

1. Determination of the level of consumer knowledge about new search platform PRIMO;
2. Identification of the most important characteristics of this system;
3. Opinions studying on the attractiveness of the repositories of higher educational institutions for the scientific community and students;
4. Analysis of users recommendations and suggestions on the effectiveness of the PRIMO system functioning.

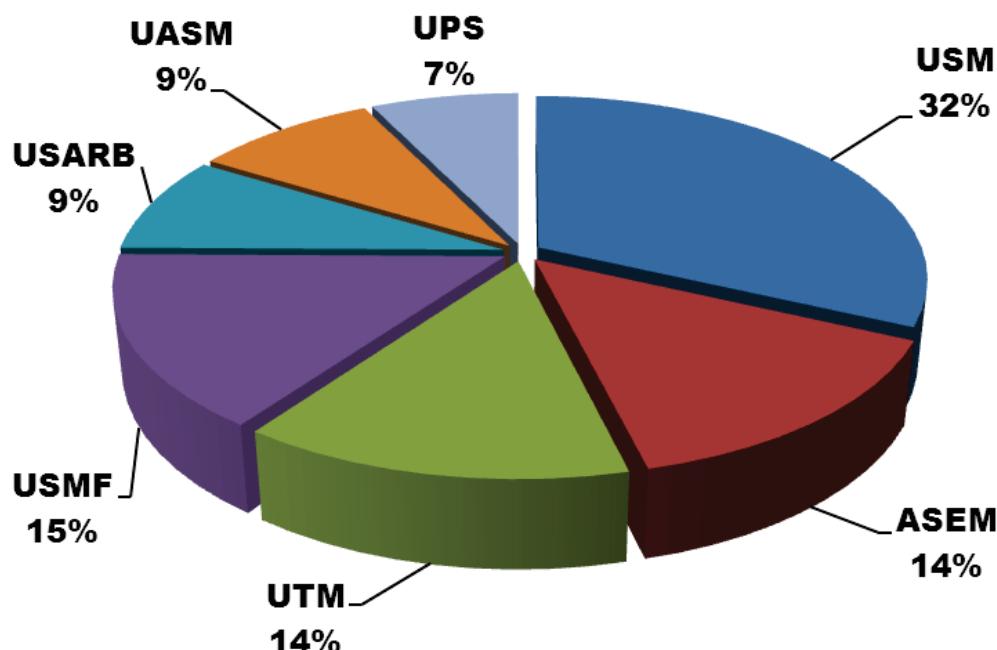
Sample of the survey complies the largest universities of Moldova: Medical University of Moldova, N. Testemițanu, Balți University, A. Russo, Agrarian University of Moldova, Academy of Economic Studies of Moldova, Moldova State University, Technical University of Moldova, Pedagogical University of Moldova it. I. Creangă.

Quota sampling. It is a model of the general population, which is represented by quotas, certain groups with common statistical characteristics.

702 respondents from seven universities participating in the project attended the questionnaire survey. Respondents were offered a questionnaire containing 21 items, among which there are open and closed questions, semantic differential, Likert scale, etc.

The percentage of respondents from the universities responding to the survey is presented in Figure 1.

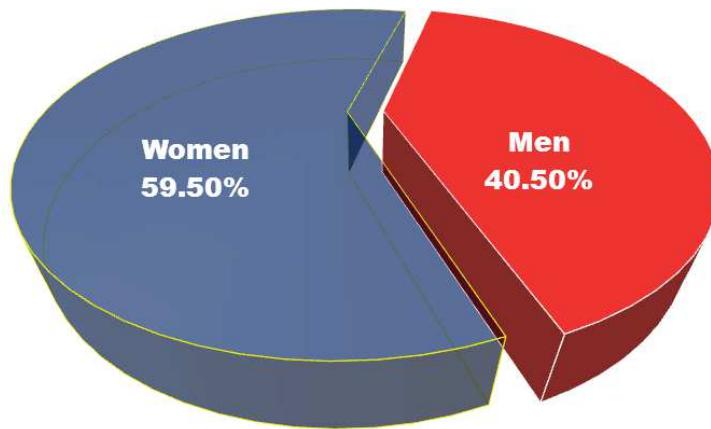
Figure 1. Respondents of higher education institutions taking part in the survey



Source: Elaborated by author

Among the respondents - 40.5% of men and 59.5% of women (Figure 2).

Figure 2. Gender of respondents

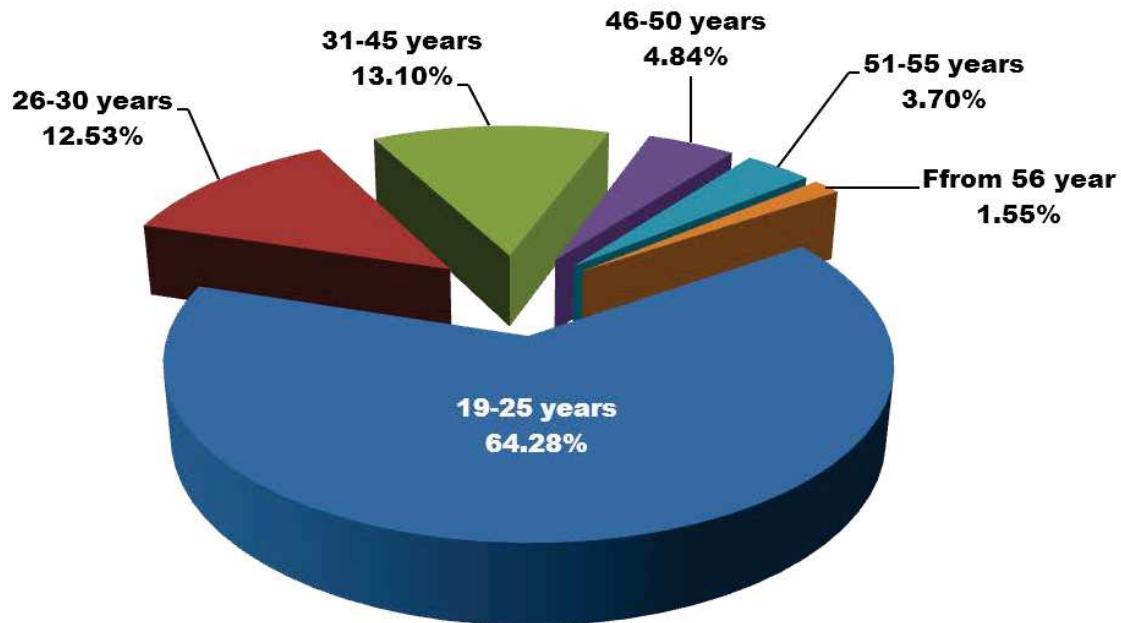


Source: Elaborated by author

The age structure of the respondents is presented in Figure. 3.

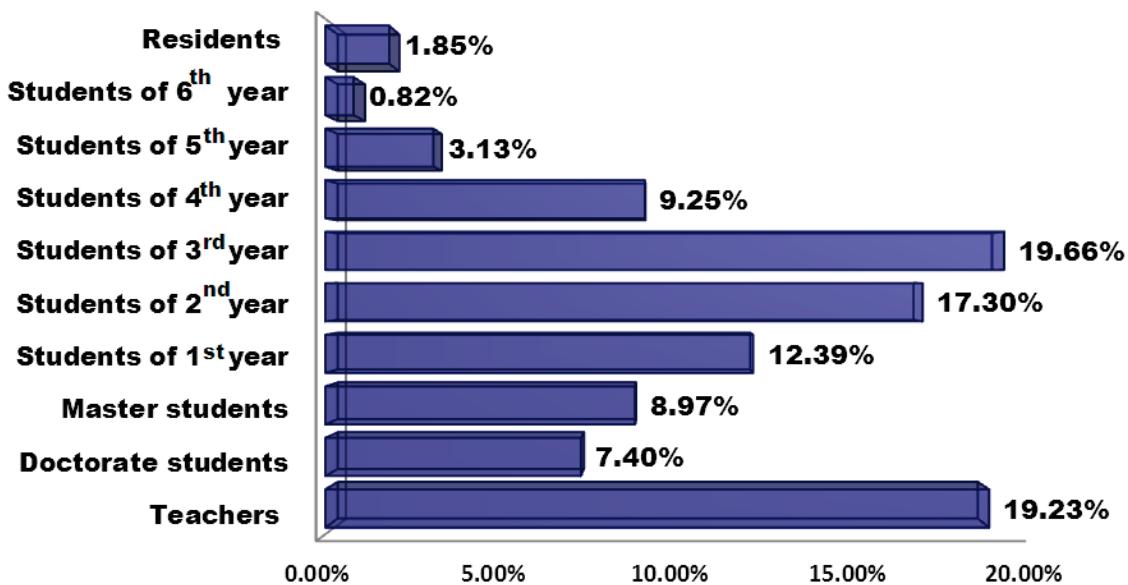
Thus, in the survey, respondents were mostly from 19 to 25 years old - 64, 28%.

Figure 3. The age structure of the respondents



Source: Elaborated by author.

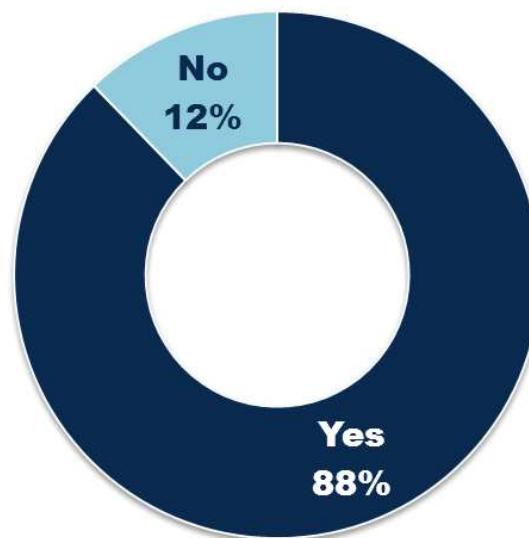
Status of respondents is represented in Figure 4.

Figure 4. Status of respondents

Source: Elaborated by author

Thus, we can note a balanced presence in the study of representatives of different status groups of users: from students to teachers.

On the first question of the questionnaire, "*Do you know about the new search online PRIMO platform in your library?*" 87.74% of respondents answered - yes, 12.26% answered negatively (Figure 5).

Figure 5. Do library users know about the new PRIMO search platform?

Source: Elaborated by author

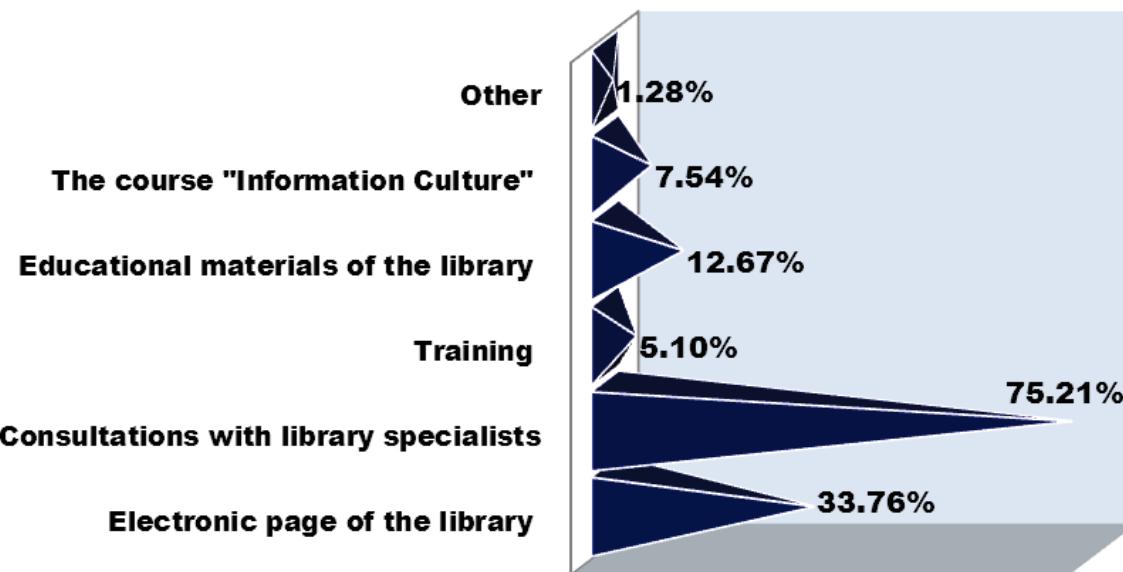
Respondents' answers demonstrate a fairly high result. Despite the short time period of presence on the websites of university libraries, the information product is already well known to users, indicating its successful promotion in the scientific and educational environment of the leading universities of the country.

Among 12.6% of respondents who do not know about this search platform, there are respondents who do not know that this system is called PRIMO, but subsequently note the advantages of the system and the frequency of its use.

This nuance demonstrates the lack of knowledge of respondents who use this information product, but do not have enough information about it.

Answers to the question "*Where did you learn about the new search platform in your library?*" allowed to reveal the effectiveness of various channels and ways of transferring information for PRIMO platform promotion (Figure 6).

Figure 6. The effectiveness of different channels and data transmission techniques for the promotion of PRIMO platform



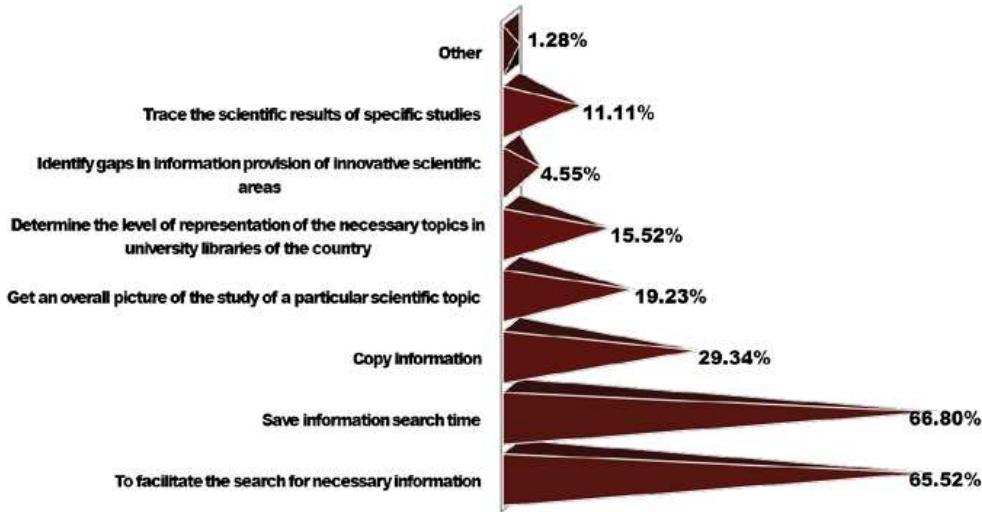
Source: Elaborated by author

While answering this question, respondents noted the complex impact of various information channels on them. The most popular, due to the complexity of this product are consultations with the librarian - 75.21%, the electronic page of the library - 33.76%, teaching materials - 12.67%, the course "Culture of Information" - 7.54%; training - 5.1%.

A small percentage of respondents found out about the PRIMO search system at the university senate, from acquaintances, from social networks, etc.

Therefore, there must be used various channels of communication in complex for effective impact on users and focus on the most popular among them.

The advantages of the PRIMO search platform and its functional features were determined by the respondents when answering the question "*The new search system of the PRIMO library allows*" (Figure 7).

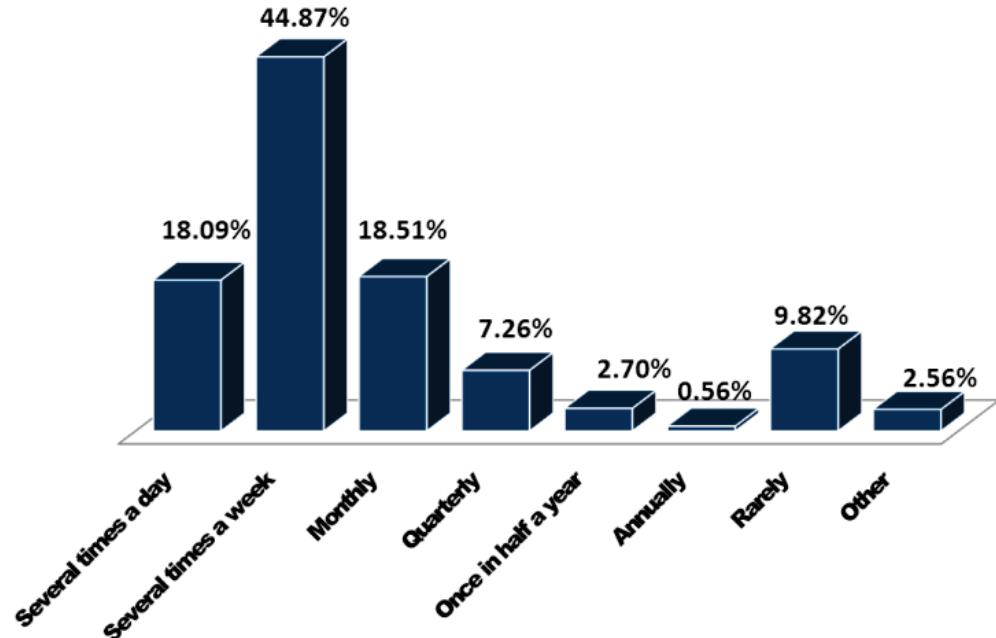
Figure7. Possibilities of the PRIMO search platform

Source: Elaborated by author

The most important advantages, according to respondents, are facilitating the search for necessary information - 65, 52% of respondents and saving time for searching for information - 66, 80%.

Doctoral students, masters and teachers noted such advantages as: to get a general picture of the study of a specific scientific topic - 19.23%; results of scientific researchers - 11.11% and others.

The respondents' answers to the question, "*How often do you search for necessary information through the PRIMO search system?*" are represented in Figure 8.

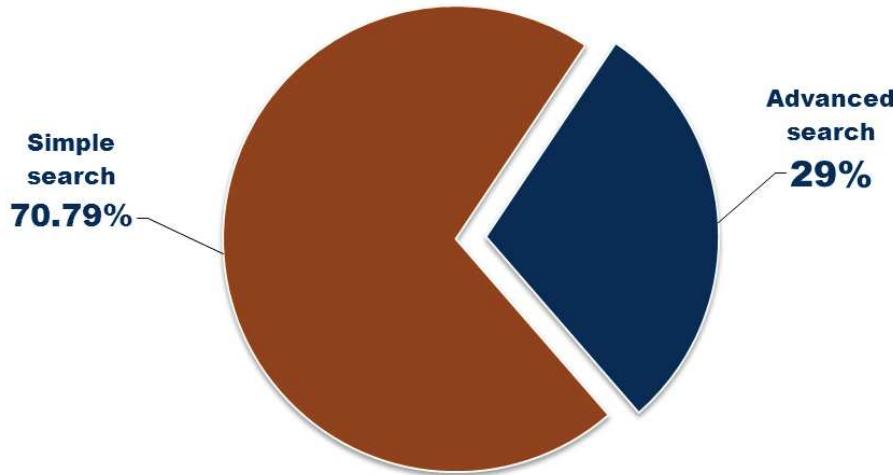
Figure 8. Frequency of use of the PRIMO search platform

Source: Elaborated by author

Thus, we can note the usefulness of the PRIMO platform and interest in it, as 44.87% of respondents use this platform weekly to search information, 18.09% - daily. The percentage of respondents who rarely use the PRIMO platform is still significant, which is explained by the short period of the presence of this product in the information market of Moldova and its availability for our consumer.

An analysis of the answers to the question: "*What type of search do you most often perform?*" showed that users are more likely to use simple search - 70.79%; advanced search is more used by 29.21% of respondents (Figure 9).

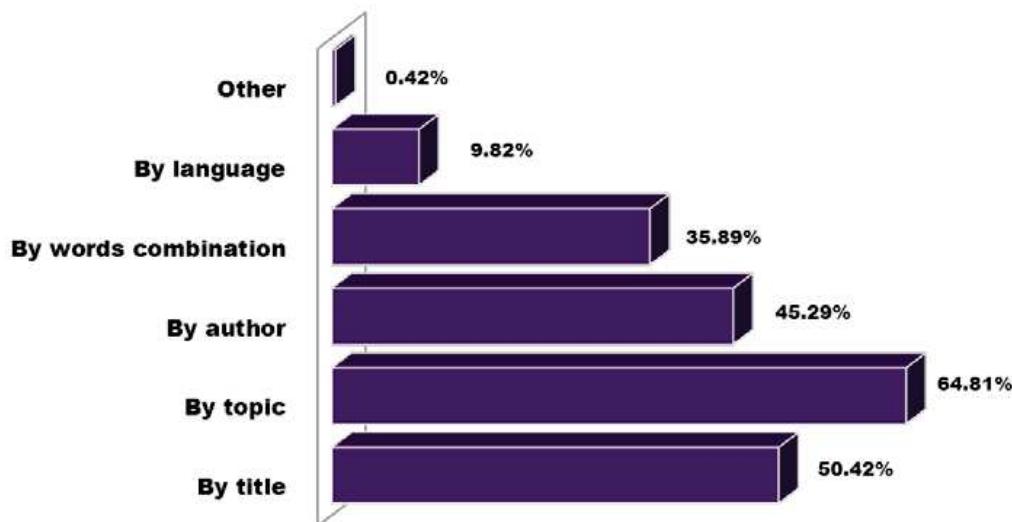
Figure 9. User preferences in the selection of search types in the PRIMO search system



Source: Elaborated by author

Answers to the question: "*What criteria do you use more often for advanced search?*" show results are represented in Figure 10.

Figure 10. Criteria for advanced search, more commonly used by users

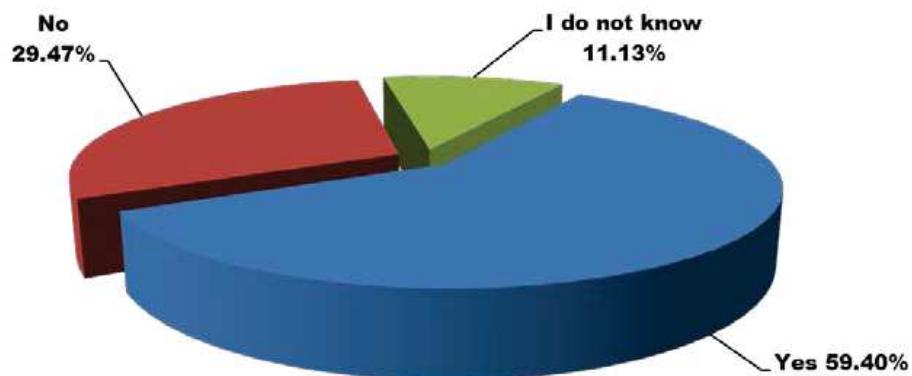


Source: Elaborated by author

Thus, it can be argued that users are more likely to use advanced search by the topic - 64.81% and by title - 50.42%. These criteria are more popular and understandable for students.

Answers to the question "*Do you need help from librarians in mastering the skills of using all the possibilities of the PRIMO new search system?*" allowed to identify the respondents' need for support and assistance from librarians. Thus, more than half of the respondents need the help of library specialists to master the skills of using the PRIMO information system - 59.40%. Do not need the help of librarians 29.47%, respondents who are undecided, that is, those who do not know whether they need or do not need specialist help - 11.13% (Figure 11).

Figure 11. The need for assistance from librarians in mastering the skills of using the PRIMO search system

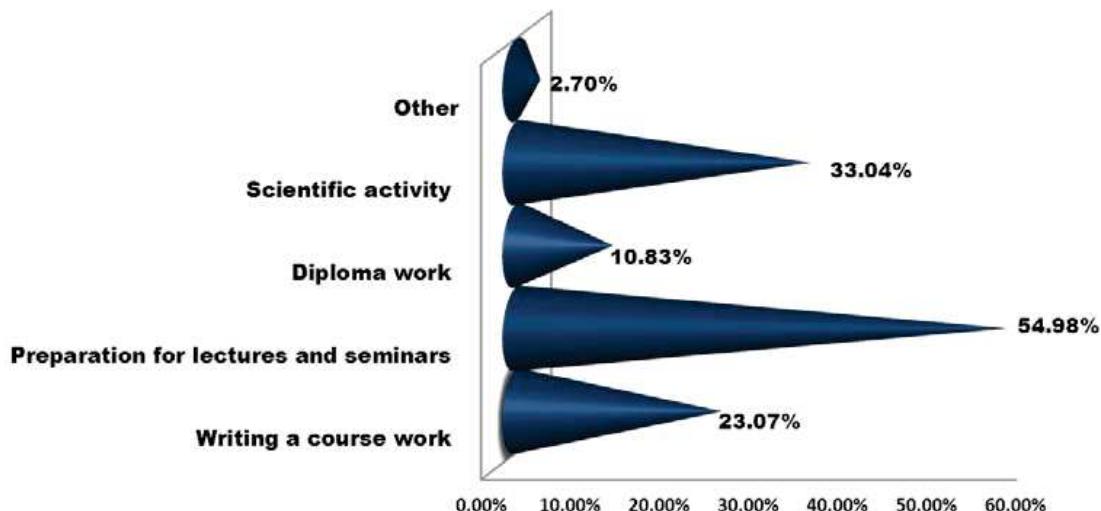


Source: Elaborated by author

Thus, the majority of respondents need the help of librarians, whose competencies help to form skills in using the search platform PRIMO.

An analysis of the answers to the question "What is the motive for accessing the new library search system?" revealed results represented in Figure 12.

Figure 12. Motives for accessing the new library search system



Source: Elaborated by author

Thus, it can be stated that most often the motive for accessing the information platform PRIMO is: preparation for lectures (seminars) - 54.98%; scientific activity - 33.04% and writing of course and project works - 23.07%.

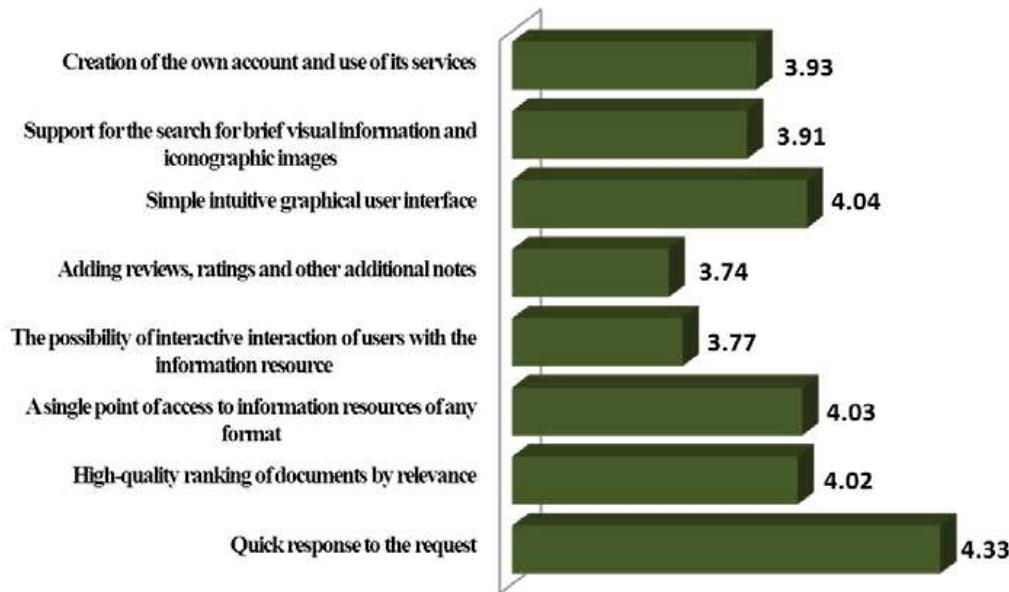
Respondents were offered an evaluation scale on which they noted their attitude to the PRIMO search system. The average arithmetic estimate was calculated, which was 4.96.

So, the respondents gave a very high score to the PRIMO search system and expressed their unconditionally positive attitude to this information product.

Respondents rated the PRIMO information system according to various criteria on a 5-point scale. Average arithmetic estimates were calculated by the following criteria:

- Quick response to the request;
- High-quality ranking of documents by relevance;
- A single point of access to information resources of any format;
- The possibility of interactive interaction of users with the information resource;
- Adding reviews, ratings and other additional notes;
- Simple intuitive graphical user interface;
- Support for the search for brief visual information and iconographic images;
- Creation of the own account and use of its services. (Figure 13)

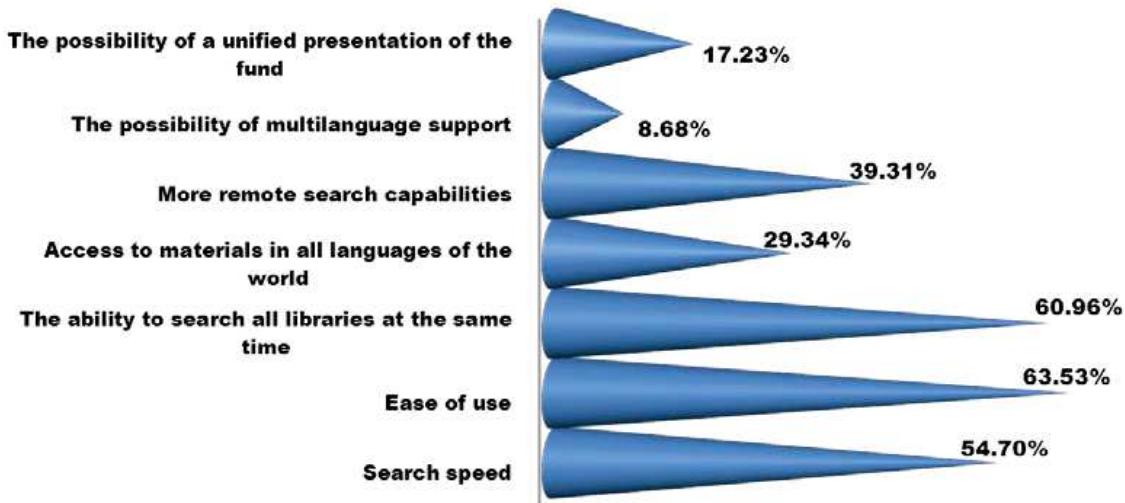
Figure 13. Evaluation of the PRIMO information system according to various criteria on a 5-point scale



Source: Elaborated by author

Some respondents found it difficult to rate the various characteristics of the PRIMO search platform, as they are not sufficiently informed about all the features of this platform. Thus, this questioning additionally had an informative and educational function, promoting the merits of the system.

The respondents noted the advantages of the new PRIMO search system; their answers determined the results represented in Figure 14.

Figure 14. Advantages of the new PRIMO search system

Source: Elaborated by author

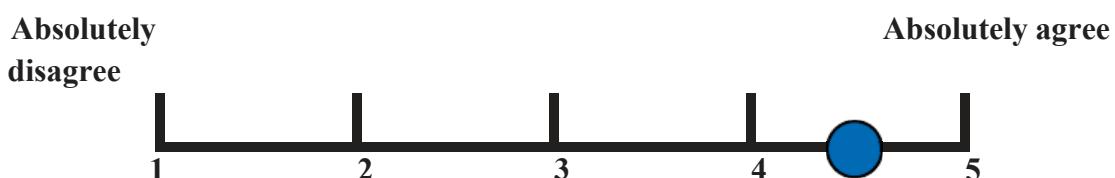
Thus, we can state that the three main advantages of the PRIMO platform are: ease of use - 63.53%; the possibility of simultaneous search in all libraries - 60.96%; search speed - 54.7%.

An analysis of the answers to the question: "*Do you know about the existence of an institutional repository on the library's electronic page?*" revealed that 60.68% of respondents know about the existence of the repository, 39.32% do not know.

Thus, there is a need for more active promotion of institutional repositories of universities among target audiences.

Respondents were asked a scale question: "*How attractive do you think the idea of publishing online the results of your own research in the library's repository?*". Based on respondents' answers, the average arithmetic estimate was computed, which was 4.21. Thus, it should be noted that not for all groups of respondents the idea of publishing the results of scientific research is attractive. This aspect is of interest mainly to teachers, scientists, masters and doctoral students.

Respondents were offered a Likert scale, where they noted the degree of their agreement or disagreement with the statement that "*Today's students and researchers expect library and information systems to have the same speed, ease of use and satisfy their search queries that they receive on the Internet.*" The weighted average was 4.43 (Figure 15).

Figure 15. The consent of the respondents with the statement about the requirements for the "library information system".

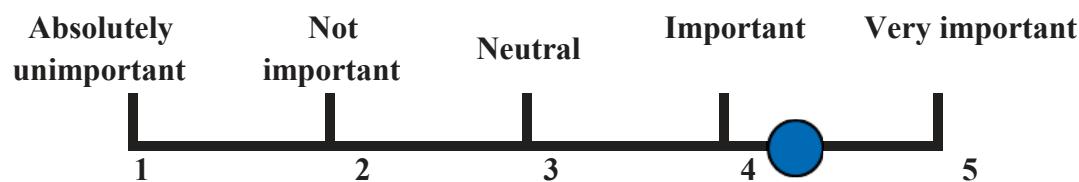
Source: Elaborated by author

The PRIMO search platform most fully meets the needs of users, approaching the Internet search systems, which the consumer uses as: a source of information, a place for information exchange and the placement of personal information.

If earlier the library systems provided only the address of the information placement, then with the help of the PRIMO information retrieval system, users get access to the full texts of electronic documents and other materials.

When answering the *question "How important is the new search system of the PRIMO library in improving the efficiency of teaching and scientific production?"* the respondents noted their answer on the scale. The weighted average was 4.33, that is, between positions "important" and "very important" (Figure 16).

Figure 16. Importance of the new search system of the PRIMO library in improving the efficiency of teaching and scientific production



Source: Elaborated by author

Thus, it can be argued that the majority of respondents recognize the importance of the PRIMO search platform for increasing the effectiveness of training and scientific production.

The PRIMO search platform allows the remote user to use library resources in the same way as readers working in the library.

Simplicity, clarity, clear structuring of resources helps users to easily find the necessary information, analyze and manage it, forming a baggage of professional knowledge of specialists, creating on its basis their own scientific and didactic developments.

The unified search interface of the PRIMO platform provides access to the richness of the scientific content of the country's university libraries, including print and electronic collections, that allows tracing the academic productivity of scientists.

The search algorithm in PRIMO guarantees the most relevant results based on the search context, which improves the quality of scientific research.

The respondents pointed to the aspects of the functioning of the PRIMO search system, which require mandatory adjustments in order to improve information retrieval.

These aspects include:

- Improving the management of electronic documents;
- Lack of most links to full-text versions of articles;
- Location of the search system on the site of the university, and not on the site of the university library, which would facilitate access to it and search for information;
- Lack of a large number of bibliographic descriptions in Russian, in the original language, which is inconvenient for users;

- Introduction of the possibility of reservation of documents through this search system;
- The impossibility of sending information found in PRIMO to the email;
- The absence on the shelf in the library of some publications marked in PRIMO.

In the new network environment and the current economic conditions of functioning, libraries can and should join forces to optimize collections, technical support, increase the purchasing power of libraries through project activities and increase staff knowledge.

The development of information technology opens up wider opportunities for the uniform dissemination of knowledge. The visualization of the potential of the scientific resources of the Moldovan universities makes it possible to determine, acquire, monitor and promote the scientific resources of the universities in the shortest possible time, both on the domestic information market in Moldova and on the international market.

Respondents suggested some recommendations for improving the use of the new search system, which can be combined into the following groups:

- Intensive training of users in the use of all the possibilities of the PRIMO search system;
- Providing the necessary training information for various serviced segments: students, teachers, master students, doctoral students;
- Promotion of the PRIMO search system at various university events, using various communication channels at various levels.
- Respondents also strongly recommend improving the reservation and ordering of necessary information, optimizing the search for articles from conference collections, auditing the presence of all library publications in the PRIMO system.
- Respondents offer:
 - Implement the ability to change personal data, such as a password;
 - To make so that links to electronic materials work;
 - Simplify access to language selection options, highlighting Romanian and Russian in a separate rubric, which will speed up access to texts in these languages;
 - Unify bibliographic records in Russian;
 - To introduce the possibility of communication for users.

3. Conclusion

Based on the conducted research on the opinion of respondents on the PRIMO information search system and its functioning, the following conclusions can be drawn:

- Information and search platform PRIMO is a new phenomenon in the library space of the Republic of Moldova, which allows speaking about the importance of this technological breakthrough for the information market of Moldova;
- The PRIMO toolkit allows carrying out an integrated search in the library catalogs of the country's largest university libraries and, on a single request, providing access to information resources of any nature;
- The results of the questionnaire determined a high level of awareness of the respondents about the new information product - the PRIMO platform, which

- indicates a developed program of promotion by library specialists-participants of the project;
- The research demonstrated the great interest of users of information to this search system, but revealed a lack of knowledge in them regarding all the possibilities of the system, which is explained by the short period of stay of this product in the information market of Moldova;
 - The most effective among the channels and ways of transferring information to promote the PRIMO platform are, in the opinion of the respondents, consultations with the librarian, since this information product is quite difficult for self-mastering;
 - The majority of respondents use the PRIMO search platform every week and the motives for using it are, mainly, educational and scientific activities;
 - The introduction and use of the information search system PRIMO for the community of the Republic of Moldova requires careful preparation of library specialists, who in turn must train students and scientists to use the full range of the system's capabilities, which will increase its effectiveness;
 - Important advantages of the PRIMO search platform, according to respondents, are: the ability to simultaneously search across multiple libraries, save time resources and easily find the necessary information, which is very important in the age of information overloads;
 - Institutional communities of higher education institutions for the most part (2/3) know about the existence of an institutional repository and consider it attractive to publish the results of their research in them, but do not yet have sufficient knowledge about the procedure of archiving and self-archiving their articles. The intermediary role of the library and its mission in this process is undeniable;
 - The respondents highly appreciated the PRIMO search system, having estimated 4.96 on a 5-point scale, which indicates the recognition of the value of this information product, both for the scientific community and for students;
 - Most respondents recommend intensive promotion of the PRIMO search system: training users in the use of all the features of the system; providing the necessary training information for various serviced segments; promotion of the search system at various events of universities, using various communication channels at various levels;
 - Information-search platform PRIMO contributes to the promotion of library collections of the university libraries of the Republic of Moldova, promotes the visibility of library services, demonstrates their value to the top management of educational institutions;
 - The PRIMO system provides rich analytical material that allows monitoring its functioning, increases its efficiency and optimizes the development of the collection;
 - Information platform PRIMO promotes the promotion of regional content, for example, scientific results of Moldovan scientists in the world scientific space;

- On the basis of the PRIMO search system, the cooperation of the Moldovan libraries is expanding, the activities of member organizations are being coordinated, and unique opportunities for library consortia are emerging.

The university library today cannot be open, accessible, popular and effective without a modern information retrieval system, which is PRIMO.

Open collections, access to a single request to information of any nature, popularization of library services increase the value of the collection and the competitiveness of the library as a whole, contribute to the maximum satisfaction of the need for scientific and educational information of students, teachers and scientists.

The main resources in the 21st century are information and intellectual capital and high-quality information retrieval systems of the PRIMO format become that vital source that feeds and satisfies the need for high-quality information (unlike the Internet) and which will contribute to the development of the country's intellectual potential. This is what people have always dreamed of - to have at hand any information they need at any time. And they will go to the library not only through communication channels, but also just come to look through the books.