Electronic Libraries in the Educational Environment of the University: The Usage of Practices

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ABSTRACT

Introduction. Digital reading is becoming a mass educational practice. To support the learning process university libraries are predominantly buying electronic books and electronic periodicals. There is a steady migration to digital books. Electronic libraries are becoming an integral part of the educational environment. The purpose of the article is to identify and describe the social practices of student readers when using the resources of electronic libraries.

Methods and methodology. The first stage: Desk research of trends in the development of electronic libraries in Russia, their integration into the digital educational environment of universities and the difficulties of promoting electronic information resources in the educational and extracurricular reading practices of students. At the second stage, quantitative analysis revealed student practices of using electronic libraries (1) in educational and research activities, (2) for extracurricular purposes, (3) the ratio of traditional and new (digital) reading practices, (4) advantages and limitations when working with electronic libraries. The research involved 478 students studying at six universities in Novosibirsk.

Research results. Electronic libraries are becoming a popular educational resource. Students prefer virtual reading. At the same time, up to 30% of students use electronic library resources very rarely or do not use them at all. This is the point of growth.

Discussion and conclusion: the results of the research can be useful in integrating the resources of electronic libraries into the digital educational environment, promoting the resources of the electronic library for the student reader, forming digital competencies of students in teaching information navigation and analytical and synthetic skills in the digital environment.

Keywords: *electronic library, digital educational environment, digitalization of education, educational practices of students*

1. INTRODUCTION

The solution of the strategic task of the national project to create a digital economy is based on the formation of digital competencies of its subjects. The digital economy needs people with digital literacy, social and emotional skills that will provide growth points. The digital educational environment of the university is a factor that ensures the formation of digital skills and competencies. We need a comprehensive assessment of the educational environment of the university in terms of assessing the opportunities and limitations of the use of digital educational resources, the readiness of students and teachers to use information and communication technologies and their involvement, evaluating digital skills and competencies (user and professional: digital literacy, communication and collaboration, digital content creation, security).

Under the digital educational environment (DEE) of the university, the following is meant: the totality of all information systems designed to ensure the objectives of the educational process, the basic principles which are unity (coherence used digital technologies), openness (possibility of data exchange with external systems based on published protocols), access (unlimited functionality of all elements of the DEE), competitiveness (the ability to replace one element in a more competitive technology), liability (law, duty, the ability of all participants to solve the tasks within its competence in DEE), adequacy (compliance of the content of DEE objectives, the powers and possibilities of the subject), the usefulness of (the creation of new opportunities and/or reduced labor costs-user) [1].

One of the leading elements of the digital educational environment of the university today are electronic library systems, the active formation of which began in the mid-1990s in the world, as well as in Russia. The implementation of international and national programs has

resulted in the creation of an organizational, technical and information infrastructure for the functioning of electronic libraries, which have become part of the digital educational process.

Discussion of various issues of creating and functioning electronic libraries became part of the scientific discussion [2, 3].

In order to develop the effectiveness of e-libraries, as well as improve the quality of system design, researchers addressed the behavior of users and their needs for digital information in various contexts, including users-representatives of the university environment (students, teachers), schools (students, teachers), government departments (employees of public institutions) and businesses (representatives of the business community using e-libraries) [4, 5]. A number of authors have paid attention to the problems of user orientation in a diverse and resource-rich digital space of different generations. For generation Z, in particular, there were noted their ability to quickly process clip information and difficulties in tasks requiring analytical and synthetic skills and navigational knowledge in the information and digital environment. Students should be taught information navigation and analytical and synthetic skills [5, P. 88]. The importance of usability, accessibility, and user acceptance/approval of specific e-libraries is highlighted; supporting user-centered learning, teaching, and research by combining virtual learning environments and digital libraries.

As a direction of the e-libraries development the following is mentioned: search for optimal technical solutions for building the "architecture" of electronic libraries; search for service solutions aimed at identifying strategies and satisfaction with information and bibliographic services of readers/users [6]; promotion of information and library resources [7].

Due to the variety of electronic educational services, the use of electronic library resources becomes a significant competence of the digital world. At the same time, digitalization of library resources transforms reading practices, requires students to be flexible in choosing the necessary resources, and possess the skills to search for information that is adequate for educational and research tasks.

L. V. Astakhova, considering the model of the European digital literacy system-2016, emphasizes that library science and practice pay insufficient attention to the problem of forming digital competencies with the participation of the university library in the context of global digital transformation [8]. At the same time, the passivity of students in the use of resources is a consequence of the lack of skills to work with electronic resources in the educational process for students and teachers of the university, and the motivation to use a high-quality information product [9].

S. G. Smolina and M. V. Legenchuk note that training the user to work in an electronic library (for example, EBS "LAN'"), familiarity with a variety of electronic educational resources, access policies, basic search strategies, demonstration of databases, EC and library sites increases traffic by almost 30% [10, P.21]. Gradual migration of reading to digital format is considered as an objective process that has advantages and disadvantages, as well as risks, and requires targeted training [11, P. 79].

The modern educational environment is becoming digital and transforming students ' educational practices. Students ' educational and research practices are based on working with library resources. The use of library resources is an important element of modern educational practices.

The research focuses on student practices of using e-library resources, including the way e-libraries are used in educational and extracurricular activities of students, their preferences when choosing the type of information resource, and evaluating the advantages and difficulties of working with e-libraries.

1.1. Methodology and methods

The theoretical basis of the research is the theory of social practices, according to which every day (routine) practices of actors are considered.

Data was collected by means of a survey using an electronic form. Respondents were offered both open and closed questions. In the statistical result processing the methods of descriptive statistics were mainly used. The survey period is February-March 2020.

Thematically, the questionnaire included blocks of questions: (1) about the use of electronic libraries in educational and research activities, (2) for extracurricular tasks (hobbies, self-efficacy, self-education in the field of culture and art, foreign languages, information about technical innovations, etc.), (3) the ratio of traditional and new (digital) reading practices, (4) advantages and limitations when working with electronic libraries. Respondents rated the proposed criteria on a five-point scale, where 5-fully agree, 4-partially agree, 3 – it is difficult to say agree or disagree, 2 – partially agree, 1 – completely disagree.

The research sample is targeted and available. The questionnaire was sent out via electronic information services of universities and student groups in social networks. 478 students took part in the research. Girls made up 46.1% of respondents, boys-52.9%, and 1% of respondents did not specify gender. Distribution of respondents by level of education is the following: Bachelor's degree -75.9%, Master's degree -7.8%, Specialist program -16.3%. The differentiation of respondents in the field of training is represented by the following groups: students of STEM fields (48.1%), socio-economic (26.2%), Humanities (24.8%), and others (0.8%). According to the course of study, respondents were distributed as follows: 1st year (29.1%), 2nd year (23.3%), 3rd year (22.9%), 4th year (16.7%), students of the 5th year of specialty, as well as the 1st and 2nd year of Master's degree made up 8.2%. Students from six universities in Novosibirsk (Russia) took part in the survey. The sample is balanced by gender, course, level of study (Bachelor's, Master's, Specialty program), and field of study (STEM, socio-economic, and humanitarian).

1.2. Our Contribution

The first information about electronic libraries appeared in the early 1980s, when some scientific journals started creating electronic libraries. Simultaneously with the creation of electronic libraries, the question of terminology arose. To date, the plurality of terminology usage remains: electronic library, digital library, virtual library [12, P. 134; 13, P. 16; 11, P.79; 14].

Based on the analysis, I. A. Yudina concludes that the idea of electronic libraries as information systems that allow reliable storage and effective use of various collections of electronic documents (text, image, sound, video, etc.), localized in the system itself, as well as accessible to it through telecommunications networks, is the most adequate. At the same time, the main task of electronic libraries is to integrate information resources and effectively navigate them [14].

1.2.1. Students ' use of electronic library resources in the educational process

The development of electronic libraries is related to the organization of the educational process and meets the needs of universities. Universities were the most active in the development of electronic libraries [15, P. 15]. Electronic libraries, on the one hand, are the result of the development of information technologies, and on the other hand, the strengthening of legal requirements for the organization of the educational process, in particular, the adoption of educational standards that regulate the provision of students with access to electronic information and educational resources and educational literature. To meet these requirements, universities create their own electronic libraries, which are filled with publications of employees, periodicals produced by the university, and dissertations, conclude contracts to attract digital library resources of partner universities [4, 16], and also purchase subscriptions to use electronic library systems containing publications of educational, methodological and other literature used in the educational process. The largest electronic library systems in Russia are EBS LAN', EBS IPRbooks, and EBS IBooks (ibooks.ru), EBS "student Consultant", EBS "University library online" [Wikipedia]. The popularity and demand for these digital library resources for students is shown in Figure 1.

In a multiple-choice question, students were asked to name the digital libraries they have used this academic year. In addition to electronic library systems, which are subscribed to by universities, students turned to the resources of the Scientific electronic library eLIBRARY.RU (RSCI) 38.7% of respondents. Popular among students is the electronic library Litres (48.3%), which provides both commercial access and access through city and district libraries on a reader's ticket (named by almost half of the respondents 48.3%). To complete tasks, 8.2% of students use the resources of the CyberLink library built on the open science paradigm [cyberleninka.ru]. In addition to mass resources,

students called Bookmate, FLIBUSTA, Lib.ru (Moshkov library), My book, Play Books, Science direct, Researchgate, Storytel, Gumer Library, Apple library (number of selections from 1 to 3).

Electronic libraries are part of the active educational practices of students. More than 30% of respondents in the current academic year rated the use of such resources as "Very often" and "Quite often". About 80% of students completed tasks using the resources of electronic libraries. In this regard, we can note the opinion of K. Kostyuk, who pointed to a noticeable " increase in 2018 in the use of EBS in universities, in general by 15% " [17].

The number of students who answered that they had never accessed the resources of electronic libraries was 18.3%, and 18.9% did not complete educational tasks using such resources. Table 1 shows the distribution of answers to questions about the use of electronic libraries by students in educational activities.

Students ' appeals to electronic libraries are stimulated by tasks received in preparation for theoretical and practical classes, research practices, and independent work. 35.9% of students received such tasks quite often. And judging by the distribution of responses to the question about the use of electronic libraries in their implementation, they followed the recommendations received.

1.2.2. Students ' use of electronic library resources in extracurricular activities.

Electronic libraries include resources not only textbooks and educational literature, but also a variety of book collections on history, culture, art, country studies, literature in foreign languages, IT solutions, psychology and management. These issues may not be included in the curriculum of academic disciplines, and for students are in the sphere of self-education and self-development. The survey showed that more than half of students use electronic libraries for extracurricular purposes, finding interesting literature about their hobbies in them and developing their soft skills. A fairly small group of students who turn to electronic libraries in search of sources in foreign languages remains. The thematic structure of queries displays the range of interests of students and is shown in Figure 2.

1.2.3. The student- reader about reading practices

The electronic library serves as a tool in the student's independent work. At the same time, accessing a well-organized repository of books or magazines (including digital ones), where you need to find answers to your questions by working through the source, is not the main thing in student educational practices. A more popular way to search for information is to search in a search engine and use the materials that are offered for this query. This search method is used "often" by 69.5% of students, "sometimes" by 23%. For comparison, 8.7% of students visit the traditional library to prepare for classes "often"," sometimes "30% ; read lecture notes 50% " often", 35.5% "sometimes".

Comparing these practices with accessing an electronic library, we find that 17% of students "often" choose this method of self-training, and "sometimes" 52.4%. This distribution of responses indicates that electronic libraries are used by students along with other databases, and the practice of working with electronic libraries is in a state of formation. The responses draw attention to the fact that a small number of students (8.7% and 30%) continue to use traditional books as a significant source of information. This indicates the prevalence of virtual reading in educational practices and changes in reading practices.

Some electronic libraries offer readers audio versions of printed books. The identification of preferences in this issue reflects the attitude of respondents to the use of audiobooks in both educational and extracurricular activities. 53.3% of students prefer reading over listening. 36.4% use both "depending on the information required". 3.2% prefer to listen to books in comparison with reading. Similar trends in preferences are reflected in responses to the question about the frequency of use of electronic library resources such as audio, video, and test materials. Almost 40% of students never used them, only 38% used them "sometimes". Apparently, in the views of students, the library is still strongly associated with the potential reader with reading as a specific form of language communication of people through printed or handwritten texts. Therefore, additional resources, such as audio and video materials, require additional actions to promote them from the reader/user.
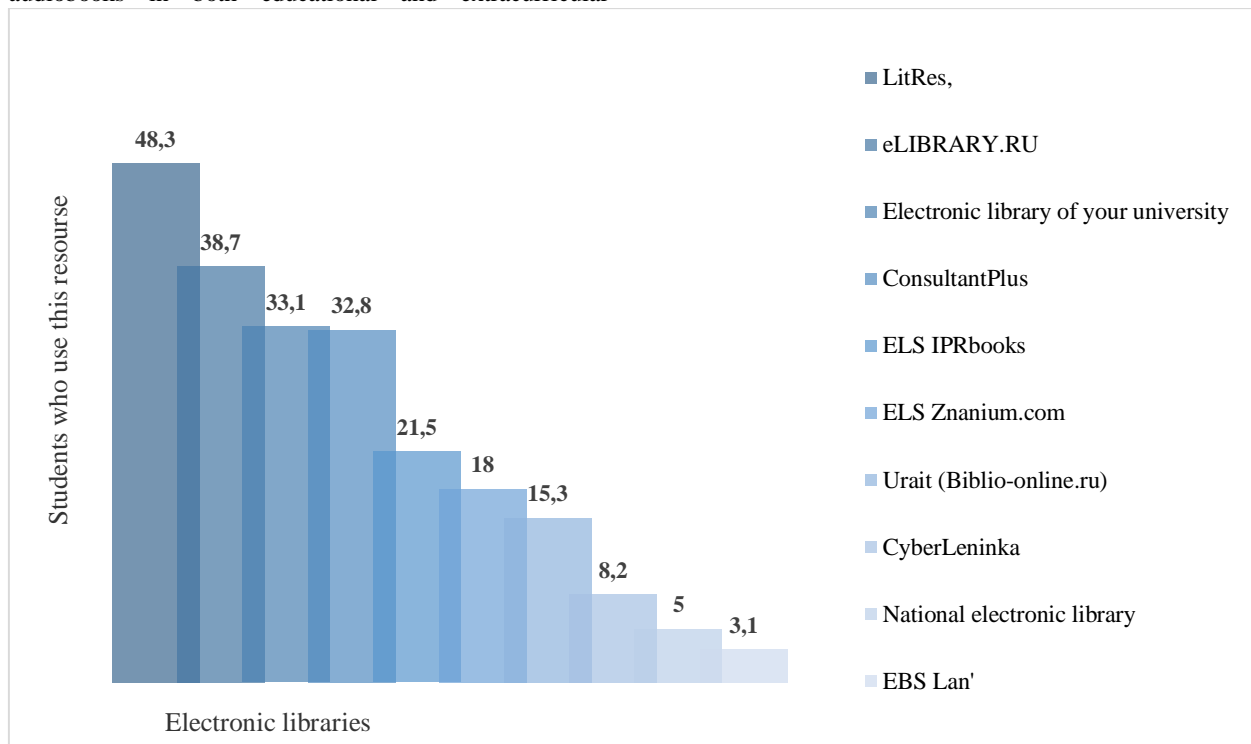

Figure 1 Electronic libraries used by students this academic year (% of respondents who specified the resource; they could specify all the resources that were used in the current academic year)

Table 1 Use of electronic library resources in the educational process, in particular %

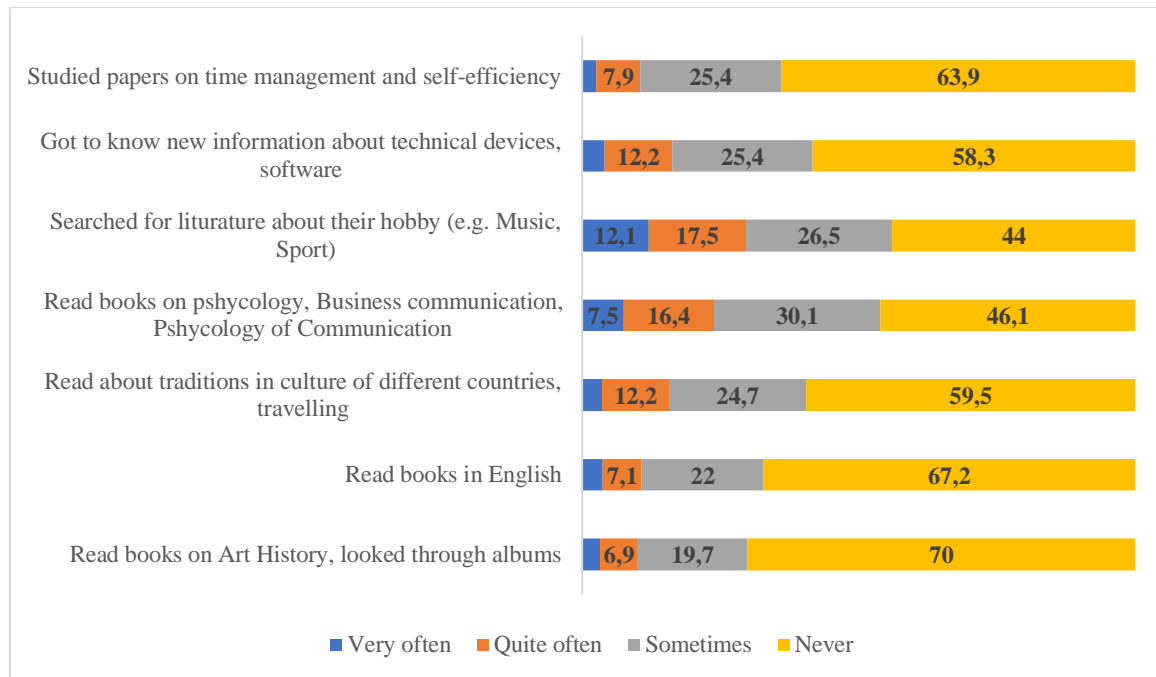|	Very often	Fairly frequent	Medium	Quite rare	Never	Total, %
How often did you contact EB this academic year?	14.5	18,6	24,1	24,5	18,3	100
Did you receive any tasks this academic year that required accessing EB resources?	16,7	19,2	29,0	19,2	15.9	100
Did you complete tasks using EB resources this academic year?	14,4	19,3	25,0	22,5	18,9	100

Figure 2 Distribution of answers to the question "Do you use electronic libraries for extracurricular purposes?" (N=468 people, %)

Table 2 Sources of recommendations when searching for information in the electronic library, in %

Search strategy / Frequency of requests	Very often	Often	Occasionally	Never	Total, %
Read or view publications that are recommended by the teacher	11	30	44	15	100
Search for publications on the questions you ask yourself	17,5	32,3	36,4	13	100
Browsing the publications that are recommended by other students	5	16	36	43	100

2. BACKGROUND

2.1. Students strategies in the digital environment of the electronic library

Navigation in EB remains a problem for student readers. 24.9% said that they "often" have difficulties in finding the necessary information, 69% experience such difficulties quite "rarely".

Working with EB is primarily an individual student's job. Attention is drawn to the strategy of searching for the necessary information, which students adhere to. Comparing them with the use of lecture notes, it can be noted that 50% noted that they independently search for

information of interest, 41% view publications that the teacher recommends, and only 29% rely on the recommendations of their classmates when choosing publications and materials. The distribution of responses to the question is shown in Table 2.

3. CONCLUSION

The importance of the digital educational environment as a multi-tasking reality will increase in the near future due to the development of digital technologies and the tasks of the adopted program "Digital Economy of the Russian Federation" (2017).

The identification of the impact of digital technologies on social relations and everyday practices, including educational ones, allows us to update the search and consolidation of the methodological foundations of such

research, to form a methodology for determining the index of digitalization of the educational environment.

The results of the research allow us to search for ways to overcome the observed contradiction between the level of digitalization of the younger generation (Internet access and the number of devices with Internet access that students have) and low inclusion in the digital educational environment, maximizing the opportunities for its use for educational and research practices. The contradiction of the world of electronic communication noted by R. Chartier, in which "the offer far exceeds the ability of readers to master these texts" [18, P.218] sets the task for digital libraries to become a tool in the classification of the world of electronic books, a Navigator and a guarantor of the quality of the proposed content.

Feedback from students and consumers of educational services using educational information services contributes to the filling of the digital educational environment with quality resources, the implementation of psychological, pedagogical and methodological support for existing educational information resources.

In order for the digital library to become more understandable and in demand by the student reader, it is necessary to conduct special training seminars where various possibilities of electronic library resources are demonstrated, skills of working with the electronic library, using its functions and services are formed (creating personal collections of publications, lists of viewed publications, search results, getting access to thematic collections, etc.).

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