INFORMATION NEEDS OF STUDENTS UNDER THE INSTITUTE ELECTRONIC EDUCATIONAL ENVIRONMENT

INTRODUCTION
The need for information is one of the most important human needs. Under the influence of various social factors, people form needs for new knowledge, without which the development and formation of personality, the solution of various problems is impossible. The mismatch between a person's knowledge and the knowledge he needs creates informational needs. Most actively they are formed and implemented in the learning process (KORMISHINA, 2016; PROKOFIEVA et al., 2018; BAYANOVA et al., 2019; KARGAPOLTEVA et al., 2019; BAYANOVA et al., 2020).

Human information needs the subject of study and analysis in various fields of knowledge. They are put forward in priority areas of research, both from the natural science corpus of knowledge, and within the humanitarian, psychological and pedagogical spectrum of sciences.

The term "information needs" was first used by journalist R. Taylor (1962) in his 1962 article "The Process of Asking Questions" in American Documentation.

The study of the information needs of scientists and specialists was one of the important areas of scientific research in bibliography and computer science in the second half of the 20th century. Significant success in the development of this problem have been achieved in the works of Russian scientists: E.S. Bernstein (1967); D.I. Blumenau (1986); S.D. Kogotkov (1986); A.V. Sokolov (1991) and others. The issues raised by them were important not only in their theoretical and practical significance.

These studies showed the complexity of the problem, requiring deep understanding. However, much of the subsequent research was carried out for purely practical purposes. New ways were developed to better meet the needs of specific categories and groups of scientists and specialists (KUTUEV et al., 2017; EZHOV et al., 2019). But the very content of information needs as a phenomenon was little touched upon. This made it difficult to solve the problem of meeting the information needs of specific groups of consumers. In the 1990s A.V. Sokolov (1996) announced a crisis in the theory of information needs. He called the concept "information need" an abstract concept denoting a really existing communication need. But the study of information needs did not stop. The main goal of modern research has remained the same - to deepen the process of studying the needs associated with specific areas of economic and social life. Today, these studies are even more relevant.

There is very interesting article by M.Y. Neschernet (2020) "Study of information needs in a historical retrospective". Based on the analysis of publications in the professional press, an overview of the history of the study of information needs and reading in Russia is presented.
The main stages in the development of this area of the research are highlighted in the article. The achievements of librarians who have made the greatest scientific contribution to the development of the theory of information needs are noted. It is shown that even before the appearance of the term (mid-twentieth century), the phenomenon of information needs was studied indirectly - through the analysis of readers’ interests and preferences. Particular attention in the article is paid to the formation and development of a methodology for studying information needs (Vinogradova et al., 2018). The practice of applying various research methods, including special ones: quantitative, qualitative, complex, computer, is considered.

I.N. Rosenberg (2017) describes the stages of development of society, which are called information revolutions, and reveals the content of information needs. The author argues that the public information need is one of the main reasons for information revolutions and the development of society.

In the article by T.A. Ozhereleva (2017) also reveals the content of information needs. Four information demand models are described. The connection between information asymmetry and information needs is shown. Information asymmetry creates information needs, and information needs are aimed at eliminating information asymmetry.

N.N. Yashalova, N.P. Krylova and I.N. Fedorenko (2020) consider the information needs of society in the era of digitalization. They claim that electronic information is one of the important sources for their satisfaction.

V.Y. Tsvetkov (2020) explores information needs arising in practice and in education. The author describes various types of information needs, shows the difference between the semantic component of the information need and the information component, the difference between information retrieval and the satisfaction of information needs, the difference between primary and secondary information needs. The article reveals the content of information educational needs.

Within the framework of the theoretical direction in other countries the concepts of “information need”, “desire”, “request” are discussed, their differences are revealed; the factors influencing the information needs are determined. The works devoted to the study of the needs of various groups of information consumers are of methodological interest.

A. Waseem (2017) argues that information need is one of the basic concepts in library science and computer science, but the concept of information needs is not fully developed. The author emphasizes the lack of clarity in the conceptualization of the need for information, the lack of a theoretical basis for empirical research. He also explores the measurement of information needs.

L.A. Friedland (2016) describes America's critical information needs. These needs are linked to areas such as emergencies and risks, health and well-being, education, transport, economic opportunity, environment, social and political spheres. Despite these growing demands, America’s information infrastructure is in crisis as funding for the media dwindles. Changes in public policy are needed to ensure that the information needs of the American public are met.

C.R. Senteio et al. (2021) article answers the question of how public librarians can better meet complex information needs. First, librarians must classify the complexity of a need using Warner’s classification model; they can then use Popper’s theory of three worlds to anticipate and respond to complex information needs by taking specific steps. This article also provides examples of how public librarians in the United States anticipated information needs and partnered with organizations outside the public library to meet complex information needs.

H. Qin, H. Wang and A. Johnson (2020) studied the information needs and information behavior of the next generation of design engineers. They found out what the informational needs of design engineers are, how those needs change during an engineering design project, and how new information technology (IT) has impacted their behavior when searching for information. Based on an in-depth analysis of the survey results, the key functions of new generation control systems were identified. This article suggests new ways to explore the information needs of future engineers and their search behavior in a collaborative working environment. The authors also characterize the key features and functions of the next generation of knowledge management systems for engineering design.
J.P. Telemala and H. Suleman (2018) studied the information needs of Swahili speakers to understand their search behavior - the language of search and the language of information preference among professional and ordinary citizens. The researchers interviewed 11 library/information experts and Swahili language specialists from Tanzania. The results showed that Swahili speakers are increasingly looking for information on the Internet. Although many of them do not speak English, they preferred English Swahili as their search language because of the relevant results they receive.

Informatization of education is an organizational, socio-economic and scientific-technical process of creating optimal conditions for satisfying the informational and cognitive needs of students based on the formation and use of informational resources. In the course of informatization, the field of education is provided by the methodology and practice of developing and making optimal use of new information technologies aimed at realizing the psychological and pedagogical goals of teaching and upbringing.

The modern educational environment involves the active use of digital technology, provides great variability in terms of time, place, trajectory or pace of learning (YASHINA, 2016).

The combination of educational information resources (including electronic educational resources), information and communication technology tools (computers, other equipment, communication channels), a system of new pedagogical technologies make up the educational information environment of an organization engaged in educational activities (YASHINA, TROFIMOV, 2016).

Combining existing approaches, the information and educational environment of a university can be considered as a combination of three components: material and technical, information and methodological and organizational.

Today, the requirements for quality and conditions for the implementation of educational programs of higher education are increasing (KALEGINA et al., 2019). In accordance with federal state educational standards of higher education, all students must be provided with unlimited individual access to the electronic information and educational environment of the university from any point where there is access to the Internet information and telecommunication network. The electronic information and educational environment of the University is designed to implement:

- access to curricula, work programs of disciplines, practical programs and electronic educational resources (including electronic educational publications);
- formation of the student’s electronic portfolio;
- fixing the course of the educational process, the results of intermediate certification and the results of the development of the educational program;
- conducting training sessions, assessing learning outcomes using electronic, distance learning technologies;
- synchronous, asynchronous and other types of interaction between participants in the educational process, including the Internet (Federal state educational standards, 2021).

A study was conducted to identify the characteristics of the information needs of students in the formation of the electronic educational environment of the Kazan State Institute of Culture.

The study aims to solve the following problems:

- identify and evaluate the attitude of students to the use of new information technologies in the educational process;
- define the range of sources of information used by students;
- to evaluate the degree and effectiveness of using various elements of the electronic educational environment of the institute;
• determine the level of competence of students in the use of electronic technologies in the educational process.

RESEARCH METHODOLOGY
The methodological base of the study was a systematic approach as a direction of the methodology of scientific knowledge, which is based on the consideration of the object of study as a system. The systematic approach opens up the possibility of building a model of informational behavior of participants in the educational process and improving, on its basis, the electronic educational environment of the university.

A situational approach to the study of students’ informational needs is used in the process of studying the interaction of various situational variables in order to find causal relationships in the formation of informational needs in the electronic educational environment of the institute, allowing to predict their further development.

This study uses empirical research methods, in particular survey and comparison methods, as well as analysis of publications and regulatory documents.

RESULTS AND DISCUSSION
During the study, students of the social and humanitarian faculty were interviewed. Most respondents are positive about e-learning. They noted that digital technologies make the educational process more “convenient”, accelerate it, and help to better perceive information. Many students spoke in favor of a combination of traditional and e-learning, emphasizing that digital information resources and technologies cannot fully provide the educational process. At the same time, all students use the Internet as a source of information necessary for study. And there is a percentage of students, while small, who do not use any other information resources except Internet resources (Figure 1).

Figure 1. Distribution of respondents’ answers to the question: «Where do you find the information that you need for studying?»

| Source: Search data. |

The electronic educational environment of the Kazan State Institute of Culture includes several components. Firstly, this is the official website of the institute, where students can find information about the institute, basic documents, regulations governing the activities of the university, educational standards and programs. On the site, students can get relevant information about the main events in the scientific, creative life of the university, a class schedule. The site implements the asynchronous interaction of the student with teachers, providing the opportunity to ask a question from the teacher’s personal page. Students use the site of the Institute and note its information content (Figure 2) quite actively.
Another component of the institute's electronic educational environment is the student's electronic portfolio, which contains data on the student's educational, scientific, cultural and creative, social activities, his sports achievements, and professional experience. Unfortunately, not all students actively work with their portfolio. Often the information in the portfolio is entered by students from case to case.

Students actively use electronic libraries. The University provides students and teachers with access to electronic library systems, which serve as a good platform for scientific and research activities, contain educational, educational, methodical, scientific, fiction literature from leading publishers, scientific monographs of modern authors and universities, magazines. Authorized users have unlimited, simultaneous and individual access from both a University and any computer with Internet access to electronic libraries:

- electronic library system "University Online Library" (http://biblioclub.ru);
- an electronic library system of the publishing house "Lan" (http://e.lanbook.com);
- scientific electronic library eLibrary.ru (http://elibrary.ru);
- National Electronic Library (http://neb.rf);
- electronic library system "URIGHT" (www.biblio-online.ru), section "Legendary Books".

As part of the National Subscription, supported by the Ministry of Education and Science of the Russian Federation, students and teachers are given access to the Web of Science Core Collection databases, covering about 18,000 scientific journals from around the world. It also provides access to Scopus, the largest database of annotations and citations of peer-reviewed scientific literature.

The most popular among students is the Scientific Electronic Library eLibrary.ru (Figure 3). This is a major Russian information and analytical portal in the field of science and education. It contains annotations, abstracts and full texts of more than 29 million publications, including electronic versions of more than 5600 Russian scientific journals, of which more than 4800 are in the public domain. Often students use the University Online Library system, which provides access to the most requested materials educational and scientific literature in all fields of knowledge. It meets the requirements of federal state educational standards of higher education for libraries in terms of the formation of funds for basic and additional literature.
Meeting information needs in the electronic information and educational environment of the institute requires the formation and development of the following competencies among students:

- readiness for independent search, identification, analysis and evaluation of educational information resources;
- the skills of applying the basic methods, methods and means of searching, collecting, storing, processing information;
- the ability to work with a computer as a means of information management;
- the ability to solve standard educational and professional tasks based on information culture using information and communication technologies and taking into account the basic requirements of information security (ZABOROVSKAYA, SAVICH, MATVEEVA, 2017).

The results of interdisciplinary colloquiums aimed at assessing the above competencies showed a high level of students’ readiness to use information and communication technologies in the educational process (the average score was 4.3 on a five-point scale).

Students themselves on average assess their level of competence in the use of electronic technologies in the educational process by four points on a five-point scale (Figure 4). 79, 3% of students surveyed would like to receive more information about the electronic informational and educational environment of their institute.

**Figure 3.** Distribution of respondents’ answers to the question: «What electronic libraries do you use?»

| Electronic Library Services | Percentage |
|-----------------------------|------------|
| Scientific electronic library E-library.ru | 71.40% |
| Electronic library system «University library online» | 57.10% |
| Scientific electronic library «CyberLeninka» | 50% |
| Electronic library system «Publishing house «Ilan»» | 42.50% |
| National electronic library | 10.70% |
| I do not use | 10.70% |
| Flibusta | 3.60% |
| National Electronic Library of the Republic of Tatarstan | 0% |

Source: Search data.
Figure 4. Distribution of respondents' answers to the question: «Assess your level of competence in the use of electronic technologies in the educational process on a five-point scale»

Source: Search data.

CONCLUSION
Thus, information needs have a number of distinctive characteristics. They are always associated with cognitive activity and are most actively formed and implemented in the learning process. Electronic information resources play a leading role today in the process of satisfying students' information needs. The information needs of the participants in the educational process are subject to changes and develop in accordance with the development of technologies and the educational environment. The electronic information and educational environment of the University provides the participants of the educational process with ample opportunities to receive information at any time and in any place where there is access to the Internet. Its use requires students to have certain knowledge, skills in the field of information and computer literacy, but students are ready to learn, to increase their level of competence in the field of information technology.

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Information needs of students under the institute electronic educational environment

Resumo
O artigo descreve os resultados do estudo das necessidades de informação dos alunos na formação do ambiente educacional eletrônico do Instituto Estadual de Cultura de Kazan. O estudo pretende resolver os seguintes problemas: identificar e avaliar a atitude dos alunos face à utilização das novas tecnologias de informação no processo educativo; definir a gama de fontes de informação utilizadas pelos alunos; avaliar o grau e a eficácia do uso de vários elementos do ambiente educacional eletrônico do instituto. A base metodológica do estudo foi uma abordagem sistemática como direção da metodologia do conhecimento científico, que se baseia na consideração do objeto de estudo como um sistema. Este estudo utiliza métodos de pesquisa empírica, em particular métodos de pesquisa e comparação, bem como análise de publicações e documentos normativos. Estudar as necessidades de informação dos alunos para otimizar seu sistema de apoio à informação, intensificar suas atividades no domínio do programa educacional básico e melhorar a qualidade da formação dos futuros especialistas.

Palavras-chave: E-learning. Entorno de e-learning. Recursos de e-learning. Necessidades de informação.

Abstract
The article describes the results of the study of information needs of students in the formation of the electronic educational environment of the Kazan State Institute of Culture. The study aims to solve the following problems: identify and evaluate the attitude of students to the use of new information technologies in the educational process; define the range of sources of information used by students; to evaluate the degree and effectiveness of using various elements of the electronic educational environment of the institute. The methodological base of the study was a systematic approach as a direction of the methodology of scientific knowledge, which is based on the consideration of the object of study as a system. This study uses empirical research methods, in particular survey and comparison methods, as well as analysis of publications and regulatory documents. Studying the information needs of students to optimize their information support system, intensify their activities in mastering the basic educational program and improve the quality of training of future specialists.

Keywords: E-learning. E-learning environment. E-learning resources. Information needs.

Resumen
El artículo describe los resultados del estudio de las necesidades de información de los estudiantes en la formación del entorno educativo electrónico del Instituto Estatal de Cultura de Kazán. El estudio tiene como objetivo resolver los siguientes problemas: identificar y evaluar la actitud de los estudiantes ante el uso de las nuevas tecnologías de la información en el proceso educativo; definir la gama de fuentes de información utilizadas por los estudiantes; Evaluar el grado y la efectividad del uso de varios elementos del entorno educativo electrónico del instituto. La base metodológica del estudio fue un enfoque sistemático como orientación de la metodología del conocimiento científico, que se fundamenta en la consideración del objeto de estudio como un sistema. Este estudio utiliza métodos de investigación empíricos, en particular métodos de encuesta y comparación, así como análisis de publicaciones y documentos reglamentarios. Estudiar las necesidades de información de los estudiantes para optimizar su sistema de apoyo a la información, intensificar sus actividades en el dominio del programa educativo básico y mejorar la calidad de la formación de los futuros especialistas.

Palabras-clave: E-learning. Entorno de e-learning. Recursos de e-learning. Necesidades de información.