Electronic information resources in Lithuanian academic libraries: purchase, demand and use of commercial databases

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Introduction

One can't imagine the library of 21st century without electronic information resources: electronic catalogue, electronic books and journals and electronic databases. Libraries provide services of electronic information; they become the link between the information (traditional or electronic) and the user. One of the most important aims of the library is to ensure that the information, provided for users is qualified and relevant. It is important for all types of libraries, but university libraries have specific requirements: formation of information resources (including electronic information resources) is determined by demands of higher educational institution. It is very important for academic libraries to keep and provide information resources matching the profile of higher educational institution, ensure the quality of education and study, provide scientific information for strategic research [4]. In learning society, academic library is not only the subdivision of a higher educational institution that provides services and maintains studying and science, but also important element of informational infrastructure, this type of library tries to participate actively in the process of science and studying and even makes influence upon it.
Traditionally, library, and also academic library, was treated as an institution, which accumulates, classifies, stores and provides informational resources for users. All those processes were changed by fast development of information and communication technology. Services of providing information are moving to virtual space – increasing part of library services becomes electronic. Alongside traditional sources, such as books, serial publications emerged electronic information resources: electronic books, electronic periodicals, compact discs, and databases. Initiatives of open access to information are speeding up, but it is not a secret that most of the information, required by scientists, researchers and lecturers is stored in commercial information resources. Lithuanian academic libraries have fair experience in working with commercial databases.

Tendencies of purchasing commercial databases in Lithuanian higher schools

First databases on compact discs in Lithuanian academic libraries were started to be used in 1991-1999. Subscription of on-line databases started in the end of 1999, when licensed agreement with EBSCO Publishing was signed through the mediation of eIFL.net (electronic information for libraries) consortium [1]. In this way the libraries have gained access to 10 EBSCO databases. Subscription of databases was pushed on when Lithuanian Scientific Association of Scientific Libraries was created (2001, December 4th; hereafter – LMBA). Main purpose of this association is to subscribe to electronic databases for its members and other libraries, pursuing to provide Lithuanian users with diverse scientific information [6]. Lithuania is participating in eIFL.net project from the year 1999 [5]. Independent fund eIFL.net is helping to gain access to electronic information resources for libraries in developing and intermediate countries, negotiates the licensing of various databases and supports consortia of participating countries. Participation in eIFL.net project saves to Lithuania from 90 to 99 percent of actual database price (Table 1).

LITHUANIA	Number of institutions sharing the cost of the resource within the country	Percentage Saved
AMP	**3**	95
IoP	**5**	96
CUP	**10**	98
OUP	**19**	99
ProQuest	**21**	99
APS	**6**	93
Gale	**5**	98
Sage	**9**	98
Wiley	**15**	99
Emerald	**11**	90
EBSCO	**56**	98

Table 1. Savings with eIFL.net

Until the end of 2006 almost all higher education school libraries were subscribed to databases, except the Library of Lithuanian Academy of Music and Theatre (LMTAB). This depends on specific requirements for low-supply literature in this higher school. Most of databases subscribed are universal or oriented to specific field of science. The main problem accentuated by the head of the library, is too small funding or even no sponsoring. From 2007 LMTAB is subscribed to databases, so we may say that all university libraries have access to global electronic information resources.

Number of subscribed databases in Lithuania is increasing steadily. Lithuanian university libraries at the beginning of 2007 were subscribed to over 80 databases (see attachment 1), 59 of them were subscribed through LMBA, others – individually or through the projects.

Since 2001 Ministry of culture and Ministry of education and science of the Republic of Lithuania support the acquisition of databases for libraries. Each year the funds allocated by ministries is increasing however the increase does not correspond to the demand of libraries. It is important to emphasize that the ministries covers about 70 % of database price; the rest is covered by the subscribing library itself in accordance with the agreement.

Survey *The use and demand of databases in the libraries of Lithuanian higher schools*

Incorporating users in the process of selection and evaluation of electronic resources are able to improve the final result. It is one of the main factors that ensures potential use of the product, provides information about users' opinion about the product and reveals the value of the product in compliance with the user's demand. The analysis of user attitudes may help to answer the question "Is this product useful?" [2; p. 29]. A library should systematically investigate the dynamics of user demands. One of those formalized methods of research is surveying of the users, letting us to create an expansive overview of user demands for electronic information and to forecast these demands in the future.

Four higher education schools were participating in the survey *The use and demand of databases in the libraries of Lithuanian higher schools* in 2006.

The purpose of survey was to collect data that give the possibility to estimate the situation of database management in higher education schools and to forecast the prospects of the future.

Tasks of survey:

1. To find out if databases are used and the frequency and intention of use and why they are not used.

2. To find out user attitude on particular databases and on database as not traditional source of information.
3. To estimate more effective principles and ways to spread information.
4. To create ways for databases optimization.

A questionnaire via email method was used for the investigation. Students, lecturers and employees of Vilnius, Kaunas Technology, Klaipėda, and Vilnius Gedimino Technical universities were participating in the survey. These institutions were selected for survey for the following reasons:

- they are the largest and leading universities in Lithuania or its regions;
- they ensure full range of social, humanitarian, physical, technological and biomedicine directions;
- subscribe to the same databases;
- enable full disclosure of views, evaluate demands and opinions about databases.

In analysis of survey results, only those questions were used, that reveal user attitude towards databases, evaluate the demand and expedience of databases and forecast most effective ways to spread information about databases.

Analysis of main data of the research

Number of answers received was 1705. 112 of them were inapplicable. Applicable answers makes 93,431%. Only applicable answers were used to summarize the survey data. In this article only the main questions are analyzed.

First question was “Do you use databases subscribed by your library?” 892 had answered positively and 701 – negatively. This makes accordingly 56% and 44% (see diagram 1).

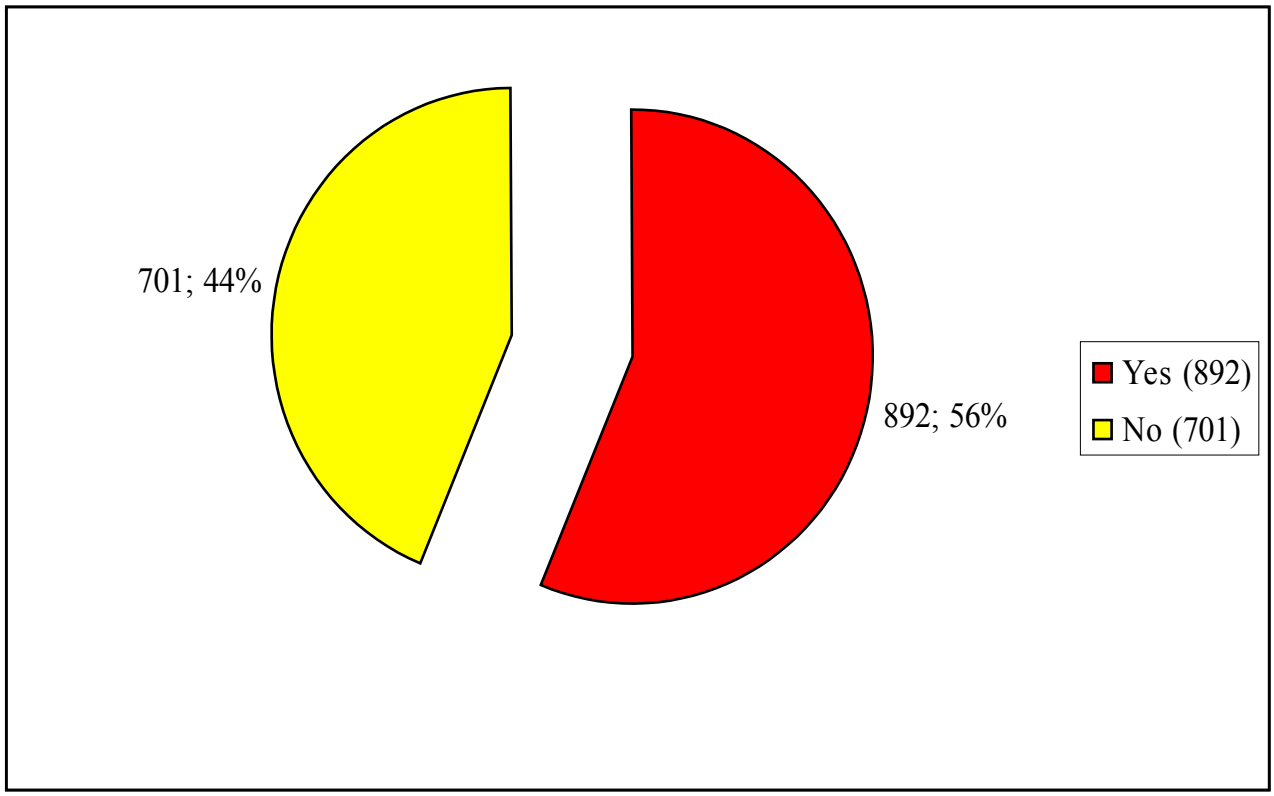


Diagram 1. Do you use databases?

Answering to the second question of the survey “If you don't use databases, indicate your reason”, it was possible to select one reason or to write your own. This question was answered by 892 respondents (56%). In conclusion, the main reason why the databases are not used is that

respondents do not know of such thing (303) and they think that you could find everything on the Internet (233) (see diagram 2).

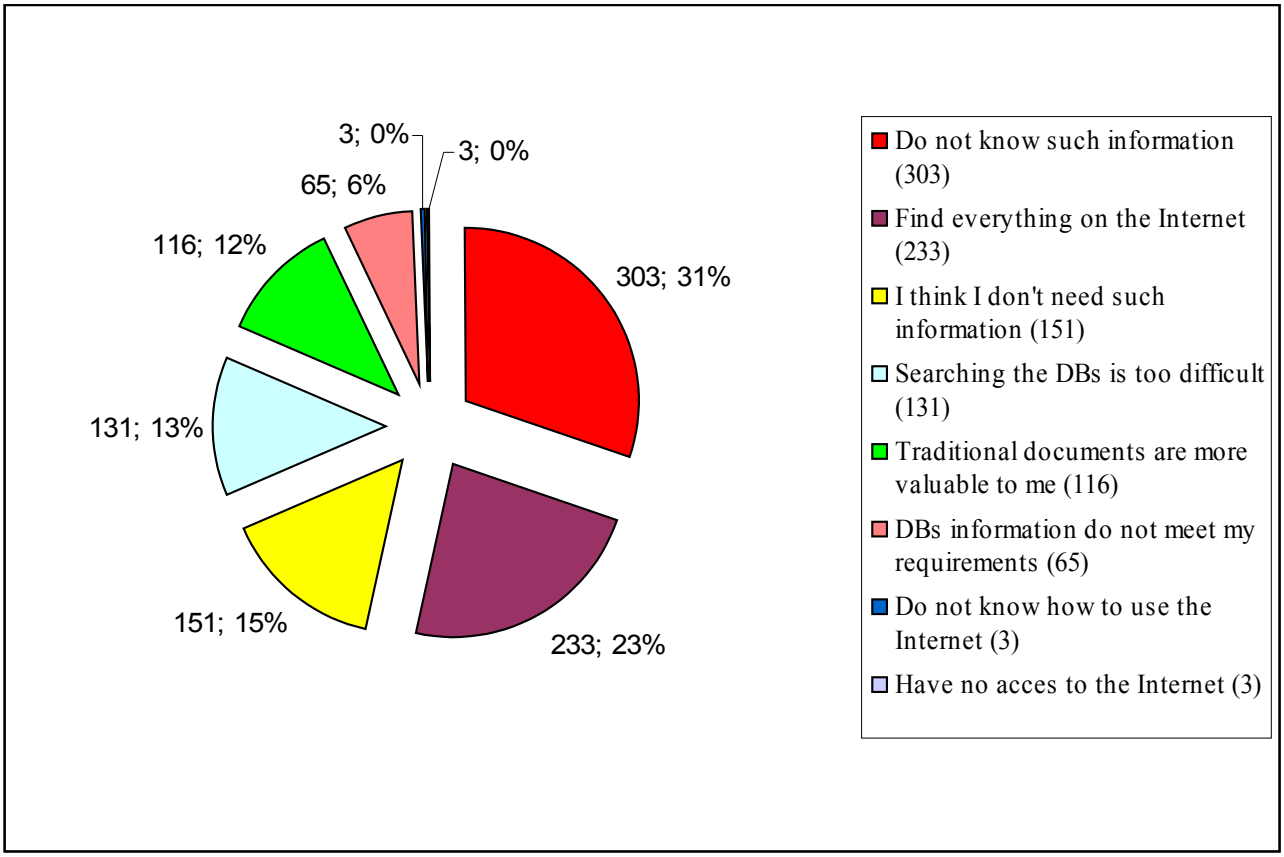


Diagram 2. Reasons of not using databases

Third question, “How do you learn about subscribed databases”, was answered by 1535 (96,4%) respondents. It was possible to select some reasons when answering this question. 241 of respondents stated that they have no such information. It is 34,4 percent of those who do not use databases. So we can say that about 460 respondents have information about subscribed databases but don't use them for other reasons (see diagram 3).

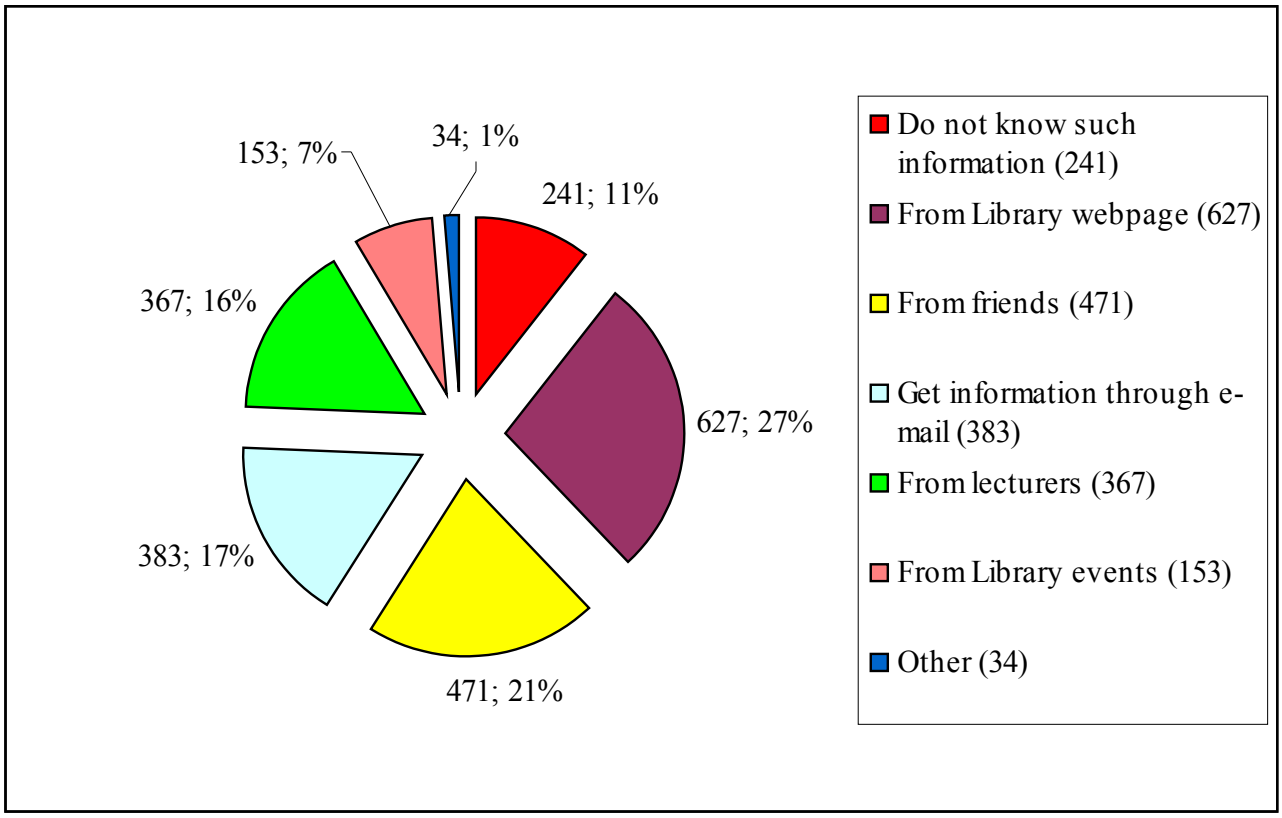


Diagram 3. How do you learn of databases?

When answering question about purpose for using databases, respondents had too choose some answers. This possibility was chosen not incidentally, a lot of respondents (662) had chosen few purposes of use. This question was answered by 890 respondents and 703 had not answered it. A lot of respondents (511) answered that they use databases in scientific research. 464 of respondents stated, that they use databases when writing their term, graduate and post-graduate papers. 388 respondents use databases as the source of newest information. 339 respondents use databases to prepare for lectures and 335 use them to create scientific publications. 158 doctorates use databases to write their graduation dissertation (see diagram 4).

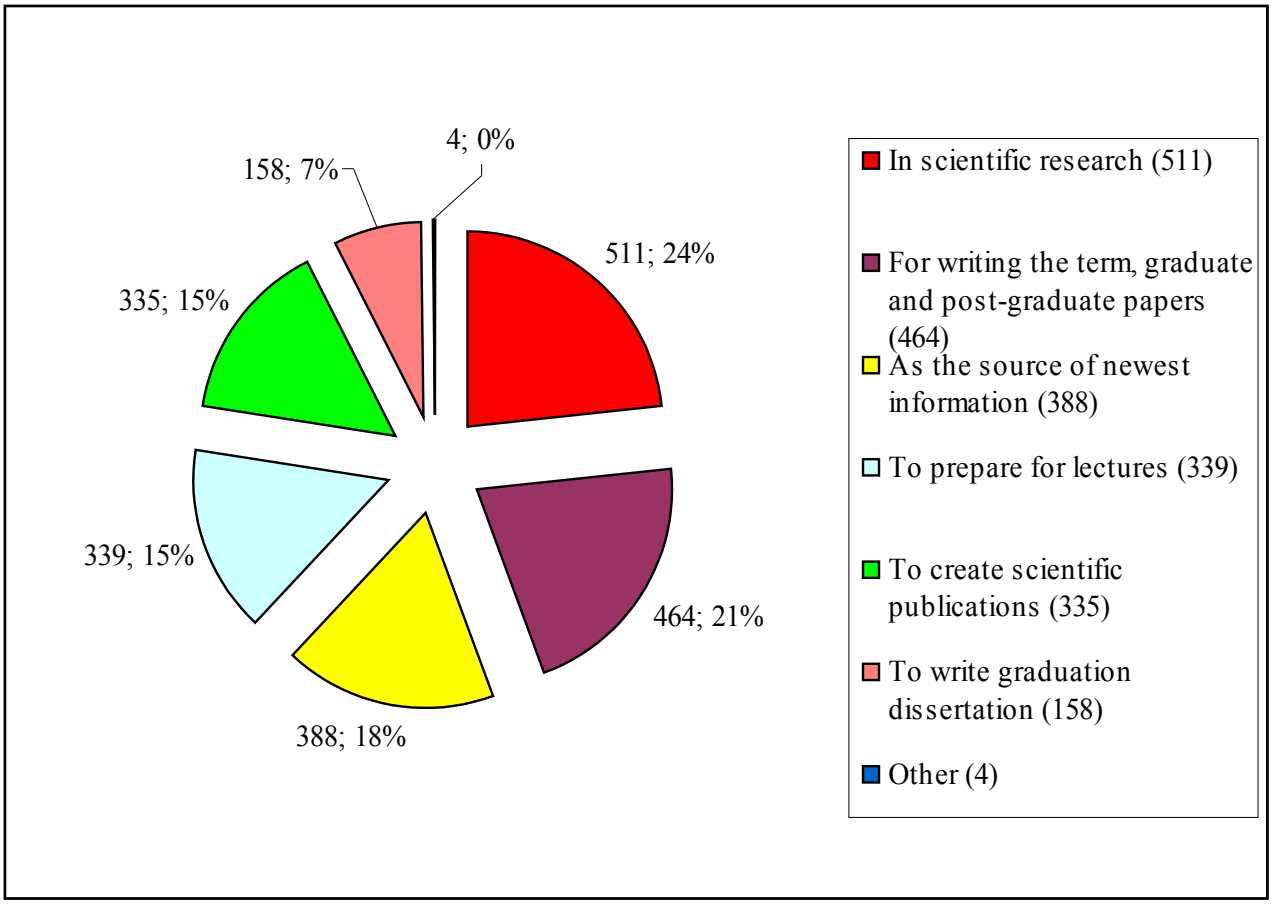


Diagram 4. Purposes of using databases

Proper advertising of databases, presentation and dissemination of information helps to optimize the use of databases. The question “In your opinion, what could help to learn more about databases and increase use of them?” was included to find out the user’s opinion about effective ways how to spread the information. Answering this question, respondents had to choose some answers. 1540 (96,7%) of them had answered this question (see diagram 5). According to the respondents, most popular means of spreading the information is using e-mail (949) and integrating such information in to the study process (835).

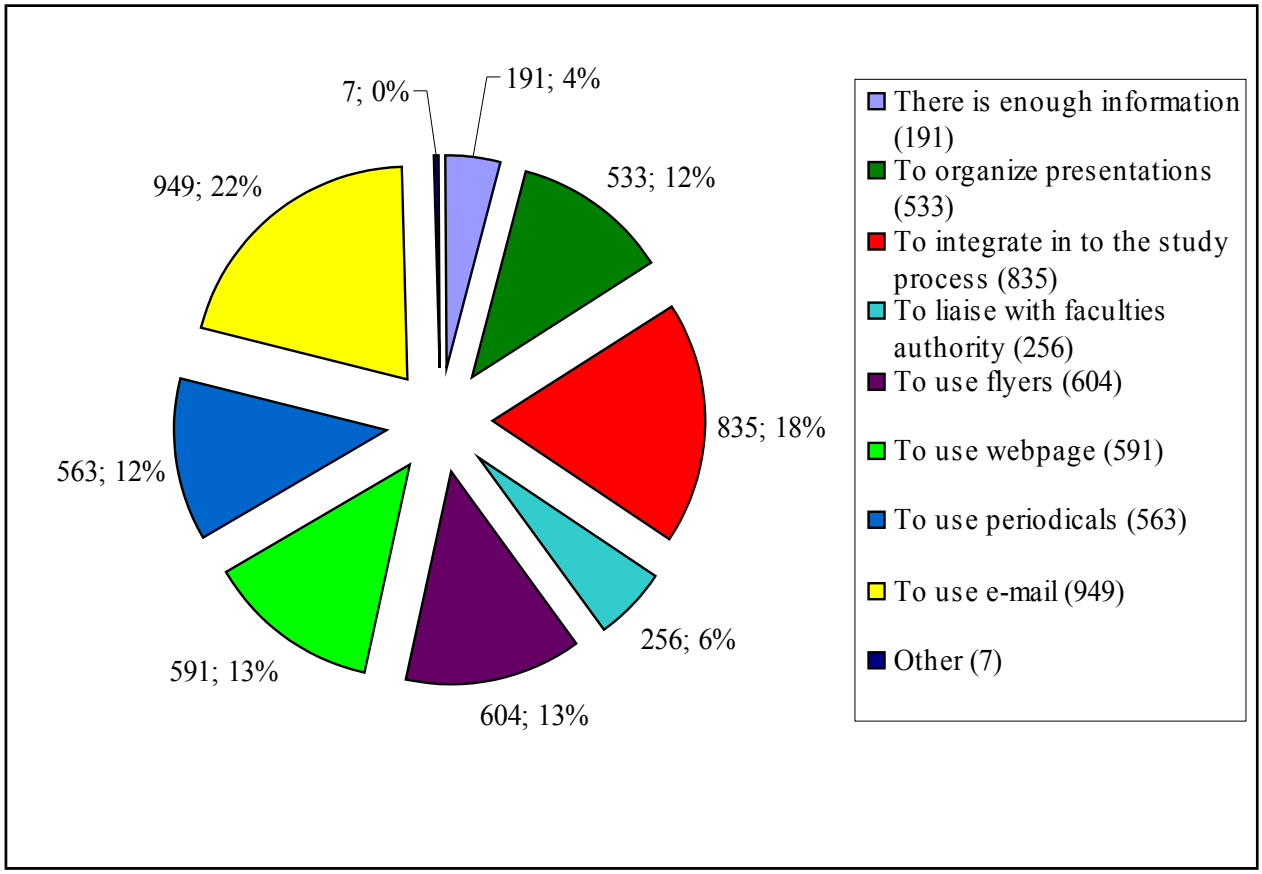


Diagram 5. What could help to learn more about databases and increase use of them?

Statistical analysis of databases use in the libraries of Lithuanian universities

Statistical analysis of database use is one of the ways to find out if a chosen resource is really required and used by users, to find priorities of resources, helps to discard resources which are not used or have almost no use and to forecast future subscription of resources. Statistics should be detailed, the following elements should be provided: number of accessions, number of searches, full text document searches, copying or storing. It is important to elaborate statistical data by particular resources, IP addresses (or other specific elements of access, i.e. account number). The use of electronic journals in databases is also an important element of analysis [3].
Databases chosen for statistical analysis were: EBSCO, Science Direct (SD), Cambridge Journals Online (CJO), and ProQuest Information & Learning (PQ). They were selected because:

- Licensed contracts were signed for 3 years lead to possibility to track statistical indicators for three years;
- These databases are subscribed by all libraries of selected higher education schools;
- These databases are most popular among users.

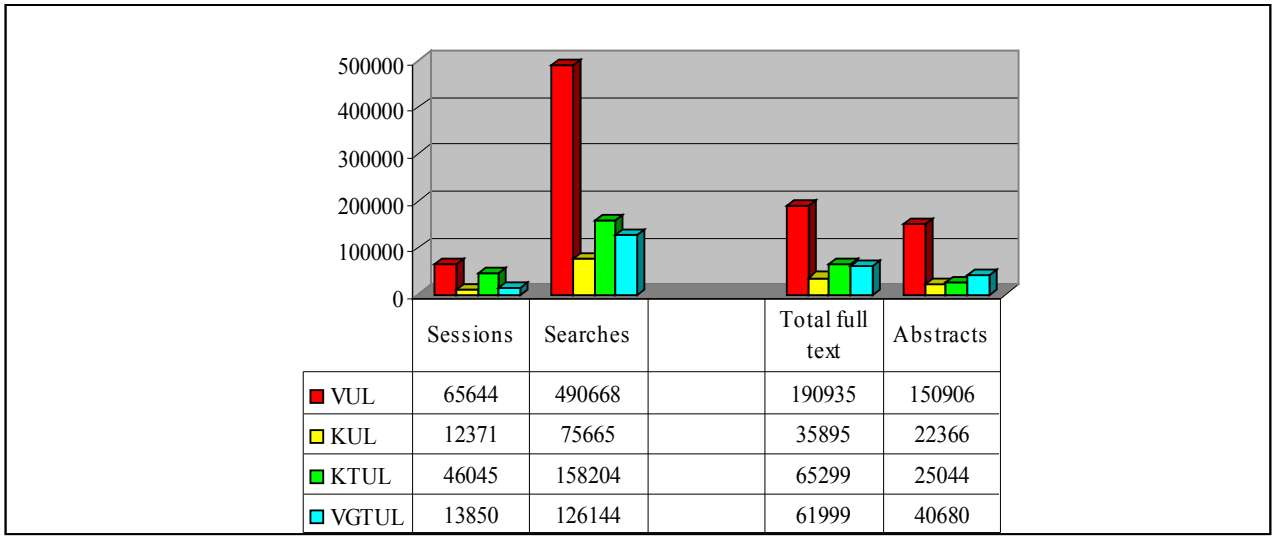
There were 4 higher education school libraries selected for the analysis – Library of Vilnius University (VUL), Library of Klaipėda University (KUL), Library of Kaunas Technological University (KTUL) and Library of Vilnius Gediminas Technical University (VGTUL).

General statistical analysis

DB EBSCO

Statistical results of use of EBSCO database are shown in diagram 6. Diagram results shows that results of use are distributed unevenly; tendencies of usage differ every year in each library. In

period of 2004-2006, EBSCO was accessed 137 910 times, 850 681 searches were executed, 354 128 full text articles and 238 996 abstracts were used.

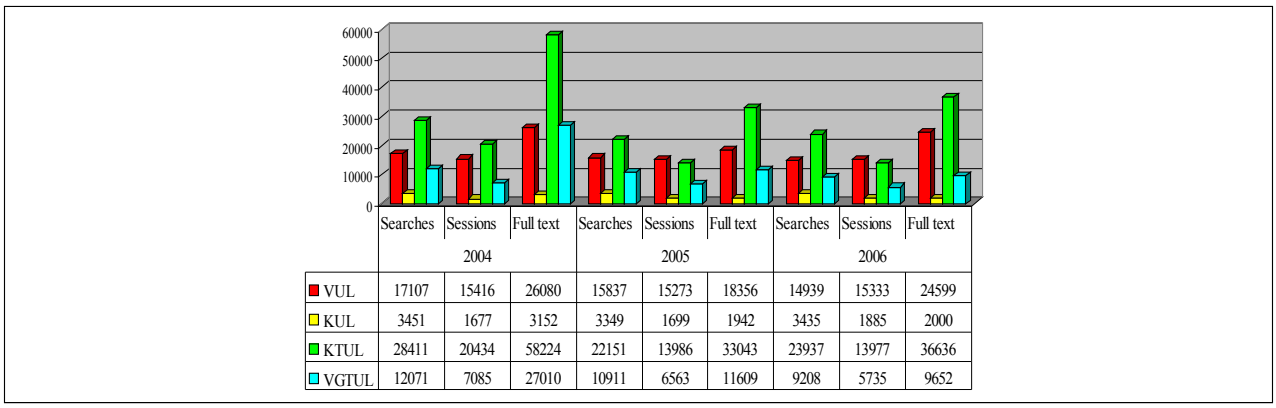


	Sessions	Searches		Total full text	Abstracts
VUL	65644	490668		190935	150906
KUL	12371	75665		35895	22366
KTUL	46045	158204		65299	25044
VGTUL	13850	126144		61999	40680

Diagram 6. Use of EBSCO database (2004–2006)

DB Science Direct

Analyzing statistical results of Science Direct use, we see that the peak of this database use was in 2004 (diagram 7). All provided indicators (accesses, searches, and full text articles) shows that this database was used intensively. The DB was most popular in Kaunas Technological University Library.

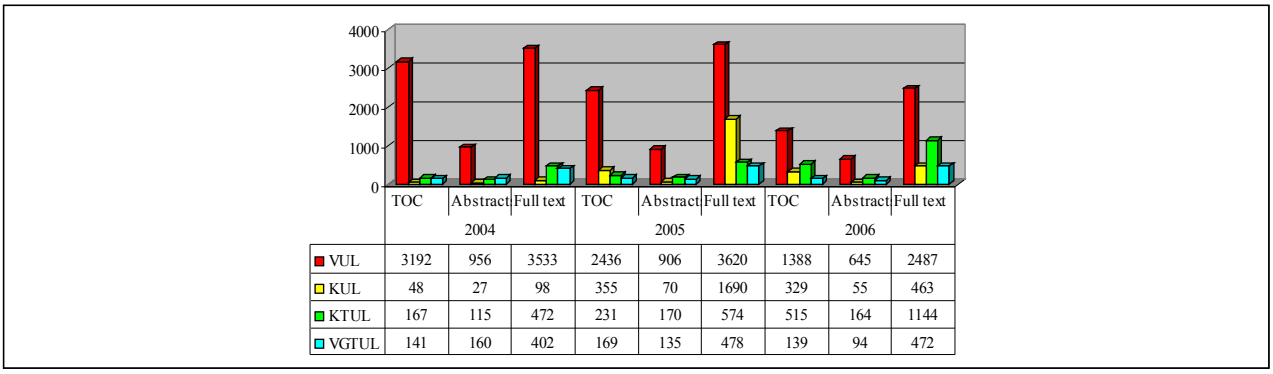


	Searches	Sessions	Full text	Searches	Sessions	Full text	Searches	Sessions	Full text
	2004			2005			2006		
VUL	17107	15416	26080	15837	15273	18356	14939	15333	24599
KUL	3451	1677	3152	3349	1699	1942	3435	1885	2000
KTUL	28411	20434	58224	22151	13986	33043	23937	13977	36636
VGTUL	12071	7085	27010	10911	6563	11609	9208	5735	9652

Diagram 7. Use of Science Direct database (2004–2006).

Cambridge Journals Online

Statistical results of CJO use are presented in diagram 8. Diagram shows that this database is not very popular among library users. Users minimally use full text articles in HTML format. 2004 – 2006 libraries used 3497 CJO summaries and 15 433 full text articles. The DB was most popular in Vilnius University Library.

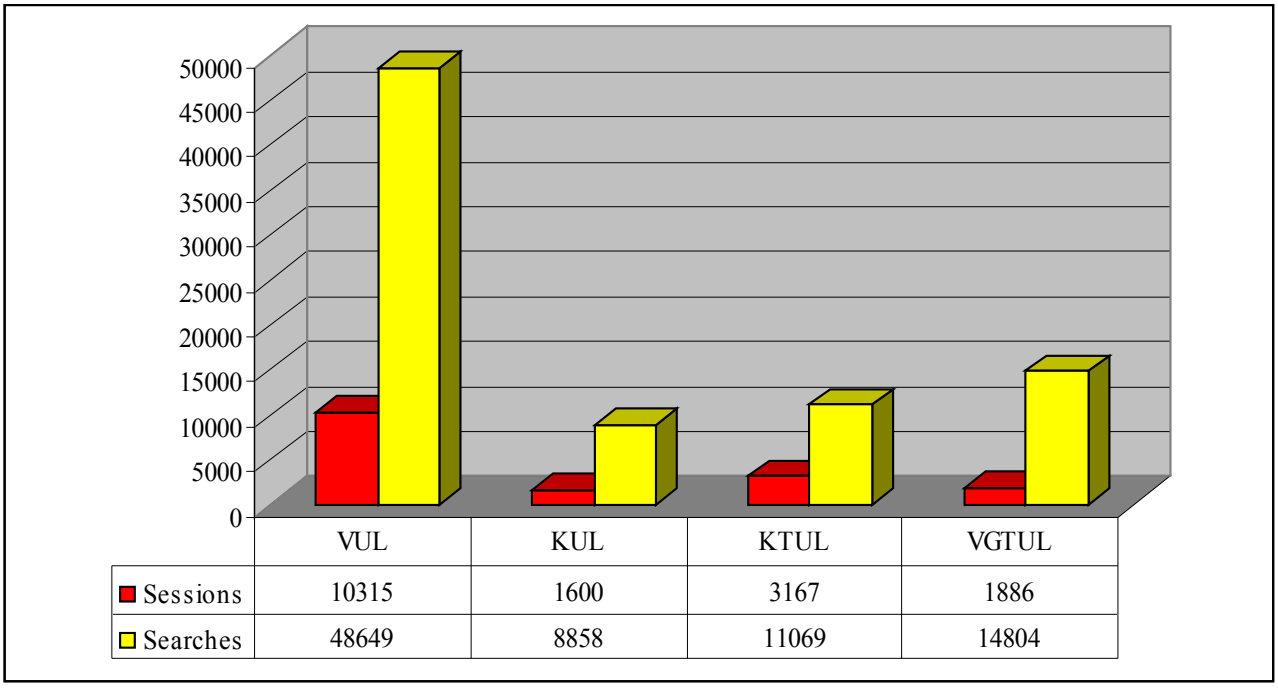


	TOC	Abstract	Full text	TOC	Abstract	Full text	TOC	Abstract	Full text
	2004			2005			2006		
VUL	3192	956	3533	2436	906	3620	1388	645	2487
KUL	48	27	98	355	70	1690	329	55	463
KTUL	167	115	472	231	170	574	515	164	1144
VGTUL	141	160	402	169	135	478	139	94	472

Diagram 8. Use of Cambridge Journals Online database (2004–2006).

ProQuest Information & Learning

Statistics of ProQuest database shows in period of 2004–2006 libraries accessed ProQuest database 13 641 times and executed 83 377 searches. The results of statistic data show the DB was popular among the users. Most popular the DB was between the users of VUL.
Indicators of year 2006 are provided till October, when the license expired.



	VUL	KUL	KTUL	VGTUL
Sessions	10315	1600	3167	1886
Searches	48649	8858	11069	14804

Diagram 9. Use of ProQuest database (2004–2006)

Conclusions

Number of databases used in Lithuanian academic libraries is growing better each year. This shows the demand of such type of information among users. It is important to point out positive effect in subscribing electronic information resources of non-commercial associations (LMBA, eIFL). Research of user opinions and fulfillment of their demands is one of the most important aims of an academic library. User should be not only a passive observer; he should be an active participant of formation of library collections. Research of user's opinion could be accomplished by surveys, interviews, expert questioning and so on. Proper analysis of user surveys is an important prerequisite for the increase of electronic resource usage, selection of resources and spread of

information.
Statistical analysis of database use should be performed constantly. It is one of the ways (with research of user opinions) for library to verify if a selected resource is useful, to find user priorities and to discard unused products and to forecast future subscriptions. These investigations are important in planning financial resources of a library.

Literature

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Abstract

Latterly, there are a lot of attempts to make scientific information freely accessible. Nevertheless, most part of information, intended to be used for scientific work and learning is available only by purchase.
Biggest part of scientific information is stored in scientific (academic) databases.
Problems of database purchase and effective use are relevant to libraries of various countries.
The article analysis these problems:
1. Purchase of commercial databases in Lithuanian academic libraries.
In Lithuania, the purchase of databases is controlled by Association of Scientific Libraries of Lithuania (consortium), which was founded in 2001. In the beginning of 2007 Lithuanian libraries were subscribed to over 80 databases.
2. Research of dynamics of user demand for electronic information.
In May-June of 2006, a survey was accomplished. 4 Lithuanian academic institutions took part in it. 1700 respondents had answered the questions. Purpose of research: to collect data for rating of database managing in higher educational institutions and to plan prospects of future.
Subject of research: Demand and use of databases in Lithuanian higher educational institution libraries. The results of survey are presented in article.
3. Statistical data of database use.
Analysis of statistical data is one of the methods to check if a selected resource is really useful and if it is used by users and to dispose unused and rarely used products by planning further subscription of resource. The article contains analysis of statistical data of some databases, subscribed by Lithuanian academic libraries.

Attachment 1. Commercial databases subscribed by Lithuanian libraries in 2007

	DB (through LMBA)	General Jonas Zemaitis Lithuanian Military Academy Library	Library of Kaunas University of Medicine	Library of Kaunas University of Technology	Klaipeda University Library	Library of Lithuanian Music and Theatre Academy	Libray of Lithuanian Academy of Physical Education	Library of Lithuanian Veterinary Academy	Library of Lithuanian University of Agriculture	Mykolas Romeris University Library	Libr Siau Univ
1	AIP			X							X
2	APS			X							X
3	AMP Package (8 DB)			X							
4	Annual Reviews		X	X							
5	Blackwell HSS				X					X	
6	Blackwell STM		X		X			X	X	X	X
7	Computers & Applied Sciences Complete			X							
8	DynaMed	X	X	X	X		X	X	X	X	X
9	EBSCO Publishing (11 DB)	X	X	X	X		X	X	X	X	X
10	Education Research Complete				X					X	X
11	Emerald Fulltext			X	X					X	X
12	Environmental Complete			X							
13	GALE: Business & Company Resource Center									X	
14	GALE: Health and Wellness Resource Center				X						
15	GALE: History Resource Center - Modern World										
16	GALE: InfoTrac OneFile				X						X
17	GALE: Literature Resource Center				X						X
18	GIDEON		X								
19	Gender Studies Database										
20	GMID									X	
21	GROVE Art Online				X	X					X
22	GROVE Music Online				X	X					X
23	Humanities International Complete				X						X
24	INSPEC			X	X						
25	Institute of Physics Publishing			X							
26	Integrum - Techno									X	
27	Lippincott W&W Custom	X	X	X	X	X	X	X	X	X	X
28	Literary Reference Center										
29	MagillOnLiterature Plus										
30	MEDLINE with Full Text										
31	Oxford English Dictionary			X	X						
32	Oxford Journals Online	X	X	X	X		X	X	X	X	X
33	Oxford Reference Online	X	X		X					X	X
34	PsychARTICLES				X					X	X
35	SAGE Journals			X	X					X	X
36	Science Direct		X	X	X				X	X	
37	SocINDEX with Full Text			X	X					X	
38	Sport Discus with Full Text				X		X				
39	Springer/Kluwer		X	X	X						
40	SpringerLINK archyvas	X	X	X	X	X	X	X	X	X	X
41	SpringerLINK E-Books		X	X							
42	Wiley InterScience		X	X	X			X	X	X	X
	DB (individualy or through the projects)										
43	ASFA: Aquatic Sciences and Fisheries Abstracts				X						
44	Beck-Online									X	
45	Clinical Evidence		X								

46	Cochrane Library		X								
47	Compendex			X	X						
48	CRC net Databases			X	X						
49	Encyclopedia of Physical Science and Technology			X							
50	Engineering Village 2			X							
51	HeinOnLine									X	
52	HINARI		X								
53	ICONDA										
54	IEEE / IEL			X	X						
55	IHS Standards				X						
56	ISI Essential Science Indicators			X							
57	ISI Journal Citation Reports			X							
58	ISI Proceedings			X							
59	ISI Web of Science			X							
60	ISSN Online										
61	JSTOR										
62	Oceanic Abstracts(CSA)				X						
63	Referex			X	X						
64	USPTO				X						
65	Zentralblatt MATH			X	X						
66	Westlaw International									X	