



# An evaluation of the second survey on electronic databases usage at Ankara University Digital Library

Electronic databases usage

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## Abstract

**Purpose** – The purpose of this paper is to encompass the assessment of the effectiveness of the digital library and the value of multidisciplinary databases in terms of user preferences and use frequency by academic ranking.

**Design/methodology/approach** – This paper compares the results of two survey questionnaires carried out in 2002 and 2005. It examines the level of awareness by academic staff of digital library resources along with their use rate and to evaluate the preferences of faculty for specific electronic databases case studies were undertaken by means of separate questionnaires in both years.

**Findings** – Findings were consistent that positive results have been observed in two studies conducted in two years, 2002 and 2005. According to the results of the current survey, increased numbers of the faculty members of Ankara University know about the existence of the digital library. Another result of the survey is that many of the faculty members, although not all, use electronic databases. The most preferred databases have been Web of Science, Science Direct and Ebsco. When use of the electronic databases is analyzed, in respect of faculty rank and level of awareness, associate and assistant professors, assistants are ranked first.

**Originality/value** – The study presents the first case study in the field in Turkey that compares the current situation of the digital library usage with the initial survey data.

**Keywords** Digital libraries, User studies, Databases, Turkey

**Paper type** Case study

## Introduction

Ankara University was founded in 1946 and provides education to 48,000 students in 15 faculties, eight high school and research centres with 3,600 academic personnel. The education branches include almost every field of art, social and human sciences such as medicine, mathematics, biology and engineering, as well as education, law, language and communication. The university that teaches at a very wide spectrum and the language of the education is Turkish. However, all academicians are expected to know English at a level that they can follow the literature and write articles regarding their field since English is accepted to be the common language of science. Publishing articles in foreign platforms is a requirement for appointments and promotions of the academicians; this is one of the main reasons that make foreign language skills so



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important. Also publishing articles abroad is the most important factor for the performance evaluation of the university comparative to other universities. Therefore the academicians are expected to use databases without difficulty as the university attaches so much importance to the usage of English language in scientific studies even though the language of education is Turkish.

In 1999, Ankara University subscribed to the Web of Science database and started to provide an electronic database service. In 2000, it joined the Anatolian University Libraries Consortium (ANKOS). In the following six years, Ankara University has subscribed to 36 database servers and become one of the leading universities with 56 databases in the electronic library. The mass and common use of the databases ensures the expected benefit from the databases and the production of new information.

In 2002 and 2005, two different questionnaires were conducted to survey the use of these databases within the electronic library of Ankara University by the academicians. In 2005, a questionnaire was conducted to evaluate the results of the activities which were carried out in the direction of the outputs of the survey made in 2002.

The objective of the present work is to compare the outputs of the previous and the recent surveys regarding the following aspects:

- Examination of the level of being informed of the academicians about digital library resources and their use rate.
- Evaluation of the preferences of faculty for specific electronic databases such as academic rank and discipline in connection with use frequency and preferences in order to determine how these factors affect one another.

### **Evaluating digital libraries: literature review**

The user statistics being updated regularly by the vendors that provide the electronic resources were observed to be inconsistent, unclear and unreliable; this was the starting point of the survey studies carried on in 2002 in Ankara University Library. Luther, like others, has drawn attention to the same problem very concretely in the literature. They have underlined that libraries are having difficulties while analyzing and interpreting the vendor usage statistics collected from different systems with different methods (Luther, 2001; Sampson *et al.*, 2004; Taha, 2004). In this context, constituting a long-term co-operation plan is being suggested for the vendor and the libraries to ensure the delivery of the statistics after an arrangement process made according to a standard form (Shim and McClure, 2002). Each library prefers to perform its own statistic studies as each vendor processes its own reporting technique while determining the usage statistics. Especially, in the last few years, it is possible to obtain more detailed data outputs by performing the database usage researches over log files regarding the electronic resources besides the survey studies (Nicholas *et al.*, 2007; Coombs, 2005).

Studies from other countries, however, have examined the use of online resources in the academic environment and provide a useful context for considering the Turkish situation. The key issues in digital library assessment, including consortial collection assessment are defining library users' and their needs, evaluating functionality of online resources, and identifying system requirements.

Bancroft *et al.* (1998) reported a user survey examining the library services, including electronic journals at the Washington State University This survey

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requested faculty members and graduate students to rank the electronic resources as essential for their work. Faculty reported that the library OPAC was the most important to their work (37.5 per cent). However, over 70 per cent of faculty expressed “No opinion /never used” concerning online full text journals. As proved to be the case for our study, the results of the WSU survey were also useful in the future decision-making involving journal cancellation.

The Alexandria Digital Earth Prototype (ADEPT) project focused on the observations to develop a digital library of geo-referenced information resources at the University of California, Los Angeles, and the University of California, Santa Barbara. The research was employed to both students and instructors and the results applied in the design of Alexandria Digital Library. Initial observations of this project suggested the requirements for constructing digital libraries from both a teaching and learning point of view. From the study findings, several recommendations were made to improve usability of the electronic resources, increased browsing and viewing mechanism, and more active interactive online training (Borgman, 2000; Hill *et al.*, 1997).

A survey of the use of the electronic journals services at the library and information service of the University of Patras in Greece looked at the frequency of use according to the demographics as age, gender and academic occupation were considered. E-journal service appears to be used by all age groups, although the majority of use was reported by those under 35 as a result of the high proportion of students, who completed the questionnaire. Proportionally, more males used the service on daily, weekly or monthly basis than females. This survey also investigated reasons of using electronic resources (Monopoli *et al.*, 2002).

The Coordinamento Interuniversitario Basi dati e Editoria in Rete (CIBE) – a Central-Southern Italian Library Consortium – survey showed both an increasing use of electronic journals and an ongoing need for promotional activities to academic communities for awareness of online resources (Garciulo, 2003). A similar survey undertaken by the Utah State University Libraries asked respondents whether they were aware of libraries’ electronic databases. More than two-thirds of respondents were aware of some of the electronic resources. Respondents who were aware of, and made use of, each database were asked to rate the importance of that database to their own work (Weingart and Anderson, 2000).

Tenner and Yang (1999) analyzed the relationship between the electronic journal use and age, and status of faculty members and found that assistant professors were most likely to have used electronic journals (44.7 per cent), followed by full professors (34.5 per cent), and associate professors (34.2 per cent). The research question addressed in our study is to what extent do Turkish faculties reveal similar attitudes and report similar use patterns to other faculty world-wide and what do the implications mean for publicizing library digital resources.

On the other hand, the libraries, which provided the electronic journals throughout a consortium, were not able to provide only the usage statistics of their own institutions as is the case in the Suny Cortland project pointed in the Coombs’ (2005) study; this is an important factor for such studies to become common. In addition to that, the studies regarding the usage of the electronic databases provided through a consortium are making important contribution to the collection centred usage researches. From this point of view, it can be mentioned that a significant part of the academicians prefer printed journals according to the research results. However, these results differ

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according to the disciplines. For example, it is observed that the academicians in natural sciences prefer the electronic journals at higher levels than the academicians in social sciences according to the survey conducted in Catalan University (Borrego *et al.*, 2007).

Another interesting study on this subject is the research made about the usage of the electronic journals provided within the ANKOS (Anatolian University Libraries Consortium), in which Ankara University also participates. In this study, the relation between the electronic resources being used within the ANKOS and the publication numbers of the universities member to this consortium, have been evaluated on subject basis; it has been proved that there is a strong connection between the electronic journal usage and research activities (Karasözen *et al.*, 2007).

According to the survey results made annually in Ohio State University covering the 1998-2000 years, more than a half of the academicians and the students are observed to prefer the electronic journals than the printed journals (Rogers, 2001). Weingart and Anderson (2000) have mentioned in the article they have written that only the minority of the other researches in the literature made regarding the use of the electronic resources in universities include a survey study directly related with the academicians. When we look at the studies made in the following years, on the use of the databases in the literature, we can say that this tendency remains unchanged. The survey made in the United Arab Emirates University proved that the electronic resources are being used by the academicians at low levels and the lack of awareness database availability is mentioned as the reason (İbrahim, 2004). In the surveys made directly on the academicians, the level of the users' awareness of database availability, the priority ranking while using these resources and their satisfactions levels are being questioned. Therefore, the survey studies made in Utah State University and Arab Emirates University are important resources, which are directly connected to our study in regard to specifically searching the level of the awareness of the academicians about database availability in the library. The results of the surveys made in both universities show that the informative activities regarding the content and operation of the databases should be focused as it is the case in our study.

### **Methodology**

This paper compares the results of two survey questionnaires carried out in 2002 (Atilgan and Özlem, 2006) and 2005. A printed survey form was delivered to 3,500 academicians in both surveys; 2,100 surveys were returned back in 2002 of which 1,996 of them have been evaluated and 1,024 forms were returned in 2005. To examine the level of awareness by academic staff of digital library resources along with their use rate and to evaluate the preferences of faculty for specific electronic databases case studies were undertaken by means of separate questionnaires in both years. For the figures in the Tables, the total value exceeds 100 per cent because all the questions except the second one were presented in a way that allowed selecting more than one choice. The evaluation of the outputs gained from the second survey is given below.

### **Findings and evaluation**

In the evaluation of the survey study, the first step was to determine whether the academicians were informed about the electronic library available to them (Table I). According to this, the associate professors were at the first rank (93.3 per cent) in 2002

and they have regressed to the second rank in 2005. The assistant professors were at the second rank in 2002 with the use rate of 90% and they have reached to the first rank with the use rate of 97.4 per cent in 2005. The professors were in the third rank in 2002 and they were at the same rank in 2005. The specialists were in the sixth rank according to the previous survey and they have shared the third rank with the professors in 2005. The lecturers were in the fourth rank according to the survey in 2002 and they have regressed to the sixth rank in 2005. The research assistants were in the fifth rank in 2002, they were at the same rank in 2005 even though their level of being informed has increased. The level of being informed of the instructors has decreased and they were at the same rank. According to these outputs, the assistant professors and associated professors were at the first rank; their level being informed was 95 per cent and over 95 per cent. This can be related with their concern of fulfilling the required obligations for their academic career. There has been a decrease in the level of being informed of the professors, this can be related to the fact that they might have reached satisfaction regarding the publications and researches. The reason for the increase in the level of being informed of the lecturers, specialists and research assistants might be caused by their increased level of interest in electronic publications and research.

The second in the questionnaire was asked to understand whether the academicians (informed about the electronic library) were using the databases and if so how often. The output of this question shows that the databases were being used by the 79.5 per cent of the academicians in 2002 and this rate has increased to 88.8 per cent in 2005 (Table II). The rate of the frequent users has been more than 55 per cent although this rate was 27.5 per cent in 2002. This improvement in the use of the databases proofs that the presentations and trainings which were conducted for three years to introduce the databases have been successful.

Title	n	Informed about the electronic library		n	%
		2002	%		
Professor	492		89.0	252	90.6
Associate professor	306		93.3	105	95.5
Assistant professor	158		90.8	75	97.4
Lecturer	156		88.6	45	84.9
Research assistant	530		84.7	333	88.3
Specialist	66		83.5	48	90.6
Instructor	19		31.7	20	26.3
Total	1,727			878	

**Table I.**  
Distribution of the titles  
of the academicians who  
were informed about the  
electronic library  
(according to their titles)

Use frequency	n	Use of electronic libraries		n	%
		2002	%		
Not at all	695		20.5	98	11.2
Occasionally	675		52.0	295	33.6
Often	357		27.5	485	55.2
Total	1,727		100	878	100

**Table II.**  
Electronic libraries use  
(according to the years)

In 2002, the databases were mostly used by the assistant professors whereas in 2005 the research assistants were at the first rank according to the use distribution based on user titles. Although there has been an overall increase in use rates in 2005 compared with 2002, the databases were most rarely used by the lecturers and the instructors. (Table III).

Only resources which were qualified as an interdisciplinary database have been taken into consideration for analyzing the use rate outputs of the databases. The Web of Science database as a bibliographic database is being used by academicians for fulfilling academic requirements and searching the citation indexes to access the articles published in the international scientific journals. This database was at the first rank in 2002 and although its use rate has increased, it regressed to the second rank in 2005. The use of the ScienceDirect database has increased at nearly 74 per cent in 2005 and its use rate has reached the first rank whereas it was at the third rank in 2002. The use rate of Ebscohost database remained nearly the same; however, it regressed to the third rank from the second rank. The SpringerLink database was being used at the fourth rank in 2002. There has been an increase of 50 per cent in its use rate and it remained at the fourth rank same as the year 2002 (Table IV). The university has been subscribed to other databases but these databases were not taken into consideration as they were being used at under 10 per cent and they were including more specific subjects.

In Table IV, the distribution of the database use is mentioned and the databases are listed according to their use based on preference ranking in Table V. Web of Science has regressed to the second rank in 2005, whereas it was being preferred in 2002 at first rank. The Ebscohost database was in the second rank in 2002 and in 2005 it has regressed to the third rank. Whereas the ScienceDirect database was in the first rank with a use rate of 18 per cent in 2002, it reached to the first rank with an increase rate

**Table III.**  
Distribution of the database use of the academicians who were informed about the electronic libraries (according to their titles)

Academic positions Title	Distribution of the database use			
	2002		2005	
	<i>n</i>	%	<i>n</i>	%
Professor	256	46	225	89.3
Associate professor	208	63	100	95.2
Assistant professor	118	68	67	89.3
Lecturer	57	32	30	66.7
Research assistant	347	55	312	97.3
Specialist	42	53	41	85.4
Instructor	4	0.7	5	25
Total	1,032		780	

**Table IV.**  
Distribution of the annual database use within the electronic library

Databases	Database use Years	
	2002 (%)	2005 (%)
ISI – Web of Science	65.9	70.0
ScienceDirect	41.3	73.3
EBSCOhost	43.2	44.5
SPRINGER LINK	23.7	36.8

over 100 per cent in 2005. The Springer Link has experienced a process contrary to the overall view of the table (the use rates have increased in 2005 when compared to 2002). This database has gone through a decrease of 100 per cent (Table V).

The distribution of use and the purposes for using these databases are evaluated with respect to their use preference ranking. We can say that the databases were used for similar purposes during the years between 2002 and 2005 when the surveys were conducted. First, the databases were being used for research purposes in both years (2002 and 2005), second, they were being used for educational purposes and third, they were being used for reaching information on general issues (Table VI).

As a consequence of these evaluations regarding the use of the databases, the numbers shows us that 10 per cent percent of the academicians stated that they were not using the databases in the questionnaire conducted in 2005, and in addition to that the ratio of the academicians who were not using the databases was 20 per cent according to the survey made in 2002 (Table II). The factors which were mentioned by the academicians for not using the databases are listed in Table VII according to their preference. The percentage ratios observed to be high in the two questions regarding the reasons why the databases are not being preferred. The individuals who were using other resources for their needs have been at the first rank in 2005 whereas the individuals who did not know how to use the database were at the first rank in 2002 with the ratio of 38 per cent. When compared with the previous years, there has been a decrease in the number of the individuals who did not have the information technology

Databases	Years	Database use Use Preference ranking			
		1 (%)	2 (%)	3 (%)	4 (%)
ISI – Web of Science	2002	37.7	15.5	8.5	2.7
	2005	22.3	19.7	9.5	7.7
ScienceDirect	2002	18.7	12.3	8.8	1.3
	2005	38.2	18.7	7.8	4.1
EBSCOhost	2002	21.0	12.4	6.7	2.1
	2005	15.1	9.0	8.1	4.5
SPRINGER LINK	2002	6.3	7.4	6.5	2.1
	2005	2.8	9.5	9.9	7.1

**Table V.**  
Distribution of the  
database use within the  
electronic library based  
on preference ranking  
(according to the years)

Purposes	Years	Purposes of database use Preferences		
		1 (%)	2 (%)	3 (%)
Education – teaching	2002	11.9	69.8	3.4
	2005	8.1	66.3	14.7
Information retrieval	2002	86.7	11.6	0.3
	2005	89.0	9.1	0.5
General information	2002	1.4	3.7	45.9
	2005	2.9	14.9	63.2

**Table VI.**  
Distribution of the  
purposes for using the  
electronic library based  
on preference ranking  
(according to the years)

background. Although the number of the databases within the electronic library increased, there has been an increase in the number of the individuals who mentioned that they could not find a proper database including their field of interest, this is another important finding that we can mention while evaluating the primarily preferences. As it is mentioned in the introduction, although there has been an increase in the number of the databases and the service providers through years, there have been individuals who answered this question by stating that there are not any database including their field of interest, this situation can be interpreted as they did not make enough effort to find the related databases (Table VII).

Finally, in Table VIII, the answers regarding how the database use trainings should be made to increase the database use rates can be seen. A question regarding how the electronic library use training should be made was asked to the participants in 2002 and 2005 surveys. The participants requested different types of informative activities related with the use of the electronic libraries, this has been the most significant difference between the answers given in 2002 and 2005. In 2002, reaching the information throughout the web page and informative booklets were mostly preferred. In 2005, all the informative options were preferred approximately at the same rate. When compared with 2002, there has been a decrease in the number of the users prefer reaching the information throughout web page and informative booklet in 2005, whereas the number of the users demanding informative meetings have risen three times.

**Table VII.**  
Distribution of the factors for not using the electronic libraries based on preference ranking (according to the years)

Factors	Years	Factors for not using databases Preference ranking				
		1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Does not know how to use	2002	38.0	10.9	2.3	0.0	1.1
	2005	32.7	17.3	7.1	4.1	1.0
Has no information technology background	2002	16.2	7.5	3.0	2.3	0.4
	2005	8.2	3.1	6.1	9.2	6.1
Not interested	2002	1.1	0.4	1.1	1.1	6.4
	2005	0.0	1.0	2.0	6.1	14.3
Considers useless	2002	8.6	3.4	3.8	5.6	0.8
	2005	17.3	11.2	11.2	4.1	1.0
Uses other resources for information needs	2002	36.1	11.7	3.0	0.8	0.4
	2005	43.9	25.5	3.1	1.0	1.0

**Table VIII.**  
Distribution of the type of the preferences for training activities regarding the electronic library (according to the years)

Training types	User preferences for training Years	
	2002 (%)	2005 (%)
Both informative booklet and training classes	24.0	20.8
Training classes	5.6	18.6
Informative booklet including databases information	19.4	19.0
Consulting librarians	10.1	17.4
Consulting librarians	40.8	24.3



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## Conclusion

Electronic database use throughout the electronic library within the Ankara University has been analyzed with the questionnaires conducted at two different periods. The services of the Library Documentation Directorate for providing electronic resources have been evaluated throughout the findings of these two questionnaires. The activities were focused on the trainings for the use of the databases according to the findings of the questionnaire conducted in 2002.

In this direction, the positive results of the informative presentations and training activities carried out were observed throughout the evaluation made in 2005. During the time passed, the use of all electronic databases within the digital library has increased. In the last evaluation, the users (among the users who were informed about the digital libraries) who described their use rate as “occasionally” according to the findings of the first questionnaire, has described their use rate as “frequently”.

According to the results, the interdisciplinary databases of ScienceDirect, Web of Science and Ebscohost have been the most popular databases used for researching and reaching full texts most widely. In the second evaluation, Ebscohost database has been the only database which did not show remarkable increase in the use rate among the other databases. In this case, although Ebscohost is the first database established, the ScienceDirect and Web of Sciences databases are the newest databases included in the e-collection. In fact, this might be the reason why the use rate distribution has changed into different direction according to the second evaluation.

It can be considered as a satisfactory result that a great majority of the academicians in all departments within our university are informed about the electronic library and also a great majority of them are using the databases. There has been an increase in the number of the scientific articles written by the university academicians, these mentioned articles have been published in the journals which are listed in Citation Indexes. As a matter of fact this improvement was parallel to the increase in the use rate of the databases.

It can be mentioned that databases are being used mostly by Research Assistants, Assistant Professors and Associate Professors as another conclusion gained according to both evaluations. In this case, it is observed that the instructors and lecturers do not feel obliged to carry out researches and prepare publications and they do not consider the academic studies preferential for their professional life, as they do not have any concerns for academic promotion. This study in place does not include the sufficiency level of the databases for meeting the needs of the users, although it is determined that the databases within the electronic library are being commonly used by the academic personnel. Users have mentioned that they are using the databases at high rates, but this does not mean that they can exactly and shortly reach the information which they are looking for. The training activities about the use of the databases have great importance to achieve this goal. According to the evaluation made it can be motioned that the most of the academic personnel prefer the training activities to be conducted online on the internet. In the direction of this result, the priority will be given to the trainings for the use of databases while planning the services. These trainings will be developed by the university distant learning center then will be carried out online on the internet.

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