

## **Consortial Usage of Electronic Journals in Turkey**

BÜLENT KARASÖZEN

### **SUMMARY**

In this short article the increase in the usage of electronically licensed databases by ANKOS (Anatolian University Libraries Consortium) is explained with reference to COUNTER compliant e-journal collections. The diversity of usage among the universities and the cost effectiveness of electronically available databases with the consortium is explained, taking into account the special characteristics of Turkish university libraries, the rapid increase of students and newly established universities, and the growth of scientific publications.

### **INTRODUCTION**

The usage of electronic journals in Turkish universities and research institutions has increased geometrically since the establishment of ANKOS (Anatolian University Libraries Consortium) in 2001. ANKOS started in 2001 with only a few members having access to nine e-journal collections and bibliographic databases. Over time, the number of licensed databases within the big deal negotiations with published and participating members of the consortium increased rapidly. In 2007, 86 member institutions were accessing 40 electronic journal packages, e-references, bibliographic databases and e-book collections of commercial and society publishers. The success of ANKOS is similar to other consortia around the world. The motivation for the increased usage of electronically available scientific information was influenced in Turkey by the following factors; the universities' insufficient print collections, the lack of a document delivery system, the establishment of new universities and the rapid increase in scientific publications. Within ANKOS, all contracts with the publishers let members join on agreed terms as in CIBER and NESLI, i.e. ANKOS is an opt-in consortium. Over time, for many universities and research institutions, joining the consortium became the only option. The development of ANKOS was documented by two recent articles; Karasözen, Bülent and Lindley, Jean Ann, 2004 and Erdogan, Phyllis, and Karasözen, Bülent, 2006. ANKOS is member of ICOLC, SELL, COUNTER and SPARC.

There are currently 94 state and 33 foundation or private universities in the Turkish Higher Education system,. Within the last two years, 40 new universities have been founded. A university now exists in every city in Turkey, about 40% of which are concentrated in big cities like Istanbul, Ankara and Izmir. The higher education institutions had about 1.7 million students and academic staff in the academic year 2006-2007. The university population consisted of 55% undergraduate, 31% vocational, 9% Master and PhD students, and 5% academic staff. In all licensing negotiations, ANKOS used the number of undergraduate, graduate students and academic staff, excluding the two or four year colleges, as FTE numbers, which is about one million. It should be mentioned that the electronic journals were mostly used by graduate students and academic staff. Because the education in most of the universities is lecture-based, the undergraduate students use the online scientific resources less than in Europe and the USA. According to the FTE numbers, Turkish universities can be classified into four categories: 15 large universities with more than 20.000 FTE's, 18 medium-sized universities with 5.000- 20.000 FTE's, 27 small

universities with 2.000-5.000 FTE's and 16 very small universities with less than 2.000 FTE's.

Turkey can be grouped with China, with Taiwan, South Korea and Brazil as the most dynamic countries in terms of their increase in scientific publications (Glaenzel, Wolfgang, 2008). In 1991, there were about 1,300 publications on the Web of Science ISI database. This number increased to over 16.000 in 2007. which corresponds to an average annual increase rate of about 14%. Similarly, the ratio of research and development expenditure on gross domestic product rose from 0.32% in 1992 to 0.76 % in 2006. It should be noted that Turkey is among the countries where most of the research was carried out in the universities.

## **CONSORTIAL USAGE OF ELECTRONIC JOURNALS**

Since the establishment of library consortia and the growth of big deals/major contracts, several studies have appeared in recent years in which the usage of e-journals were investigated with respect to their cost effectiveness, user diversity according to research fields etc (see for example Karasözen, Bülent, Kaygusuz, Ayhan and Özen(Bati), Hacer, 2007, Tonta, Yaşar and Ünal, Yurdagül, 2008, Gargiulo, Paola, 2003, Bevan, Simon, Dalton, Pete and Conyers, Angela, 2005, Boukacem-Zeghmouri, Cherifa and Schöpfel, Joachim, 2008)

In 2007, the total number of full-text downloads reached about twelve million. In the first years of the consortium, the annual increase rate of full-text downloads and participating members was about 75-80%, but slowed to 15-20% in the last years.. These figures are comparable with usage statistics in the French consortium Couperin, Boukacem-Zeghmouri, Cherifa and Schöpfel, Joachim, 2008 and with the NESLI study Bevan, Simon, Dalton, Pete and Conyers, Angela, 2005. In 2007, among the 86 ANKOS members, 46 of them were subscribing to 1-10 databases, 28 members to 11-20 databases, 12 more than 21 databases.

In 2007, more than 50 universities had access to the major interdisciplinary e-journal collections: Science Direct, Springer, Blackwell, Wiley and Taylor & Francis. On average, 20 ANKOS members subscribed to the university press and to more disciplinary society e-journal packages .The sharpest increase in the number of participating members occurred for Ebrary, where the number of ANKOS members increased from 8 in 2004 to 70 in 2007. This increased demand for e-books is probably due to the insufficient and scattered printed book collections in the university libraries and to inefficiencies within the inter-library loan system. Many libraries are currently experimenting with accessing other e-book collections.

In Table 1, the full-text downloaded articles of COUNTER compliant e-journal collections within ANKOS are listed. Columns 2-4 give the number of subscribing institutions and the last three columns give the full-text downloads over the years. One observes for the majority of e-journal collections an increase in usage, whereas JSTOR, Ebsco Publishing, Blackwell Publishing, and Springer are the most dynamic with respect to increase in usage. As in many other consortia, Science Direct is leading with about 40% of all ANKOS full-text usage annually.

**Table 1**

E-journal packages	consortium members			Full-text downloads		
	2005	2006	2007	2005	2006	2007
American Computing Machinery	11	13	15	37,077	42,546	55,477
American Chemical Society	18	23	27	161,327	168,465	193,448
Blackwell Publishing	37	43	53	571,120	803,117	981,463
Cambridge University Press	20	20	30	27,258	45,828	68,362
Ebsco Publishing	44	52	56	1,062,730	864,198	1,470,842
Emerald	18	18	19	53,734	88,412	71,677
Institute of Physics	25	25	30	48,234	52,519	74,153
JSTOR	20	27	43	246,498	381,371	543,027
Nature		10	10		75,163	75,126
Oxford University Press	27	28	33	225,127	272,509	238,513
Proquest 5000	14	14	15	261,833	232,924	275,201
ScienceDirect	59	66	66	5,232,730	5,694,351	5,843,049*
Springer	42	48	53	504,007	443,862	689,298

\* estimated by Tonta, Yaşar and Ünal, Yurdagül, 2008

In order to understand the usage patterns within the consortium, it would be helpful to look at the scientific progress in Turkey over the last twenty years. According to Web of Science, between 2002-2006 among the top 50 Turkish universities, 9 universities published more than 2000 articles, 17 universities between 1000-2000 articles, 24 universities less than 1000 articles. The publication profile of Turkey shows that Turkey is strong in the areas of clinical medicine, biomedical sciences, agriculture, chemistry and engineering, (Glaenzel, Wolfgang, 2008). These correspond to subject areas where the most full-text downloads occurred within Science Direct in 2006. (See Karasözen, Bülent, Kaygusuz, Ayhan and Özen(Bati), Hacer, 2007). The full-text downloads among the consortium members correlate with the publication output in the universities: only 6 universities had more than 4 % full-text downloads in Science Direct in 2006, 10 universities had between 2-4% full-text downloads, 22 universities 1-2 %, and 30 of them less than 1 %.

The average cost of full-text downloads for the COUNTER complaint e-journal collections in Table 1 was approximately 1.7\$, which varied between \$0.5 to \$2.6 among the databases. Because the insufficient print collections in the universities, the databases were used in a more cost effective way than in other consortia (see for example Boukacem-Zeghmouri, Cherifa and Schöpfel, Joachim, 2008, the cost of usage in French universities). The variation among the members institutions were for large interdisciplinary databases less than more discipline-based databases. This can be explained by the diversity of research activity among the universities. In many studies dealing with the usage of e-journals, the proportion of full-text downloads from unsubscribed titles is counted as a benefits of big deals. Because the number of subscribed printed journals was less than in other consortia within ANKOS, the full-text downloads from unsubscribed journals was more than 50 %.

## CONCLUSIONS

ANKOS' success and growth has occurred in a natural way, by identifying carefully the needs of their members and prioritizing solidarity within the consortium between small and large libraries. ANKOS also adopted from the beginning the international principles of ICOLC and prepared a national site license, which became the standard license for all negotiations with the publishers. The diverse and dynamic structure of the Turkish educational system and the rapid progress of research mean that the usage statistics for each database and institution should be carefully analysed. It will also form the basis of licensing negotiations with the publishers. As remarked in Carbone, Pierre 2008, many publishers are trying to increase their profits in so-called emerging markets, like Asia, the Near East, Brazil and Turkey, all of which are regions or countries currently experiencing growth in the field of science. Meeting the needs of their users for scientific information in a cost-effective way will be a challenge for Turkish librarians in the future.

## REFERENCES

Karasözen, Bülent, Kaygusuz, Ayhan and Özen(Bati), Hacer "Patterns of e-journal use within the Anatolian University Library Consortium", *Serials*, 20(2007), p, 37-42  
<http://serials.uksg.org/app/home/issue.asp?referrer=parent&backto=journal,5,62;linkingpublicationresults,1:107730,1>

Karasözen, Bülent and Lindley, Jean Ann, "Impact of ANKOS: Consortium Development in Turkey", *Journal of Academic Librarianship*, 30(2004), p. 402–409.

Bevan, Simon, Dalton, Pete and Conyers, Angela, "How usage statistics can inform national negotiations and strategies", *Serials*, 18(2005), p. 116–123,  
<http://serials.uksg.org/app/home/issue.asp?referrer=parent&backto=journal,10,62;linkingpublicationresults,1:107730,1>

Boukacem-Zeghmouri, Cherifa and Schöpfel, Joachim "On the usage of e-journals in French Universities", *Serials*, 21(2008), p. 121-126,  
<http://serials.uksg.org/app/home/issue.asp?referrer=parent&backto=journal,1,62;linkingpublicationresults,1:107730,1>

Carbone, Pierre, " Consortium Negotiations with Publishers - Past and Future", *LIBER Quarterly*, 17(2007)2, <http://liber.library.uu.nl/>

Erdogan, Phyllis, and Karasözen, Bülent, "ANKOS and Its Dealings with Vendors", *Journal of Library Administration*, 44(2006), p 69–84.  
<http://www.haworthpress.com/store/ArticleAbstract.asp?sid=HSDNUT4UCRGR8L3RJRUEHAEG65N051QA&ID=81720>

Gargiulo, Paola, "Electronic journals and users: the CIBER experience in Italy", *Serials*, 16(2003), p. 293–298.  
<http://uksg.metapress.com/openurl.asp?genre=article&issn=0953-0460&volume=16&issue=3&spage=293>

Glaenzel, Wolfgang, "Turkey on the way to the European Union? On a scientific power rising next door", *International Society for Scientometrics and Informetrics (ISSI) Newsletter*, 4(2008) p. 10-17

Karasözen, Bülent, Kaygusuz, Ayhan and Özen(Bati), Hacer “Patterns of e-journal use within the Anatolian University Library Consortium”, *Serials*, 20(2007), p, 37-42  
<http://serials.uksg.org/app/home/issue.asp?referrer=parent&backto=journal,5,62;linkingpublicationresults,1:107730,1>

Karasözen, Bülent and Lindley, Jean Ann, “Impact of ANKOS: Consortium Development in Turkey”, *Journal of Academic Librarianship*, 30(2004), p. 402–409.  
[doi:10.1016/j.acalib.2004.06.008](https://doi.org/10.1016/j.acalib.2004.06.008)

Tonta, Yaşar and Ünal, Yurdağül, “Consortial Use of Electronic Journals in Turkish Universities”, Proceedings ELPUB2008 Conference on Electronic Publishing – Toronto, Canada – June 2008, <http://eprints.rclis.org/archive/00014031/>

#### **WEB SITES REFERRED TO IN THE TEXT**

ANKOS, Anatolian University Libraries Consortium,  
<http://www.ankos.gen.tr/index.php?lang=english>

COUNTER, Counting Online Usage of Networked Electronic Resources  
<http://www.projectcounter.org/>

ICOLC, International Coalition of Library Consortia,  
<http://www.library.yale.edu/consortia/>

SELL - Southern European Libraries Link. <http://www.heal-link.gr/SELL/>

SPARC, Scholarly Publishing and Academic Resources Coalition,  
<http://www.arl.org/sparc/>