



INTERNATIONAL PERSPECTIVES

• Portrait of a Consortium: ANKOS (Anatolian University Libraries Consortium)

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The Anatolian University Libraries Consortium (ANKOS) was created in 2001 with only a few members subscribed to nine e-journal collections and bibliographic databases. This Turkish library consortium had developed from one state and three private universities joining together for the purchase of two databases in 1999. Over time, the numbers of licensed databases and participating members of the consortium increased rapidly (Fig. 1).¹ In 2008, through ANKOS, 90 member institutions were accessing 47 electronic journal packages, e-references (e.g. online reference books, encyclopedias, dictionaries), bibliographic databases, and e-book collections of commercial and learned society publishers. ANKOS also promotes Turkish librarianship through staff development programs, Turkish-language instructional materials, and international cooperation. The birth of ANKOS has previously been described by Karasözen and Lindley.² This column gives an overview of current ANKOS activities and its impact on electronic collection development in Turkey.

THE UNIVERSITY BACKGROUND

The evolution of ANKOS and its rapid acceptance by librarians and end-users can be best understood by looking at recent changes in higher education, research and the library environment in Turkey. There is a big demand for higher education in Turkey because of the high proportion of young people: 44% of the population is under 25. This demand drives the opening of new universities, 54 having been established since 2000. There are currently 94 state and 33 “foundation” (i.e.

private) universities in the Turkish higher education system. Every city now has a university, with some 40% of them 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 consisting of 55% undergraduates, 31% vocational school students, 9% in Masters and PhD programs, and 5% academic staff.

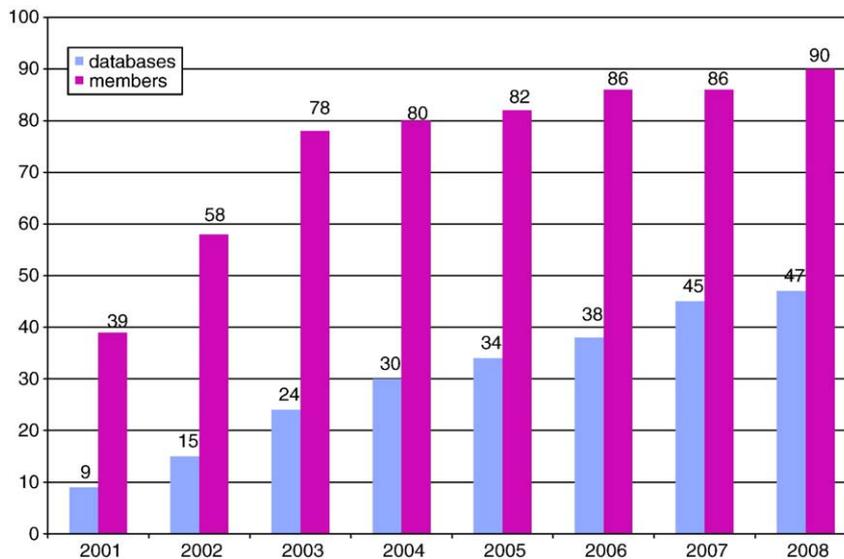
Turkish universities are organized under the Council of Higher Education, which is a fully autonomous supreme public body responsible for the planning, coordination, governance and supervision of higher education. On April 27, 2006, the Inter-Universities Council, which is an academic advisory body of the Council of Higher Education and comprises the rectors and one academic from each institution, recognized ANKOS as an official advisory committee.

The research output of Turkish universities has risen rapidly. The spectacular rise in the number of Turkish academic publications has been reported by Glänzel³ and Karasözen and Bayram.⁴ In 1991 there were about 1300 Turkish publications (articles, reviews, letters, and notes) in the ISI Web of Science database. This number increased to over 16,000 in 2007, which corresponds to an average annual increase of about 14%. Turkey moved from 38th place in 1991 to 19th in 2007 for publication output in the sciences, engineering and medicine. Similarly, the share of research and development expenditure in its gross domestic product rose from 0.32% in 1992 to 0.76% in 2006, although this is still below the European Union (EU) average of 1.9%. The number of researchers was 58,000 in 1999 and increased to 90,000 in 2006; of these, 73% are employed in higher education institutions, 16% in the private sector and 11% in the public sector. As indicated in OECD reports, Turkey has a history of producing a small but high-quality number of science and engineering graduates and researchers, most of whom later work in the education sector. The number of Masters students increased rapidly from 35,000 in 1993 to 90,000 in 2005. The number of PhD students increased more slowly, from 15,000 to 20,000 in the same period. Because research activities are concentrated in only a

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Figure 1
Growth in Numbers of Members and Licensed Databases.



few universities, half the PhD students are in just seven universities. Despite this, there is increasing use of the ANKOS electronic databases in the smaller universities, which has been reflected in the rapid increase in publications from those institutions.

Meeting the rising demand of researchers puts great demands on already over-stretched library services. The proportion of library spending in the university budget is on average 0.61%, but there is a big variation among universities, with this figure ranging from 0.1% to 4.0%. Only 15 universities spend more than 1 million US dollars annually on acquisitions. Library expenditures for the collection varied in 2008 between \$200,000 and \$3,000,000. In Turkey libraries operate with many fewer staff compared to libraries in Europe and North America. The average number of staff in 2007 in university libraries was 18, which included six librarians.⁵ Most of the libraries of newly opened universities have inadequate funding for acquisitions, personnel and library buildings.

Under these extremely diverse conditions it was a challenge to build up a successful consortium within a few years. The success of ANKOS in providing a wide range of electronic resources to scholars and increasing usage of the licensed databases is similar to that of other consortia around the world. The development of the consortium up to 2005 has been documented in two articles.^{6,7}

MANAGEMENT AND STRUCTURE OF THE CONSORTIUM

The majority of ANKOS members are universities, but membership is also open to special (research) libraries. ANKOS is an opt-in consortium; all contracts allow new members to join later under the agreed conditions as is the case with CIBER in Italy and NESLi2 in the United Kingdom. Joining the consortium has become the only option for many Turkish libraries that want access to

electronic databases. ANKOS is not a purchasing consortium with government funds. Each consortium member pays the license fees from its own funds, but the consortium negotiates with the publishers for a better price. Thus ANKOS is what is known in the literature as a “buying club”.⁸

ANKOS is the primary supplier of electronic databases and journals to Turkish universities and research libraries. Unlike the French academic consortium⁹ or the consortia described by Hormia-Poutanen et al.,¹⁰ ANKOS is not a legal entity and has no budget. Neither its management team nor any of its volunteers (members of working and research groups, database liaisons, webmaster, etc.) receive any compensation for ANKOS duties. The only funds available to ANKOS are donations from product vendors and publishers who display their resources at ANKOS meetings, and these funds are used to cover meeting-related expenses such as travel and accommodation for invited speakers. Because ANKOS does not have central funds, it is not a purchasing consortium in the sense of HEALink or the California Digital Library. ANKOS negotiates with the publishers for a better price, and each member institution decides independently whether to purchase the product using its own funds. According to the classification in Hirshon,¹¹ ANKOS is a negotiations consortium with an opt-in model like NESLi2 and NELINET.

ANKOS operates in accordance with decisions taken by a management team composed of directors of university libraries, elected by the members of the ANKOS General Assembly (directors of the member libraries) during the Annual Meeting. Although for the first 6 years the governing group was known as the Steering Committee, the current ANKOS webpage¹² calls it the management. In order to carry out ANKOS' functions, librarians employed in member libraries are appointed by the management team to permanent

working groups and temporary research groups; as webmaster for the ANKOS webpage; and to serve as “database liaisons”. There are currently 22 librarians working as database liaisons.

These librarians, with the approval of their directors, use work hours to perform their consortium duties and to attend ANKOS meetings and training sessions. Occasionally non-librarians with pertinent expertise are invited to join the groups. The management team meets several times a year to review the work of the committees and liaisons and to plan training sessions for those librarians; to organize workshops for all interested librarians; and to take decisions regarding relations with vendors, including setting database trials and approval of contracts. Everyone who works for ANKOS is a non-salaried volunteer.

WORKING GROUPS

Current working groups deal with licensing and negotiating, promotion and organization (public relations), user statistics, and open access and institutional repositories. From 2002 to 2007 there was a user/librarian training working group. The earlier single licensing group's duties are currently divided between a licensing working group and a so-called “negotiating group on databases”.

Licensing and Negotiating

The products desired by ANKOS are almost always in English. The predominance of English in scientific and technical publishing is in large part responsible for this, but in Turkey the fact that a number of universities provide instruction exclusively or partially in English adds to the importance of that language for the Turkish academic community. Until now the few negotiations undertaken for Turkish databases had not ended in ANKOS contracts. For 2009, however, contracts have been arranged for a subscription to a Turkish legal database and the purchase of a compact disk containing a bilingual Turkish-English dictionary.¹³ One of the most significant accomplishments of this working group is the model Turkish National Site License (TRNSL), which is discussed in a later section of this article.

User Statistics

This working group was established in 2003. Its members gather quantitative data about member institutions (e.g. numbers of students, numbers of academics, library holdings, library budgets). They work with the database liaisons in obtaining usage statistics from vendors. (The TRNSL calls for these to be COUNTER-compliant.) The group compares user statistics for all ANKOS members for each product. They also do cost analysis to determine the value of the product to the various libraries. These statistics are reported to the ANKOS management and participants in the annual meeting, and are used to encourage member libraries to promote underused products, to reconsider an individual library's need for a product when renewals approach, and to convince university administrators to provide funds for subscriptions.

Liaison librarians use the data in negotiating the overall fee for a contract and in setting the share to be paid by each member.

The group developed a web tool through which each member library can get monthly usage statistics for the material licensed by the consortium. This allows the libraries to follow the frequency with which the licensed material is used, arrange user training and promote the licensed material within their institutions. The member libraries also have access to annual statistics like usage per FTE and price per usage, which will affect their purchasing decisions and their negotiations with the university for funds.

Promotion and Organization

Members of this group, established in 2005, are responsible for organizing social and professional activities to promote ANKOS both nationally to member and non-member libraries, and internationally. To this end it coordinates workshops, seminars and annual meetings as directed by the consortium management. The group also prepares promotional materials such as leaflets and posters for dissemination in print and electronically.

Open Access and Institutional Repositories

The OAIRWG is the newest working group, set up in 2006 to raise awareness of the concepts of open access and institutional repositories among information professionals in Turkey; to ensure cooperation between ANKOS, informational professionals and researchers to this end; and to work in cooperation with Turkish and international organizations engaged in providing open access and the operation of institutional repositories. In addition to organizing meetings on these topics, this group prepares educational documents for posting on the ANKOS webpage to inform members about the relevant standards, and encourages Turkish scientific publishers to adopt open access and Turkish academic institutions to establish institutional repositories. The working group has made available on the ANKOS web site a guide for the university administrators and librarians who are involved in the process of establishing a repository. As mentioned by Tonta in his article¹⁴ describing the open access movement in Turkey, ANKOS has been very influential in the movement and in promoting the building of institutional repositories in Turkish universities.

User/Librarian Training

The User/Librarian Training Working Group was established by the Steering Committee in 2002 to increase the familiarity of librarians and library users with consortium-acquired products through training sessions and by creating Turkish-language online user guides for the subscribed databases. These user guides were accessible from the ANKOS web site and available for member libraries to use on their own web sites. The working group was dissolved following the change of management which took place in 2006. The current ANKOS web site offers user guides for major databases, some not yet translated into Turkish.

RESEARCH GROUPS

Research groups are set up to undertake projects and are dissolved on completion of a report on the results. Such groups' assignments have covered electronic book publishing, remote access, common interfaces, and inter-library loan (ILL). Currently the Collaboration Research Group deals with ILL.

Electronic Books

This group was set up in the spring of 2005 and dissolved following the presentation of its report to the 2005 ANKOS Annual Meeting. They investigated subscription models, purchase models and limited-time access agreements. Their survey covered e-books available free of charge, those accessible over the Web, e-book reading devices, e-book suppliers, and publishing houses producing e-books.

Common Interface

Established in July 2006, this research group undertook to identify a) products which provide access to alphabetical lists of journals; b) products which provide access to articles for which the user has a citation; and c) products which provide access across multiple databases simultaneously. These three product types were then compared to highlight the advantages of each. The group completed its report in May 2007 and presented it to the 2007 Annual Meeting. One of its members subsequently made a presentation on "Innovations in Research: Federated Search Motors" during a panel session organized by vendors at the 2008 Annual Meeting, after which the group dissolved.

Remote Access

Also appointed in 2006, this research group made a survey to discover which member libraries provided remote access to their e-resources and what methods they used to do this. At the same time it tried to introduce next-generation solutions like Shibboleth and VPN. The results of the survey were reported to the 2007 ANKOS Annual Meeting. The report found the Shibboleth system, which its web site calls a "standards based, open source software package for web single sign-on across or within organizational boundaries",¹⁵ most relevant to ANKOS members and planned to install it for a demonstration, but the group was dissolved following the Annual Meeting.

Collaboration

The only current ANKOS research group, founded in September 2006, deals with different aspects of collaboration between university member libraries. It incorporated the members of an earlier research group on ILL and has developed an electronic ILL program (called "Kits", an abbreviation of its Turkish name) for use by ANKOS members. An electronic request form has been created and made available on the internet.

The group's other project aims at establishing staff exchanges between member libraries. A draft policy document provides for the exchanges to be organized by ANKOS management between libraries that join the program. The exchanges are foreseen to last from 1 to

6 weeks. Librarians will also be offered "professional visits" to other libraries for 1 or 2 days.

OTHER ELEMENTS OF ANKOS

Webmaster

The ANKOS web site was first created by librarians at Middle East Technical University, seat of the consortium. Subsequently the Bilkent University Library took it over until a change in the ANKOS administration resulted in its move to Ege University in Izmir in February 2007 and eventually to Süleyman Demirel University in Isparta where it is currently located. Apart from the usual challenges of web sites such as keeping them up to date and making them user friendly, much of the ANKOS site is bilingual, in Turkish for local users, while presenting ANKOS to the worldwide library community in English.

Database Liaisons

Each ANKOS product is handled by an assigned librarian, some of whom are responsible for more than one. They are in direct contact with the vendor on the one side and the subscribing libraries on the other, relaying information, queries, etc. They solicit statistics from the libraries and vendors, follow up contract negotiations, and propose pricing models for their products.

MODEL TURKISH NATIONAL SITE LICENSE (TRNSL)

As more and more academic libraries joined ANKOS, and more and more products were being considered, it was evident that a systematic approach to licensing was necessary to meet the demands of the suppliers and the greatly varying needs and circumstances of the libraries. Thus the Licensing Working Group (originally called Site Licensing Group) was founded.

Non-Turkish vendors/publishers, no matter what their country, usually require license agreements to be in English. For this reason the informal group which began work in 2000 included four American librarians then employed in Turkey and two Turkish librarians. One of the Americans also had a law degree, which helped the group understand English-language legal terms and explain them to their colleagues in the ANKOS member libraries. The group developed a set of ANKOS principles for the acceptance of licenses. From these principles a model Turkish National Site License (TRNSL) was drawn up. It includes clauses reflecting the usual requirements of libraries everywhere, such as permission to grant access to resources to all on-site users and to provide copies of articles from the resources to other libraries on request, as well as other clauses specific to the Turkish situation. These include provisions for individual prices for each consortium member, for incorporating new members into multi-year contracts, for terminating license membership of a single library in case of a breach of contract without harm to the other members, and for use of the language of instruction at an institution as a criterion for establishing the price to that member. There is also a requirement that the supplier provide, or financially

support, ANKOS' provision of Turkish-language instructional and informative materials about the product.

The initial TRNSL and licensing principles were presented to the ANKOS Annual Meeting in 2002 and accepted by the 78 member libraries. They had been drafted in English for presentation to vendors and publishers and translated into Turkish for the ANKOS members. Both documents had been reviewed by the Bilkent University legal advisor for conformity to Turkish law. Creation of the TRNSL has been described in detail in an earlier article.¹⁶

The Licensing Working Group strives to achieve multi-year contracts that allow for the possibility of adding new members in later years for the remainder of the contract. They contract for electronic resources but endeavor to make arrangements for advantageous pricing to members for the print product if they wish to acquire that as well. ANKOS undertakes to guarantee adherence to the agreements and cooperates with the vendor should users from a member library commit indiscretions.

In 2006 the TRNSL was revised to include a provision for secure authentication; to request the vendor to provide COUNTER-compliant usage statistics, which are more usual in Europe than the ICOLC statistics previously called for in the TRNSL; to authorize the use of licensed material in coursepacks and in academic works such as assignments and dissertations; to require publishers to use their best efforts to comply with open access and web accessibility standards; and to ensure archival rights in case of cancellation of subscriptions, or cessation of publication.

LICENSING NEGOTIATIONS

Negotiations proceed in accordance with the flow chart in Fig. 2. The TRNSL is available on the ANKOS web site to acquaint vendors with the consortium's expectations.¹⁷ Some vendors accept the ANKOS license 'as is' or with a few modifications. If the vendor presents ANKOS with its own standard license, it is evaluated by the Licensing Working Group. For ease of evaluation, a table of key questions (see Appendix) was drawn up to examine the contract presented by a supplier for its adherence to ANKOS principles and the model TRNSL. Non-conforming or missing clauses are pointed out to the supplier and an attempt made to procure the desired wording. This usually leads to positive results for both sides, but on occasion the negotiations have led to abandonment of the deal. Once the licensing group is satisfied with a draft contract (which must also specify the share of the price to be paid by each member), it is presented to the consortium management.

If accepted by this group, interested member libraries are requested to commit to the terms by signing a copy of the contract and subsequently paying their own invoice from the supplier. Since 2006 some ANKOS contracts have been superseded by single contracts between suppliers and ULAKBİM, the Turkish Academic Network and Information Center, a body of the Scientific and Technological Research Council of Turkey (TÜBİTAK). ULAKBİM uses TÜBİTAK grant funding to procure and pay for national site licenses.

PRICING MODELS

Membership in ANKOS is contingent on participation in at least one contract. Each member is free to join any agreements it chooses. The ULAKBİM contracts, on the other hand, paid for centrally, give access to all higher education institutions, including military academies and the universities in Northern Cyprus, and all teaching and research hospitals affiliated with the Ministry of Health. At the time the authors were members of the ANKOS Steering Committee, negotiations for pricing varied according to the suppliers, who include commercial publishers, learned societies, database compilers and aggregators. ANKOS' dealings with vendors have been described in detail elsewhere.¹⁸ Current ANKOS management confirm that the following description still reflects the situation.

In all licensing negotiations, ANKOS uses the number of undergraduates, graduate students and academic staff, excluding the two-year vocational colleges, in calculating full-time equivalent (FTE) numbers, which total about 1 million. FTE enrollment in each of the universities varies from less than 1000 to over 50,000. It should be mentioned that electronic journals are mostly used by graduate students and academic staff. Because the education in most universities is lecture-based, the undergraduate students use the online scientific resources less than in Europe and the USA.

Some suppliers, especially those with expensive databases, have been intent on continuing the systems of price-setting they were used to. As these were based mainly on FTE numbers of the member libraries' institutions, ANKOS pointed out the differences between library users in English-speaking countries and those elsewhere. ANKOS' aim was to set up a scale of prices to potential users taking into account a number of different factors.

A major factor is the language of instruction at the institution; those using English paying a larger share, those where students are required to take a year of English before starting their university courses in Turkish paying a lesser share, with strictly Turkish-language institutions paying the least.

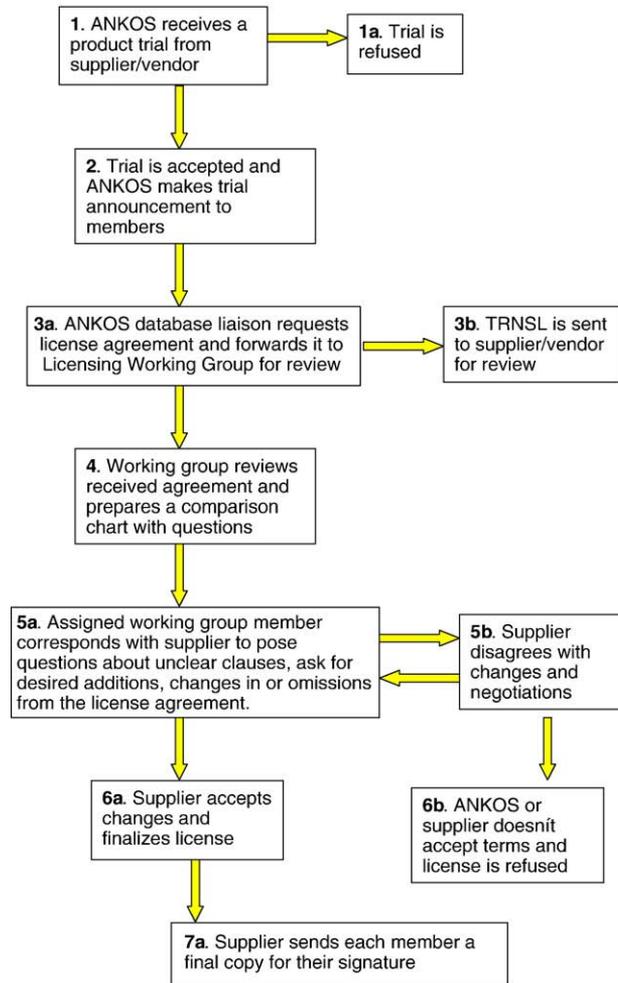
Another factor involved in the ranking is the number of graduate students and teaching staff, both groups being presumed to be more research-oriented than undergraduates and more familiar with English, so member shares in the price are higher where there are greater numbers of those two groups of users. Students enrolled in two-year vocational programs are not included in FTE numbers used by ANKOS in its pricing calculation.

Yet another criterion in the ANKOS price calculation is the library collection budget. The amount of funds allotted annually to the libraries range from several million dollars to around \$200,000, so libraries are ranked accordingly and those with more funds are expected to pay higher shares than those with lower budgets.

These separate factors are combined in a formula to rank the libraries, which are then divided into anywhere from three to six price brackets depending

Figure 2

ANKOS Licensing and Negotiating Working Group. Work Flow Chart. Adapted from G. Kara – Oct. 19, 2006.



on the number signing on for the particular contract, and the total price is shared between them. Some licenses covering products specific to certain disciplines (e.g. IEEE) are priced according to the members' student enrollment and teaching staff in the relevant fields.

When a license comes up for renewal, usage statistics are also given weight in distributing the amount to be paid by each member. This is based on use per FTE, relying on the work of the ANKOS User Statistics Working Group.

It is interesting to note that the two licensing models used by the French consortium Couperin¹⁹ closely resemble certain aspects of ANKOS practices. Both consortia negotiate a contract and pricing with the publisher or supplier but do not effect purchases, and in both, members are free to join a contract or not. In the Couperin case, although it is not a purchasing agent, once the consortium has agreed with a major publisher on price and conditions, one member or a partner of the consortium constitutes a public tender,

pays a single bill, and collects the share from each member. With its other model, Couperin negotiates a license after which each member places its own order for the product and pays its own invoice. Unlike ANKOS, Couperin accepts only publicly-funded institutions as members whereas ANKOS includes private university libraries.

IMPACT OF ANKOS: CONSORTIAL USAGE OF ELECTRONIC DATABASES

The usage of electronic databases offered by ANKOS has been analyzed and discussed in several papers.²⁰⁻²² The increase in full-text downloading is shown in Fig. 3.²³

In 2007, more than 50 universities had access to the major interdisciplinary e-journal collections of Science Direct, Springer, Blackwell, Wiley, and Taylor and Francis. On average, twenty ANKOS members subscribed to university press and learned society e-journal packages. The sharpest increase in the number of participating members occurred for ebrary, from eight in 2004 to 70 in 2007. Apart from the ever-increasing

numbers of e-books available, this increased demand by Turkish university libraries is probably due to their inadequate and scattered printed book collections and to inefficiencies in the inter-library loan system.

The total number of documents supplied by ULAKBİM in the period 2000–2005 was 283,000,²⁴ which was not comparable with the exponential increase of full-text usage by ANKOS members. The availability of electronic journals from university libraries through consortial agreements was the main reason for the decreasing requests for documents from ULAKBİM.

In Karasözen et al.²⁵ and Tonta and Ünal,²⁶ the relation between the usage of full-text journals and research activities was analyzed for various full-text journal collections. The distribution of downloads among the consortium members correlated with the publication output in the universities; the majority of full-text usage was in just a few research-oriented universities, the remaining usage being spread among the rest of the universities. A strong correlation between the number of publications and amount of full-text usage was indicated also by Karasözen et al.²⁷ for 2004 and 2005, which shows a trend toward homogenization of usage among the universities within those years with the increased availability of full-text journal collections.

The newly founded universities without any print or electronic subscriptions benefited from the consortium more than the older universities, so for them the usage was more cost-effective despite the smaller numbers of students and academic staff.

Libraries that used to have print subscriptions moved to electronic subscriptions starting with Science Direct and then Springer, Wiley and other journal collections as in other consortia elsewhere.²⁸ This gave those universities more flexibility in managing their collec-

tions within and outside of the consortium. As mentioned above, ANKOS added new provisions to the model TRNSL in 2006 concerning archival rights, but there is still no national archiving policy.

The impact of access to electronic journals on research activity in the form of increasing publications has also been investigated by Kirlidog and Bayir.²⁹ The usage patterns in different fields were investigated by Atilgan and Bayram,³⁰ who conducted surveys and compared usage statistics within Ankara University.

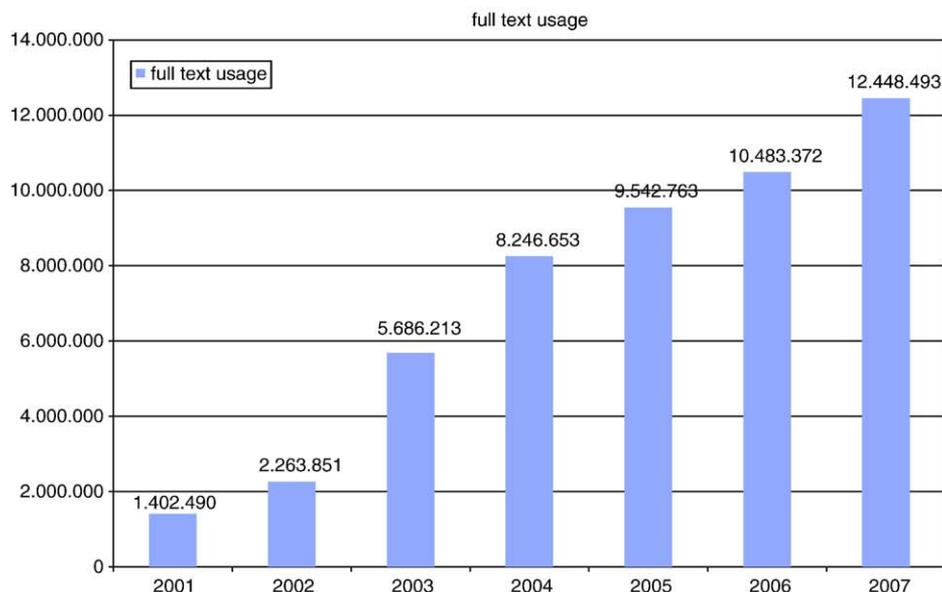
INTERNATIONAL COOPERATION

International cooperation has been a priority since the establishment of ANKOS. ANKOS joined ILOLC (International Coalition of Library Consortia) in 2002 and adopted the ICOLC principles on “Selection and Purchase of Electronic Information” and the “Guidelines for Statistical Measures of Usage of Web-Based Information Resources” in its licenses. It also signed the recent “Statement on the Global Economic Crisis and Its Impact on Consortial Licenses”.

ANKOS is one of a few consortia which started to support open access and institutional repositories early on. It became a member of SPARC (Scholarly Publishing and Academic Resources Coalition) in 2002, and ANKOS Chairman Bülent Karasözen served on the SPARC Europe Board from 2004–2007. ANKOS also became a member of COUNTER (Counting Online Usage of Networked Electronic Resources) in 2005.

ANKOS joined SELL (Southern European Libraries Link) in 2002 and participated in its annual meetings to share experiences related to consortia, electronic collection development, open access, digitization, Value-Added Tax and other issues. This consortium group brings ANKOS together with the Hellenic Academic Libraries Link (HEALink) in Greece, the Consorci

Figure 3
Growth of Full-Text Downloads.



di Biblioteques Universitàries de Catalunya (CBUC), and other institutions in Italy, Portugal and Spain. The annual SELL meeting in 2003 took place in Turkey. In 2007 ANKOS participated for the first time in a multinational consortial agreement for the ALPSP Learned Journals Collection, under the umbrella of SELL.

In order to familiarize the Turkish librarians with recent developments in open access, archiving, and e-books, ANKOS organized a workshop on "Institutional Repositories, e-Books and Long Term Preservation" on 26–27 October 2006, at Sabanci University, Istanbul. The speakers at the workshop were David Ball (Bournemouth University, UK), Gregor Horstkemper (Bavarian State Library, Munich), Alma Swan (Key Perspectives Ltd.) and David F. Kohl (University of Cincinnati). Thirty-five librarians participated. Another recent activity featured three talks about "Building the Digital Library" given in May 2008 in Ankara, Izmir and Istanbul by Klaus Kempf (Bavarian State Library, Bavaria Consortium, Germany).

CONCLUSIONS

ANKOS was conceived in typical library consortium fashion as a consolidation of the purchasing power of its members. Since then, because of the rapidly developing higher education community in Turkey and its special characteristics, the objectives of ANKOS have broadened.

The lack of library staff prompted ANKOS to undertake a larger role than that of a mere purchasing agent. To compensate for the lack of professional training and knowledge of English among many library staff members, the Steering Committee made every effort to advise libraries about the ANKOS resources most relevant to their universities and to encourage a rational use of the funding available to them. ANKOS also provides staff training and user materials in Turkish for the resources it purchases.

In the light of the successes of the first 10 years of ANKOS, we believe that it should continue to develop its role in providing professional training and developing skills, in addition to acquiring electronic resources. It should also make every effort to become a legal entity so that it can receive funds, whether from the government or one of its agencies, or from the universities themselves. Even if it is only allowed to collect the amount of the subscriptions, by serving as a single invoicing address it can obtain more advantageous pricing. If it can enjoy additional funding, ANKOS could develop into what Hirshon³¹ calls a hybrid consortium, in which "the consortium pays part of the cost and each participating member library matches or shares the expense to cover the remaining cost".

With its professional expertise and contacts, and its visibility on the international scene, ANKOS is vital to the future of Turkish academic librarianship. One mark of the significance of ANKOS' activities is that beginning in 2006, ULAKBİM gradually took over the subscriptions for a number of ANKOS resources, paying for a national site license and extending access to all universities and governmental research institutions regardless of their prior membership or not in ANKOS. In fact, with very

few exceptions, all the databases now supplied by ULAKBİM were first acquired by ANKOS.

That a Turkish government agency provides funds for library resources is a positive step for librarianship in the country. On the other hand, the university librarians need to be involved to ensure relevant collection development, to provide resources that are appropriate for all the universities, and to promote professional skills. This is the role we see for ANKOS in the coming years.

APPENDIX A. SUPPLEMENTARY DATA

Supplementary data associated with this article can be found, in the online version, at [doi:10.1016/j.acalib.2009.04.008](https://doi.org/10.1016/j.acalib.2009.04.008).

NOTES AND REFERENCES

1. Ertuğrul Cimen and Gültekin Gürdal, "ANKOS". 8th SELL Meeting, University of Trieste, May 30–31, 2008, Available: http://www.heal-link.gr/SELL/2008/07%20ANKOS_2008.ppt (accessed February 5, 2009).
2. Bülent Karasözen & Jane Ann Lindley, "The impact of ANKOS: consortium development in Turkey," *The Journal of Academic Librarianship* 30 (2004): 402–409.
3. Wolfgang Glänzel, "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): 10–17.
4. Bülent Karasözen and Özlem (Göktürk) Bayram, *1997–2006 Bibliometric Indicators of Turkey* (in Turkish). Ankara: Higher Education Council. Available: www.yok.gov.tr/bilimselgostergeler/bilimselanaliz.pdf (accessed February 5, 2009).
5. Ayhan Kaygusuz, "Universities and university libraries in Turkey," *Liber Quarterly* 18 (3/4) (2008): 480–492.
6. Karasözen and Lindley (2004).
7. Phyllis L. Erdogan & Bülent Karasözen, "ANKOS and its dealings with vendors," *Journal of Library Administration* 44 (3/4) (2006): 69–83.
8. Arnold Hirshon, "Believing six impossible things before breakfast: electronic resource collection management in a consortial environment," in: H.S. Ching, P.W.T. Poon, C. McNaught (Eds.), "eLearning and Digital Publishing," Springer, 2006, pp. 151–171.
9. Catherine Forestier & Pierre Carbone, "French consortium Couperin: achievements and goals," *Serials* 21 (2) (2008): 116–119.
10. Kristiina Hormia-Poutanen, Claudine Xenidou-Dervou, Rima Kupryte, Kari Stange, Alexander Kuznetsov, & Hazel Woodward, "Consortia in Europe: describing the various solutions through four country examples," *Library Trends* 54 (3) (2006): 359–381.
11. Hirshon (2006).
12. Available: <http://www.ankos.gen.tr/index.php?lang=english> (accessed Feb. 5, 2009).
13. Personal communication from member of ANKOS negotiating group on databases, Dec. 2, 2008.
14. Tonta Yaşar, "Open access and institutional repositories: the Turkish landscape," in: Bayir Didar (Ed.), "Turkish Libraries in Transition: New Opportunities and Challenges," Turkish Librarians Association, Istanbul, 2008, pp. 27–47.
15. Available: <http://shibboleth.internet2.edu> (accessed Mar. 25, 2009).
16. Jane Ann Lindley, "The Turkish National Site License (TRNSL)," *Serials* 16 (2) (2003): 187–190.

17. Available: http://www.ankos.gen.tr/index.php?option=com_content&task=view&id=53&Itemid=1&lang=english (accessed Feb. 6, 2009).
18. Erdoğan and Karasözen (2006).
19. Forestier and Carbone (2008).
20. Bülent Karasözen, Ayhan Kaygusuz, Hacer (Bati) Özen, "Patterns of e-journal use within the Anatolian University Library Consortium," *Serials* 20(1), (2007): 37–42.
21. Bülent Karasözen, "Consortial usage of electronic journals in Turkey," *Liber Quarterly* 18 (3/4) (2008): 464–469.
22. Yaşar Tonta, Yurdagül Ünal, "Consortial Use of Electronic Journals in Turkish Universities," *Proceedings ELPUB2008 Conference on Electronic Publishing – Toronto, Canada*. Available: http://elpub.scix.net/cgi-bin/works/Show?id=203_elpub2008&sort=DEFAULT&search=%2fseries%3a%22ELPUB%3a2008%22&hits=52 (accessed February 6, 2009).
23. Cimen and Gürdal (2008).
24. Yaşar Tonta, Yurdagül Ünal, "The Impact of Electronic Journals on Document Delivery Services," in *ELPUB: International Conference on Electronic Publishing* (10th: 2006: Bansko), Bansko (Bulgaria), 14–16 June 2006. Available: <http://eprints.rclis.org/9625/> (February 5, 2009).
25. Karasözen et al. (2007).
26. Tonta and Ünal (ELPUB2008 Conference).
27. Karasözen et al. (2007).
28. Claudine Xenidou-Dervou, "Moving from print to electronic: a survival guide for Greek academic libraries," *Serials* 16 (2) (2003): 145–152.
29. Melih Kirlidoğ & Didar Bayir, "The effects of electronic access to scientific literature in the consortium of Turkish university libraries," *The Electronic Library* 25 (1) (2007): 102–113.
30. Doğan Atilgan, Özlem (Gökkürt) Bayram, "An Evaluation of Faculty Use of the Digital Library at Ankara University, Turkey," *The Journal of Academic Librarianship* 32(1), (2006): 86–93.
31. Hirshon (2006).