

## OPEN ACCESS INITIATIVES IN AZERBAIJAN @ KHAZAR UNIVERSITY

*Tatyana Zaytseva*

*(Khazar University, Baku, Azerbaijan)*

*"Open development is an emerging term used to describe the community-led development model found within many successful free and open source software projects"*

OSS Watch Wiki

### INTRODUCTION

Comprehensive Open Access (OA) to scholarly literature and research documentation is vital because "Azerbaijan's economy is developing more rapidly than in many Asian countries,"<sup>1</sup> according to Asian Development Bank President Haruhiko Kuroda.

Many of the restrictions on access to knowledge in Azerbaijan revolve around restrictively inadequate funding, copyright practices and regulations, a lack of access to internet-based technologies, a lack of English-language proficiency that hinders expansion and use of digital information resources, and the lack of creative and effective government support to create environments within higher education that would enable institutions to match the modern vision of knowledge and innovation in Azerbaijan.

Institutional repositories provide universities in developing countries with a good avenue to disseminate their intellectual output to the outside world. The OA movement has not yet permeated the academic research environment. Azerbaijani university libraries have not begun to practice or promote institutional repository or are at very early stages of it.

We present a case study of repository development at Khazar University in order to discuss key issues faced in the process. One of the main goals of this repository is to collect published papers from faculty, campus journals, presentations, student theses, etc. which may be in widely scattered places, many of which are inaccessible due to copyright or technological restrictions. These scholarly assets represent the valuable capital of the academic system, and should be gathered, managed, made accessible and protected over time, securing the public's investment in higher education. Commonly referred to as an Institutional Repository, this initiative aims to create a model for the development of archival and dissemination tools for

---

<sup>1</sup> Azerbaijan Developing Rapidly - Asian Bank <http://www.news.az/articles/14657> > May 03, 2010.

delivering scholarly materials to students and academicians in Khazar University via the Internet. [1]

This paper therefore seeks to highlight the opportunities and challenges to the establishment of Open Access institutional repositories and e-Learning systems in Azerbaijan as well as views and awareness of Open Access initiatives among scholars and researchers in the target institutions of developed countries.

## BACKGROUND

With about 50 universities and 150 organizations carrying out research and development work, Azerbaijan boasts of more universities than many other developing countries. This prompts a reasonable inquiry as to what constraints have prevented a country with so many academic institutions and so much research output from developing Open Access institutional repositories.

One of the main reasons is that research and innovation activities remain extremely modest. Azerbaijan has still not adopted a national research strategy that would allow it to upgrade its capacity in technological research and innovation, with a view toward integration into the European Research Area and into the Community Research & Development framework program.

Azerbaijani scientists face two problems common to scientists everywhere, but acutely felt by scientists in poorer countries: access and visibility. As shown by the popular Webometrics Ranking of World Universities 2010, only two universities from Azerbaijan are in the list of the top 8,000 universities worldwide: Khazar University and Qafqaz University [http://www.webometrics.info/rank\\_by\\_country.asp?country=az](http://www.webometrics.info/rank_by_country.asp?country=az).

The ranking classifies universities worldwide by taking into account the global volume of academic & scholarly content available from an institutions' web domain, the number of publications and scientific papers published on the web, and the international visibility of this knowledge. Web data is used as indicator of the visibility and impact of the activities of the universities, colleges and research institutions worldwide. [2]

The main advantage of the Ranking Web is its coverage of developing countries. For the comparison of Azerbaijan with other post-Soviet states, digital divide statistics are provided below:

*Academic Digital Divide of the Former Soviet States, January 2010*

| #  | Country | Number of universities in top 8,000 universities |
|----|---------|--|
| 1. | Russia  | 243  |
| 2. | Ukraine | 52   |

|     |            |    |
|-----|------------|----|
| 3.  | Lithuania  | 22 |
| 4.  | Belarus    | 15 |
| 5.  | Estonia    | 17 |
| 6.  | Latvia     | 17 |
| 7.  | Armenia    | 7  |
| 8.  | Moldova    | 6  |
| 9.  | Kazakhstan | 6  |
| 10. | Georgia    | 5  |
| 11. | Kyrgyzstan | 3  |
| 12. | Azerbaijan | 2  |

In many cases, the reason for a low ranking is poor web practices. There are examples of universities changing their web domains, but maintaining older ones, or even organizations with two or more web domains. In our country university authorities are probably not yet enforcing an adequate web policy or promoting Open Access initiatives which would improve the evaluation of technologies.

Now Khazar University Library Information Center is preparing recommendations in order to increase our website's ranking. The Khazar University web site should reflect the set of activities and results produced by the university and thus help to improve visibility and prestige, attracting new students, excellent scholars and more funding.

It would be useful to carry out a comprehensive study comparing universities in Azerbaijan and comparing web publications with conventional publication outputs as well as indicators of economic and technological development.

### **Azerbaijan Library and Information Consortium**

In recent years some steps were taken towards library and information development in our country. The Library and Information Strategy for Education and Research for 2008-2013 was approved by the president of Azerbaijan in 2008, and plans for its implementation have been continued in the following years.

The aim of the strategy is to outline the probable future changes and challenges in our society, the greatest of which are changes in technology and communication systems and their influence on the following areas: the need, availability, and quality of public library and information services; the inclusion of digital libraries, Open Access repositories and reformation of the library network; changing job descriptions in library organizations; flexible use of information stores; traditional cataloguing and metadata; generating collections; information acquisition of school and university students and the role of libraries in the process of procurement of knowledge.[3]

Azerbaijan Library and Information Consortium (AzLIC) joined in the effort to advance Open Access more widely within our country through Open Access initiatives.

AzLIC was established in December 2003. AzLIC's highest priorities are expanding the domestic market for electronically published products, providing access to available electronic resources, offering training, and strengthening electronic resources.

Members of the Azerbaijan Library and Information Consortium have begun participating in eIFL.net projects to gain access to such online resources as EBSCO online databases, American Physical Society, Blackwell Publishing, Cambridge University Press, Oxford University Press, HighWire Press, Institute of Physics Publishing, ProQuest, etc.[4]

Much of the effort throughout the recent years was therefore devoted to the creation of national consortia through meetings, grant schemes, training, and the strategic advice of task forces.

### *Main activities*

- ✓ Guttenberg-Azerbaijan project providing free access to full-text Azeri Literature in Latin script.
- ✓ Series of presentations on consortium activities for representatives of 10 regional libraries, which was organized by the US Embassy in Azerbaijan within the Regional Library Project.
- ✓ Study tour in Lithuania to learn from the experience of the Lithuanian Research Library Consortium.
- ✓ Memorandum of understanding between AzLIC and Georgian Integrated Library and Information System Consortium.
- ✓ CALIMERA Project (Cultural Applications: Local Institutions Mediating Electronic Resource Access).
- ✓ Study visit of Open Access institutional repository managers to Ukraine in 2008 for exploration of Open Repositories in Ukraine.
- ✓ Establish DSpace software at Khazar University to preserve: scholarly materials, internally produced digital objects, and externally published digital objects, including the ability to enable appropriate use.
- ✓ Poster for the ETD 2009 12th International Symposium on Electronic Theses and Dissertations in Pittsburgh.

We are sure that comprehensive Open Access (OA) to scholarly literature and research documentation is vital to less-developed countries, such as Azerbaijan, to help us keep up with the frontiers of science. It's very important for academia, research and library communities in Azerbaijan to create and establish working models of Open Access journals and institutional repositories. Researchers could

provide Open Access to their peer-reviewed journal articles in two different ways: (1) by publishing them in OA journals, or (2) by publishing them in non-OA journals but also self-archiving them in their institutional OA Archives.

We consider that self-archiving serves two main purposes: it allows authors to disseminate their research articles for free over the internet, and it helps to ensure the preservation of those articles in a rapidly evolving electronic environment.

An official mandate for OA provision is necessary to accelerate the growth of OA—and thereby the growth of research usage and intellectual impact—nation-wide, and world-wide as well.

OA policy intervention would constitute a National Information Policy since it would address the storage, dissemination, and retrieval of scholarly research output.

To encourage acceptance of Open Access electronic publications among the academic and research community in our country, we made a series of attempts to disseminate information about making the fruits of research freely available on the internet. We organized a number of presentations, the overall aim of which is to ensure that high-level representatives from key academic, research and funding bodies have a clear understanding of the issues involved in the creation and operation of Open Access.

To realize Open Access initiatives in Azerbaijan, AzLIC Board created the Joint Working Group, consisting of equal numbers of library information professionals (including those from Khazar University), researchers, scholarly publishers and representatives of funding bodies. This working group was asked to address common issues of value-added contributions in the emerging electronic environment and to identify the issues that need to be addressed for successful collaboration and for the organization of series of workshops, translation of key documents into Azeri, possible fund-raising for travel of local participants, etc.

### **Khazar University Institutional Repository (KUIR): Challenge, Vision**

Khazar University Institutional Repository, which is the first electronic archive in Azerbaijan, was implemented at the end of 2008. KUIR is a suite of services offered by the Khazar University Library information Center (KULIC) in support of the university's researchers.

One motive for building the IR is to support the strategic goal of enhancing knowledge management on the campus. As proposed in the Khazar University LIC Strategic Plan (2009-2010), in these years the University will strive to accelerate access to digital resources by streamlining internal processes and improving the gateways to scholarly resources. One way to realize this goal is to effectively capture, preserve and disseminate the scholarly outputs of Khazar University. [5]

Building an institutional repository brings other benefits, for example, enabling the campus to create an always-available, shared space to support learning and collaboration intra- and inter-institutionally.

By expanding our digital library initiative to include not only the graduate, but also the undergraduate and faculty population, the IR program provides an incredible benefit to our students, faculty, staff, research programs, the institution, and indeed the international scholarly community by delivering the unique global exposure that only Open Access on the Internet can provide. Additionally, the centralized institutional repository program offers the perfect mechanism for the deposit, search, discovery and acquisition of research materials.

Khazar University Institutional Repository's research collection preserves the scholarly and institutional information of Khazar University for the future and facilitates wider access to academic research. It provides a full citation for each item, and wherever copyright restrictions permit, the complete content. It delivers a key initiative of the University's Information Management Strategy.

This work has been a collaborative effort led by the library, with significant input from the research and academic community across the university. On behalf of Khazar University, LIC is overseeing the development of the repository and actively mediates the addition of all new material.

It is known that scientific and technical journal articles are one of the most important science and technology indicators. The total of all scientific and technical publications in Azerbaijan between 1996 and 2005 came to 2,010; for the same time period this indicator in Turkey measured 87,629. On the other hand, two prestigious American universities, MIT and Stanford University, published 99,643 articles in the same period.<sup>2</sup>

One of the ways to provide an avenue for scholars to publish their work, then, is to establish academic journals. Khazar University has provided for such journals, inaugurating the publication of the Journal of Azerbaijani Studies, Azerbaijan Archeology, Khazar Journal of Mathematics, and Khazar View. These journals and other publications are the products of a publishing press housed at Khazar University, which also provides a venue through which other works are published.

For a technical platform for the repository, the DSpace software was chosen, and the LIC working team developed policies and procedures to make Khazar University research outputs more accessible; establishing workflows centrally within the university in order to make the content as widely available as possible.

---

<sup>2</sup> Science and Technology in the OIC Member Countries: Executive Summary. (SESRTCIC/Ankara Center) [www.sesrtcic.org](http://www.sesrtcic.org)

The institutional repository follows Khazar University Policies when faced with complaints and legal challenges to the content in the repository. To address copyright issues, when items are submitted to DSpace, authors grant Khazar University the non-exclusive rights to reproduce, distribute, and migrate their submissions as described in the “Author Agreements.” In this guide authors also confirm that each submission is their original work, and that they either hold the copyright, or have obtained permission of the copyright owner to grant the Khazar University non-exclusive distribution rights.[6]

Special attention is paid to the development of self-archiving. Our educated librarians are facilitating the all-important start-up wave of self-archiving (by being ready to perform self-archiving on behalf of authors who feel they cannot do it for themselves). We believe that self-archiving in our institutional repository is the key to providing access.

Khazar University aims to be internationally recognized for its teaching and research. An Open Access institutional repository could function as both a “window” to showcase the output of the university as a whole and as a “door” to facilitate the world’s discovery of and access to research documents). The institutional repository is an alternative channel by which knowledge dissemination by Khazar University is made possible. Making research visible contributes to the university’s goal of recognition and motivates staff to strengthen its position as a research institution.

### ***Current collections in Khazar University Institutional Repository:***

- Academic papers and presentations by students and staff.
- Periodicals (Journal of Azerbaijani Studies, Khazar Journal of Mathematics, Khazar View, Journal of Archaeology).
- Theses on all levels - bachelors' and masters' papers, PhD dissertations.

### ***E-Theses in KUIR***

The ETD movement has not yet taken root in the Azerbaijan. Nevertheless, activity in the field has been growing steadily over the last year.

One reason why Azerbaijan has perhaps not moved into the world of ETDs more quickly is because of this centralized model. Many universities have become accustomed to a procedure involving the dispatch of their theses to the National Library, and thus have considered the management of their theses an issue for the National Library rather than for themselves, shelving their own local copies of theses in closed access stacks and retrieving the copies only when they are requested for use on campus.

The existing thesis collection is built around the traditional print collection. There is a concrete need to look for a modern platform for submitting e-theses. A good e-thesis collection is part of the research strength of the institution. It should be made more accessible to the users. Its design and interface should be in line with other digital collections.

### **ETD Policy**

KULIC has created ETD archiving policies. Our goal is to align our commitment and resources to maintain these online information resources over time.

KULIC stores and preserves Khazar University's theses and dissertations in all formats. The University Archives, a unit within the department, has traditionally archived these works in bound hard copy form, as they are received. It is now appropriate to document our parallel standards, policies and procedures for electronic theses and dissertations (ETDs). [7]

Each academic department determines the quality of the work of its students, while individual thesis/dissertation committees approve each student's work based on its own merits. The Graduate School primarily oversees mechanical considerations, the purpose of which is to provide a degree of uniformity and to assure that each thesis or dissertation is in a form suitable for reading and/or viewing online so that it can be preserved. The University Archives ensures long term preservation and access to this record of graduate students' research.

With digital materials we can give access and simultaneously prolong the life of the work. This is not possible with other, non-digital media. We can ensure the durability of the present through stability of the means of storage.

### **Methodology**

At the start of the project a multi-skilled cross unit team formed of IT specialists and library staff was put together to successfully oversee the project from concept through to implementation. The overall project approach consisted of the following key threads:

- Selection and implementation of a technical platform.
- Identification of the content and its ownership.
- Identification of appropriate workflows and metadata schemas for the identified content types and subsequent testing.
- Integration of repository content with existing resource discovery systems within Khazar University.
- Development within the University of appropriate frameworks and policies for the capturing and use of repository content.



- Promotion and expansion of the repository within Khazar University and the Azerbaijani Library Information Consortium.

We envisaged having four main collections (Academic Support, Library Information Center, Periodicals, and Schools) to encompass the wide range of materials we wanted to expose through the repository and to assign content leaders and experts for each of the collections.

Khazar University's academic schools and departments and Khazar University Press have been providing input and support on the content aspect. The teams of specialists would manage the workflows associated with content and ongoing maintenance of the repository, including the application of appropriate metadata standards.

### **E -Learning**

Recently KU LIC has implemented an open e-Learning system base on Moodle software. This pilot project provides free online access to course material (mostly ppt and pdf files) from one academic discipline that includes course syllabus & presentations, assignments, and supplementary course material. The diversity here would range widely with courses in such fields as management, engineering, computer science, basic sciences and humanities. The site is broadly popular with a number of web hits, contributes considerably to the university presence on the web, and provides the basis for its rank in Webometrics.

### **Conclusion**

Khazar University Library Information Center has taken the first steps in Azerbaijan that will enhance the University information environment and create a system to communicate, make digital content accessible, and preserve the intellectual output of our scholars based on the proposed implementation in order to establish a digital object preservation service in Khazar University.

The collective digital intellectual resources of Khazar University are systematically captured, preserved, and made accessible for both present-day and long-term use, and in hopes that the knowledge gained in developing this service for Khazar University can be disseminated as a model for adoption by other Azerbaijani universities.

The successful acceptance of some of these initiatives among the academic sector in Azerbaijan will mean that in the future, the scholarly publications from our country will be freely available and open to the research community.

**REFERENCES AND NOTES**

1. Zaytseva T, Hajibayova L. Poster "The establishment of an ETD in Azerbaijan @ Khazar University" /12th International Symposium on Electronic Theses and Dissertations, June 10 – 13, 2009, Pittsburgh <http://conferences.library.pitt.edu/ocs/viewabstract.php?id=677&cf=7>
2. Isidro F. Aguillo. Web, Webometrics and the Ranking of Universities. [http://www.docstoc.com/docs/27367914/Web\\_webometrics-and-the-ranking-of-universities](http://www.docstoc.com/docs/27367914/Web_webometrics-and-the-ranking-of-universities)
3. State Programme for Development of Library-Information Sphere in the Republic of Azerbaijan in 2008-2013. Order of President of the Republic of Azerbaijan dated October 6, 2008, # 3072.
4. Calimera Azerbaijan Country Report: Information on Public Libraries, Local Museums and Archives" (co-author with Lala Hayibayova). Journal of Azerbaijani Studies. 9(1): 3–24.(2006)
5. Khazar University LIC Strategic Plan (2009-2010).
6. Three Principles for University Open Access Policies." SPARC Open Access Newsletter, no. 120 (2008). <http://www.earlham.edu/~peters/fos/newsletter/04-02-08.htm#principles>
7. The Open Access Mandate at Harvard." SPARC Open Access Newsletter, no. 119 (2008). <http://www.earlham.edu/~peters/fos/newsletter/03-02-08.htm#harvard>

*Summary***OPEN ACCESS INITIATIVES IN AZERBAIJAN @ KHAZAR UNIVERSITY***Tatyana Zaytseva**(Khazar University, Baku, Azerbaijan)*

Little is known about the development of OA initiatives in developing countries of the former Soviet Union. This paper presents an exploratory overview of the situation in Azerbaijan.

Institutional repositories provide universities in developing countries with a good way to disseminate their intellectual output to the outside world. The OA movement has not yet permeated the academic research environment in our country. Azerbaijani academic libraries have not begun to practice or promote institutional repository, or they are at a very early stages of it.

This paper therefore seeks to highlight the opportunities and challenges to the establishment of Open Access institutional repositories in Azerbaijan (using the example of Khazar University), as well as to analyze views and awareness of Open Access institutional repositories among scholars and researchers in the target institutions of developed countries.