An Institutional Repository Initiative and Issues Concerning Metadata

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Ankara University has become one of the fist open access initiatives in Turkey. Ankara University Open Access Program (AUO) was formed as part of the Open Access project (*http://acikarsiv.ankara.edu.tr*) and supported by the University with an example of an open access institutional repository. As for the further step, the system will require the metadata tools to enable international recognization. According to Budapest Open Access Initiative, as suggested two strategies for open access that are self-archiving and open access-journals AUOA system aims to be compatible with international standards. In this sense, the program will adapt generic framework to the requirements of repository metadata tasks within Turkish language-based interface. Therefore, this paper outlines a method for creating a format using Dublin Core(DC) elements of an institutional repository at Ankara University. Handling metadata repository by cataloguing staff is the most professional method; however, professional creators such as catalogers are limited in their availability at Ankara University. This raises problems; although, the tools that are used to submit digital objects will allow authors generated metadata format. The research presented in this paper proposes a format for Turkish language-based metadata crosswalks. The crosswalks are encoded as DC records that could be generated by author. The DC metadata set is an accepted scheme for using simple description of digital information. In this paper, it will be discussed how essential elements of metadata repository can be created to simplify the process of submission and repository management of the program.

Keywords: Institutional repository, E-archive, Author-generated metadata.

1 INTRODUCTION

The open access movement has gained increasing power as the part of global scholarly communication by enabling researcher's access information that is freely available and sharable on-line. Although the importance of the matter is being conceived in Turkey, there are some problems occurring during the application. Therefore, in this paper the necessity of the Ankara University Open Access Program (AUO) should be carried beyond the organizational requirements will be discussed and with his purpose, the studies for adaptation process to the Open Access Initiative standards will be mentioned. Firstly, the conceptual content of the open access will be emphasized and the activities that are being carried out in Turkey will be briefly introduced. Secondly, Ankara University Open Archive System (AUO), which is one of the leading enterprises of this field in our country, will be introduced. Then, as it can be seen in the AUO model, the solutions of the problems related with the metadata substructure in the process of the institutional repository archive constitution will be focused.

2 THE CONCEPT OF OPEN ARCHIVE AND DEVELOPMENTS IN TURKEY OPEN ACCESS ASSERTS THAT

"a complete version of the work and all supplemental materials, including a copy of the permission as stated above, in an appropriate Standard electronic format is deposited (and thus published) in at least one on-line repository using suitable technical standards (such as the Open Archive definitions) that is supported and maintained by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open Access, unrestricted distribution, interoperability, and long-term archiving"(1).

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Institutional repositories (IR) are essential units of open access infrastructure. An IR is "a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members" (2). Institutional repositories' contributions to open access satisfy following needs (3):

- scholarly communication
- supporting education through learning materials
- electronic publishing
- managing digital collections of research outputs on university networks
- housing and preserving digital collections
- enhancing university's prestige by collecting and making easily accessible it's research output
- offering knowledge management tool for university management
- research assessment on behalf of the university management

It is known that there are more than 600 open archives in the world. This number increases day by day. In Turkey, the concept of open access or Institutional Repository has developed in universities in early months of 2005. This constitution has firstly formed with the postgraduate classes and applications of these classes in the of Information and Records Management departments within universities. This concept has been adopted by the university libraries and they undertook the constitution of Institutional Repositories.

The open archive activities of the universities have firstly gained acceleration with the open archive constituted by the Ankara University library in the end of 2005. Open access and Institutional Repository sessions has been organized at the two national scientific meetings. Creating awareness and disclosure activities about open archives has been carried out by these meetings and the panels. Throughout the improvement of awareness, METU, Süleyman Demirel University has placed the postgraduate thesis written within their institution to open access, Sabancı and Bahçeşehir University have opened the studies of some academic personnel via web pages.

These attempts couldn't go very much far from individual efforts. Civil attempts has been activated to change this situation and to constitute a national policy. A committee named "Open Access Consultancy Committee" has been founded as the first positive outcome of these attempts. *(www.acikerisim.org.tr)* ULAKBİM (National Academic Network and Information Center) , ANKOS (Anatolian University Libraries Consortium), ÜNAK (University and Research Librarian Association) and TKD (Turkish Librarians Association) are associates of this committee as Library Associations in Turkey. Besides being in the leading position for the NGOs of library profession, TKD and ÜNAK have placed the whole archives of their publications to open access. ULAKBİM administers the internet networks of universities throughout the national network; it has also founded 4 databanks of different science branches and has placed the articles within these databanks to open access. Another associate acting as a locomotive is ANKOS besides these three institutions. ANKOS has begun supporting SPARC in 2001 after its foundation in 2000. (*www.ankos.gen.tr*) Later, it has become one of the members of SPARC executive board.

ANKOS, carrying on its activities to ground and improve the concept of open access in Turkey, has founded the open access working group (AEKA) (Open Access and Institutional Repositories Group) in February 2006. AEKA has the goal to corporate with the national and international institutions activating in open access field. This study group, which is preparing assisting and instructing documents to support the attempts for constituting an Institutional Repository and open access, has published the open access brochure as the first step. It publicizes and updates the information on the brochure and other developments throughout the blog that is being published on the ANKOS web site. (*http://www.acikerisim.blogspot.com/*).

3 ANKARA UNIVERSITY OPEN ARCHIVE SYSTEM WITHIN ANKOS

Ankara University, which has started the first open archive attempt as it has mentioned above and takes place within ANKOS since 2001, has deposited the scientific studies of the academic personnel to the open archives, including the postgraduate thesis. (*www.acikarsiv.ankara.edu.tr*)

The open archive of Ankara University has been constituted as pilot project application by three academicians within the Faculty of Letters, Information and Records Management Department. It has been decided to place the course notes, reports, thesis, books, declarations, presentations, conference texts, scientific articles prepared by the academic personnel to the open archive which is being supported by the University Administration.

Appropriate software has been chosen to enable an easy access to the data in this content and to enable a web based data structure. Instead of using a ready program serving for this purpose, a new program has been prepared special for the university which meets the institutional requirements. The program, which is constructed on PHP based MySQL, has been uploaded to a serves that is only used for open archive purposes. The admissions of the data are being proceeded after the control made by the Library Documentation Head Division. Although there are no limitations for the format of the data proceeded, PDF and HTML file formats are being preferred to ensure easy use and to avoid copying and illegal use.

An informative column rolling from upwards to downwards is preferred for publicizing the data base to the academic personnel and ensuring contribution to the data base. A circular describing the content and the purpose of the open archive has been prepared and posted electronically to all of the academic personnel. The same circular has been also passed to the Head of Departments throughout the Deanships.

At the next stage, testing of the project has been carried out and more than a hundred publications have been included to the open archive for web based access. Presentation and data entry instruction meetings have been organized throughout the faculties for ensuring a higher contribution to the open archive after the accomplishment of the testing period.

By this way, the research reports and postgraduate thesis which were electronically in access throughout the university library and documentation head department web page, have been included to the system by the librarians, besides, the academicians have been enabled to include their studies to the open archives. Moreover, the articles written by the academicians of our university published in the academic refereed journals being published by the university and the articles passed through referee consideration are placed in the open archive with the university administrative board decision.

The theses which were included in the archive with the permission of their authors and the articles published in the journals of which copy rights belong to the university may cause violence for the copy right issues. However, there are some requirements to be published for the other publications within the archive, such as the publications shouldn't be stated in the Romeo/Sherpa list and shouldn't be published by the publishing houses which are not supporting the open access.

Within the data base formed in the scope of the concept above, the access is being enabled to the material with different access points such as author name, title, key term and full text indexing. For this reason any standard metadata scheme hasn't been developed at the beginning. However in time, the idea of expending the scope of the archive and placing it among the international corporate archive enterprises has brought the project appliers face to face with the problems mentioned below. The metadata records and the software should be supporting OAI-PMH protocol for the system to be able to run inter-operable. To ensure this, the existing system had to be cross examined with the requirements of the OAI in terms of provision of resource discovery tools and interoperability as well.

There were two options in place for the constitution of the metadata records: First one was the constitution of the description of the records by the cataloguers; the second one was the constitution of the metadata records by the authors. The first option was going to increase the work load of the librarians which were responsible for the digital library works. Then, the second option has been considered and preferred; the principle of benefiting from the existing librarians after the conversion of the records was accepted. In this direction, for the solution of the problem, the author generated metadata application has been carried out. The metadata elements have been transferred automatically from the "submitting material" form within the Turkish interface (Figure 1) and submitted to the Dublin Core (DC) schema which was formed beforehand.

Figure 1. Submission form

http://acikarsiv.ankara.edu.tr/yayingiris.php?cmd=a1

Metadata elements grouped in three classes in DC schema which facilitates access points related to deposited materials (figure 2). Therefore, the form ensured that all of the records produced contained metadata for the mandatory elements: These include *publisher* and *rights* metadata, which have fixed values, and are automatically generated via the DC form, and *title, audience, author/contributor, subject, date created, date modified, URL, language, type*, and *format*, which require author input. By this way, the Ankara University Open Archive, which was developed to meet the criteria of the OAI_PMH protocol, has been registered to OAI.

Figure 2. DC Metadata Elements

Content Elements	Intellectual Property Elements	Instantiation Elements
Title	Creator	Date
Subject	Publisher	Format
Description	Contributor	Identifier
Type	Rights	Language
Source		
Coverage		
Relation		

4 CONCLUSION

The system currently has all the features that any other open source coded software which supports metadata has. However, there are considerable amount of academicians still doesn't take place in the open archive system with their studies. When the developments around the world considered, it is clear that the %71 of the authors who doesn't include their studies in any open archive, are unaware of the open archive activities (4). In this scope, Ankara University   Open Archive (AUO), as one of the leaders in AE (Open Access), has covered an important distance. Hereafter, increasing the contribution of the academicians by performing activities for the presentation of open archive more intensively is the thing that should be done.

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