

# OA Repositories @ Special and Academic Libraries in Zagreb

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## Summary

*The introductory part of the paper deals with the “serial crisis”, the open access movement and the characteristics of the Croatian scientific community. The most important causes of the “serial crisis“ are explained. The open access movement is defined and the most important initiatives, documents and projects are described. Two ways of achieving open access (open access journals and open access repositories) are defined as well.*

*Research on special and academic libraries in Zagreb constitutes the main part of the paper. An electronic online questionnaire has been sent to the libraries of all research institutions in Zagreb that have not yet established their institutional repositories. Librarians were asked whether their institutions should have open access repositories and, if the answer was affirmative, how they think their future repositories should be organized (which software should be used, which formats and types of documents should be deposited, whether they have to be OAI-PMH compliant, how to deal with copyright issues, etc.)*

*The aim of research is to determine how many librarians of special and academic libraries in Zagreb think that institutional repositories are necessary and find out librarians' opinions on establishing open access repositories. The results show librarians' awareness of the importance of the open access move-*

ment. The results also indicate if there is a need for some national-based plans for action and the funding of institutional open access repositories.

**Key words:** academic libraries, institutional repositories, open access, special libraries

## **Introduction**

Since the launch of the first scientific journals in 1665, the number of journals has been growing rapidly. Scientific journals have been recognized as the best way of formal scientific communication. Owing to quality control by means of peer-review, the pyramid of journals has been established. At the bottom of the pyramid there are a great number of low quality journals, and at the top of the pyramid there are only few high quality journals. After World War II some commercial publishers saw a money-making opportunity in publishing high quality journals. Increasingly many publishers started publishing scientific journals and they kept increasing subscription prices without fear of losing subscribers. Libraries had to reallocate their budgets in order to meet their users' needs for high quality scientific journals.

The "serial crisis" culminated in the 1990s as a result of the increasing prices of journal subscriptions, which had an adverse impact on formal scientific communication. Rising journal prices resulted in the decreasing accessibility and visibility of scientific output. The crisis was a very serious threat to scientific communication, as well as to science in general.

At the same time, as a result of technological development electronic publishing became a new way of making research results available to the scientific community and wider public.

The possibility of publishing on the Web seemed to be a way out of the "serial crisis".

## **The Open Access Movement**

Three initiatives important for defining and popularizing Open Access (OA), the so-called 3B initiatives, are the *Budapest Open Access Initiative* (2002), the *Bethesda Statement on Open Access Publishing* (2003), and the *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* (2003).

*The Budapest Open Access Initiative* (BOAI) was the first document to define Open Access and two ways of achieving it. According to the BOAI, OA is free and unrestricted online availability of scholarly literature (primarily peer-reviewed journal articles, but it can also include unreviewed articles). Open Access would increase visibility, readership and impact of scholarly literature. Two ways of achieving OA, which are recommended by the BOAI, are self-archiving (depositing scholars' refereed journal articles in open electronic archives or repositories) and open access journals (a new generation of journals that are openly available online, without any restrictions). The BOAI also em-

phasized that the overall cost of providing open access should be lower than the costs of traditional forms of publishing.<sup>1</sup>

The *Bethesda Statement on Open Access Publishing* defines an Open Access publication as one that meets two conditions. The first one is that the author (and/or copyright holder) grants to all users free, irrevocable, worldwide and perpetual access to the work and a license to copy, use and distribute it, as well as the right to make small numbers of printed copies for personal use. The second condition is that a complete version of the work is deposited immediately upon its initial publication in at least one online open access repository.<sup>2</sup>

The goal of the *Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities* is the realization of the vision of a global and accessible representation of knowledge. The web has to be sustainable, interactive and transparent; content and software tools must be openly accessible and compatible.<sup>3</sup>

Open Access was very soon recognized in Croatia as a valuable initiative for achieving better visibility of both global and Croatian research results. Today (May 2009) more than 200 Croatian scientific journals are OA journals (available either on Hrčak, the portal of Croatian scientific journals, or on their own websites). The second way of achieving Open Access, OA repositories, is less common in Croatia. Only three institutional repositories have a tendency to be OA repositories, and they are all established at the faculties of the University of Zagreb. Do academic and special librarians in Croatia think that OA repositories are necessary? Have they considered the possibility of establishing them? Are they aware of all the problems connected with choosing appropriate software, metadata model, and types of documents? Are they aware of the problems connected with copyright issues?

## Research methods and sample

The aim of our research was to examine librarians' attitudes about launching institutional open access repositories. We created an online questionnaire for the libraries of research institutions without repositories and sent it by e-mail to 46 addresses – to each of the 25 libraries of the University of Zagreb faculties, as well as to all the libraries of research institutes in Zagreb (21 libraries). The list of research institutions has been obtained from the Ministry of Science, Education and Sports website.<sup>4</sup> The questionnaire was created using Formdesk web-

<sup>1</sup> Budapest Open Access Initiative. 2002. <http://www.soros.org/openaccess/read.shtml> (3-4-2008)

<sup>2</sup> Bethesda Statement on Open Access Publishing. 2003. <http://www.earlham.edu/~peters/fos/bethesda.htm> (3-4-2008)

<sup>3</sup> Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities. 2003. <http://oa.mpg.de/openaccess-berlin/berlindeclaration.html> (3-4-2008)

<sup>4</sup> Ustanove iz sustava znanosti. Ministarstvo znanosti, obrazovanja i športa Republike Hrvatske. [http://pregledi.mzos.hr/Ustanove\\_Z.aspx](http://pregledi.mzos.hr/Ustanove_Z.aspx) (14-1-2009)

site forms which offer various useful features such as e-mail auto responses, statistics, result downloading, password protection, and secure data transfer.<sup>5</sup>

We received 32 responses (69.6 % response rate).

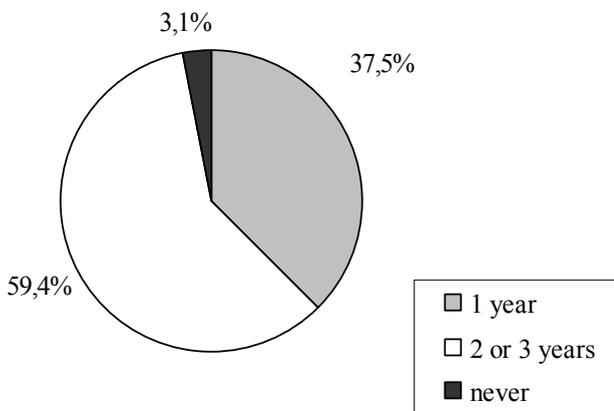
The questionnaire consisted of 14 questions. We asked the librarians whether their institutions should have OA repositories and, if the answer was affirmative, how they think their future repository should be organized (which software should be used, which formats and types of documents should be deposited, whether they have to be OAI-PMH compliant, how to deal with copyright issues, etc.) We also asked them who should initiate the launch of their institutional repository, who should maintain it, who would be its users and, finally, if they had any plans for establishing a repository.

### Results

A great majority of respondents (31 or 96.9%) find it necessary to establish a digital repository at their institution.

12 librarians (37.5%) think that a repository should be established within a year. In our opinion, this expectation is impossible to fulfill because of all the work that must be done before a repository becomes operational. Nonetheless, some of the respondents later answered that they had already begun setting up a repository and might be able to finish the work in one year's time. 19 librarians (59.4%) answered that their repository should be set up in 2-3 years' time. One respondent (3.1%) answered that no repository should be established (Chart 1).

Chart 1: How long will it take to set up an institutional repository?



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<sup>5</sup> Otvoreno dostupni digitalni repozitoriji. April 2009. [http://www.formdesk.com/rgic/oa\\_repository](http://www.formdesk.com/rgic/oa_repository) (17-4-2009)

In the third question librarians were asked who they think should initiate the launch of their repository. 34.4% of them think that it should be initiated by the Ministry of Science, Education and Sports, 31.3% answered that it should be initiated by the library, and 28.1% of the answers were – the institution. The answers indicate that many librarians are aware of their own role in launching an institutional OA repository, but also a great number of them know that repositories could be established much more easily with the help of the Ministry.

The answers to the fourth question support that conclusion – 80.7% of librarians think that their repositories should be funded by the Ministry.

In the fifth question librarians were asked who should have access to the repository. 93.8% of them think that repositories should be OA repositories and 6.2% think that only the employees of their institution should have access to the repository.

How many persons should be responsible for maintaining a repository? 65.6% of librarians answered that one person would be enough and 31.3% answered that two to three persons should be in charge of repository maintenance. Maintaining a repository is hardly a job that can be done effectively by one person. The majority of librarians are not aware of the complexity of work that must be done if they want the repository to be updated on a regular basis.

When asked about software that should be used, 75% of librarians answered that open-source software should be used and 18.8% think that commercial software would be a better choice. The majority of librarians know that OA repositories around the world use open-source software. The two most important preconditions for an OA repository are that open source software is used and that it is OAI-PMH (Open Access Initiative – Protocol for Metadata Harvesting) compliant.<sup>6</sup>

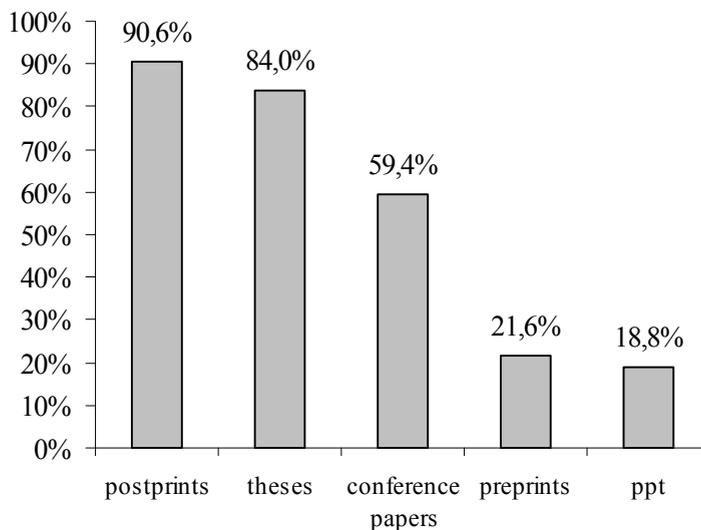
Librarians think that scientific papers and doctoral theses are the most important material for their users. 90.6% of librarians would like to deposit peer-reviewed scientific papers (postprints) and 84% of them would deposit doctoral theses. They also find conference papers very important (59.4%) and 21.6% of them would deposit preprints (papers not yet peer-reviewed but submitted for publishing in a scientific journal). Chart 2 shows answers to the question about material types that should be deposited in an institutional OA repository.

As to the most appropriate format for depositing documents, the PDF format received the highest percentage of answers (93.7%), while other formats such as RTF, Tiff, HTML, DOC and PPT obtained lower percentages. This leads to the conclusion that librarians find the format similar to printed publications the most appropriate and that they have not given a lot of thought to the potential advantages of other formats.

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<sup>6</sup> Corrado, E. M. The Importance of Open Access, Open Source and Open Standards for Libraries. // *Issues in Science and Technology Librarianship*. 2005. <http://www.istl.org/05-spring/article2.html> (11-12-2008)

Chart 2: Which material types should be deposited in a repository?



In the tenth question we asked librarians who should archive papers in a repository. The highest percentage of answers, i.e. 56.3%, refers to self-archiving by authors themselves (34.4%) or with the assistance of a librarian (21.9%). Since the question was a multiple answer type, the solution where librarians alone should archive also prevailed with a significant percentage (43.7%). 12.5% of answers refer to self-archiving by authors assisted by someone other than a librarian. It seems that librarians are aware that authors, especially those self-archiving for the first time, might need some assistance. They also believe that librarians are professionals who have to and are trained to help them. Based on the percentages of answers shown above, it can be claimed that librarians understand that self-archiving requires continuous cooperation between authors and librarians and that the archiving process, even within the same repository, can be organized in several ways. The mentioned percentages are shown in Chart 3.

The majority of surveyed librarians, i.e. 77.4%, consider that consent for archiving should be sought from copyright owners. Librarians are aware of the importance of copyright issues knowing that any copyright infringement could cause problems for their institution (Chart 4).

Answers to the twelfth and thirteenth question also indicate that librarians are conscious of the environment of the institution the library is part of. Namely, a high percentage of librarians (96.8%) believe that self-archiving in an institutional repository should be obligatory for all the employees of the institution. An institutional self-archiving policy is necessary in order to define self-archiving and the repository itself. Librarians obviously understand that their cooperation with the institution is crucial for establishing and maintaining a high-

quality digital repository. Librarians know that the efficiency of such cooperation would be guaranteed by the existence of a formal document (i. e. the self-archiving policy). Such a document would also contribute to the better recognition of the institution in a wider scientific community. Nevertheless, the above-mentioned awareness of librarians of the importance of copyright issues points to the fact that librarians understand that obligatory self-archiving cannot be done “automatically”, but requires continuous cooperation with copyright owners.

Chart 3: Who should be in charge of archiving material in a repository?

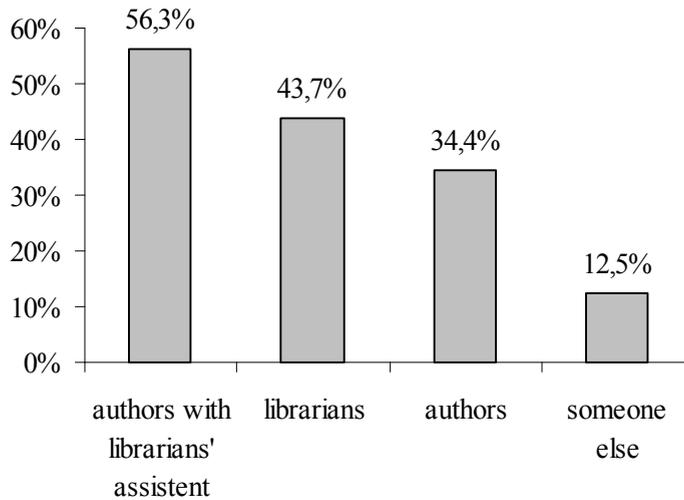
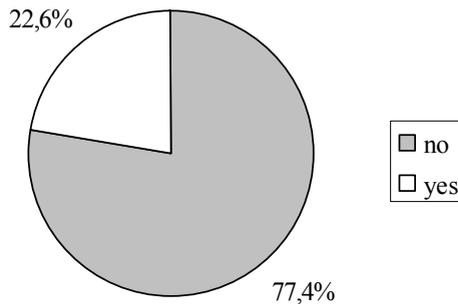


Chart 4: Should consent for archiving be sought from a copyright owner?



Answers to the fourteenth question indicate that the reasons why an institutional repository has not yet been established are the lack of obligatory self-archiving (58%), followed by the lack of staff in charge of its maintenance (48.4%), the lack of financial means (38.7%), the indifference of management (25.8%) and indifference of employees (19.3%), as shown in Table 1. By pointing out the fact that self-archiving is not obligatory as the main reason why institutional repositories do not exist, librarians implicitly express their opinion that their users (employees of an institution) have not adopted and/or recognized the main principles of the OA movement.

Table 1: Main reasons why an institutional repository has not been established

Reason	Percentage
Non-obligatory self-archiving	58.0
Lack of maintenance staff	48.4
Financial problems	38.7
Indifference of management staff	25.8
Indifference of employees	19.3
Nothing of the above	9.7

Exactly half of surveyed librarians answered affirmatively to the question if they have any plans for establishing a repository, while the rest of them answered in the negative. These results are far from satisfactory. It can be assumed that librarians who currently do not plan to establish a repository are waiting for a formal initiative, either from the Ministry of Science, Education and Sports or from their institution. They believe that such an initiative could solve financial problems, the problem of obligatory self-archiving as well as the problem of the lack of staff who would be responsible for its maintenance. However, this thesis leads us to the fundamental question – who should initiate the establishing of repositories? Although some respondents (31.3%) believe that the initiative should come from the library, the majority believes that the initiative should come from the Ministry of Science, Education and Sports (34.4%) or from the institution the library is part of (28.1%), probably having in mind the depositing and funding problems.

## Conclusion

We can draw a conclusion that the librarians of special and academic libraries in Zagreb are relatively well acquainted with the issues relating to establishing and maintaining OA repositories. The fact that the majority of respondents believe such a repository is necessary for their institution is commendable, but the fact that only half of surveyed libraries (or their institutions) have plans for setting it up gives cause for concern. Certain misleading assumptions of part of the surveyed librarians, e.g. those that a repository can be established within a year and that one person is sufficient for its maintenance, can be interpreted as the lack of

practical experience or knowledge of how to set up and maintain a repository. Librarians are also aware of copyright issues and related problems.

The most important problem and the main reason why OA repositories have not been established yet is the lack of self-archiving policies. Funding is also an important issue. The majority of librarians think that the Ministry of Science, Education and Sports should take part in both initiating and funding institutional OA repositories. Also, libraries should have detailed plans for setting up and maintaining an institutional repository. Most librarians are aware of the importance of their help to authors in the self-archiving process.

In conclusion, we can say that special and academic librarians in Zagreb are very well informed about OA repositories and are ready to take an active part in their establishing and maintenance.

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