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# Institutional repository policies: best practices for encouraging self-archiving

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**Abstract**

Over the past year, many Institutional Repositories have been launched by Greek Universities. In this framework, the Library of the Technological Educational Institute of Athens has designed and is launching an Institutional Repository containing Faculty's published and unpublished work, students' theses and a major "Institutional Archival Collection". However, the library had a long history of mistrust, mainly deriving from its long periods of understaffing and poor services. Thus, it was evident that the Institute had to rebuild trust and promote the IR. The first step in launching IRs was to set up policies regarding the content, the self-archiving procedure, the use of personalized services for users and the introduction of relevant routines. In the process, it became apparent that the organizational culture had to be redesigned. These lead to the formulation of 'best practices" which would secure the effective and widespread use of the repository by all members of the academic community. A bibliographic review was carried out regarding repository policies. In addition, observation techniques were used in assessing the use of the repository. Furthermore, a questionnaire was distributed to users in order to assess the effectiveness, ease of use and level of understanding of the repository's functions.

## 1. Introduction

Between 2000 and 2010 IRs were developed within the Greek academic libraries. Most of them were materialized after 2005andthrough EU funding. There are many successful examples of major Greek

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InstitutionalRepositories. For example, *Helios*(http://helios-eie.ekt.gr/EIE/) is a repository developed by the National Hellenic Research Foundation(http://www.eie.gr/index-en.html) and is maintained by the National Documentation Centre of Greece (EKT) (http://www.ekt.gr/en/index.html),one of the Foundation's institutes.*Nemertes*(http://nemertes.lis.upatras.gr/jspui/), implemented by the University of Patras Library (http://www.upatras.gr/index/page/id/17).*Psepheda*(http://dspace.lib.uom.gr/)provided by the University of MacedoniaLibrary (http://www.lib.uom.gr/)and the repository *Dspace@NTUA*(http://dspace.lib.ntua.gr/) developedby the National Technical University of Athens Library (http://www.lib.ntua.gr).

In this framework, between 2005 and 2010, the *Technological EducationalInstitute* (TEI) of Athens had made a first attempt to establish arepositorywhich produced poor results mainly because of the lack of content contributions. In 2011 the *Department of Library Science and Information Systems* (LIS) of the TEI of Athensbecametheleader of the project "TEI of Athens Library: development of digital services", which runs within the *Digital Plan Program*and is financed by the European Union (http:// http://digitalplan.gov.gr/portal/). Within this framework the new repository is aiming at collecting the faculty's published and unpublished work, students' theses and educational material. It will also incorporate a major collection comprising the Institute's archives.

The Library had a long history of mistrust, mainly deriving from its long periods of understaffing and poor services. This placed an additional strain on the task, as it was obvious that the environment was going to be rather indifferent and uninterested. Thus, it was evident that we had to rebuild trust and promote the IR.The IR is used as a vehicle for rebuilding trust and promoting library services.

The faculty members are not familiar with open access benefits, are suspicious of open access policies and they are hesitant because publishing rights and publishing policies are not clear. The Institute hadtopromote the repository to its faculty members and aim at collecting the maximum amount of their research work. In order to achieve that, it was evident that it had to abide to international standards and respect publishers rights.

The study was held within the TEI of Athens, one of the largest higher education institutions in Greece. This is a case study of the TEI of Athens IR. We felt that the Institute's particular circumstances –the economic crisis and the reform of higher education in Greece- played a key role in the emerging TEI of A as a research institution. The survey's main objectives were:

- To determine faculty's level of knowledge regarding open access and their attitudes towards it. Their opinion about open access and their intention to publish in an open access journal
- To test the establishedsystem for collecting faculty's published and unpublished work for the repository and determine "best practices" for promoting the IR and enhancing the collection of scientific content
- To explore faculty attitudes regarding participation in open access practices, determine difficulties and formulate best practices

Emphasis is given to the formulation of IR policies and best practices, especially those concerning the encouragement of faculty members in depositing their work. The main results of this survey will be presented and discussed in this paper.

## 2. The survey

The survey was conducted within the academic community. A questionnaire was circulated to 140 permanent faculty members through e-mail. The questionnaire itself was uploaded to the web using open source software. We had 90 responses out of which the 19 were incomplete. The 140 faculty members belonged to different faculties. They were informed through previous e-mails and meetings about the launching of the IR. The survey methodology is analyzed further below inthe relevant section.

### 2.1. Framework and aims

The TEI of Athens Library IR was designed by the LIS Department in 2011 and is currently under pilot testing. The study focused on identifying the elements for rebuilding trust between the library and the users. This involved:
- The setting up of the IR and its promotion
- The adoption and emphasis on personalized services for users
- The reform of the organizational culture towards the library
- The formulation of 'best practices"

As it is already mentioned, a previous attempt tobuild a *digital library* (DL) in 2008 yielded poor results. It collected approximately 700 digital items,offered but not self archived in the "old" DL, these being almost exclusively student theses. It was evident that LIS (Library and Information Systems Department) had to design from scratch the "new" TEI of Athens DL/IR. The project team set a data migration plan for the records of the old DL system to the new one and then set out to collect the digital content much needed for the success of the venture. The team promoted personalized services for the users and communicated them through individual e-mails.

The reform of the organization culture toward the library is necessary. The library, the administrative staff and the faculty, should cooperate for the IR success through the establishment of open access and self-archiving procedures. The Institute needs to show and promote its research at a national and international level.

### 2.2. Methodology

Before proceeding to the survey, the identification of similar cases through literature review and the examination of relevant case studies were necessary. More about the literature review will be analyzed in the next session. Afterwards, a questionnaire was distributed within the academic community. The questionnaire was circulated to 140 faculty members, in order to identify the attitudes towards library services in relation to the IR, its effectiveness and ease of use and the level of understanding of the repository's functions. During the personal communication that the project team had with members of the faculty and according to the survey results, most of them are not experienced in using IRs. The assessment of their perception and understanding of open access policies as these are directly related to the IR is crucial. Finally, the findings of the survey helped in the formulation of best practices and recommendations.

The survey was created in LimeSurvey (http://www.limesurvey.org/), which is an open source free application for on-line questionnaire creation, administration and delivery. LimeSurvey was installed in the same virtual machine, offered by GRNET (http://www.grnet.gr/)that hosts the LIS Department's e-class (Moodle) installation

[1]. Data were collected by use of the statistical analysis functions of LimeSurvey and they were further analyzed in Excel spreadsheets. The URL of the survey is:http://ithaki.lb.teiath.gr/onlinesurvey/index.php?sid=29541&lang=el.

The questionnaire was communicated by e-mail containing a link to the survey URL, sent on 13 June 2012. A second reminder e-mail was sent on 2/7/2012. The data collection ended on 12/7/2012 and overall lasted for one month. 140faculty members participated in the survey. We had 90 responses out of which the 19 were incomplete. The response rate was 50% (70 of 140 respondents). The data analysis was based on the complete responses. The 140 faculty members belonged to different faculties. Out of the 140 faculty members 112 belonged to applied sciences and 28 to social sciences. There are no faculty members belonging to the humanities. Academic staff is both tenured and on contract. Faculty members publish their work mostly in internationaljournals and selectively in national journals. They were informed through previous e-mails and meetings about the launching of the IR.A letter was sent to the faculty members by the Rector's office. The Faculty Deans informed the head of the Departments. Each Department called the general assembly, in which all the faculty members were informed about the repository by the project team. Personal communication was also established between the faculty members and the project team. The survey sample was the faculty members that had been informed about the launching of the IR, through this communication mechanism that the project team had set up [2].

The questionnaire was structured in four parts. Although the questionnaire was anonymous, the first part collected personal data, such as the date of completion, the Department's name, the sex and the age of the faculty member. The second part aimed at collecting data pertaining to the faculty attitudes about open access. For example, if they know what open access is, what they believe about open access journals and scientific articles, if they would publish in an open access journal, etc. The third part included questions recording the users' opinions about the digital libraries and repositories in general and about the TEI of Athens IR. Questions such as, what they believe about the TEI of Athens IR, their intention to deposit their publications to the IR, their major concerns (e.g. copyright clearance) were included in the third part. Finally, the fourth part contained questions about self-archiving.

LimeSurvey itself did the initial data manipulation; further analysis was made in Excel spreadsheets.

*2.3. Literature review*

The scientific environment is multi-disciplinary. DLs and IRs are built and they serve different disciplines. For this study, a bibliographic review was carried out regarding repository policies. More specific, IRs and user attitudes towards open access were examined though Mel Collier's work [3]. Self-archiving attitudes among different disciplines were essential for this survey. Sally Rumsey's survey [4] depicts self-archiving attitudes in the UK.In Rumsey's survey, which took place in 25 UK IRs the academics of scientific, technical and medical disciplines were found to be more active in depositing content rather than academics in humanities. Similarly, open access awareness in academics of the humanities was low, whilst they understood the advantages of depositing content in the IRs. Most of them brought forth plagiarism concerns, however, the two-thirds of the respondents were positive in depositing their work in IRs [4]. The faculty's participation and motivation in self-archiving was also highlighted in similar surveys [5, 6].In Xia's study, the results contradictedthe previous survey [4].Specifically, faculty contributions to the IRs were not impressive and the majority of them were not willing to self-archive and/or having someone depositing their work. [5]. However, the majority believed that when there is a self-archiving mandate policy, results could be positive [5]. Finally, in Kim's research, digital preservation and copyright management are crucial factors that in fact increase faculty participation in IRs [6].

## 3. Results and discussion

The majority of the people that participated in the survey are between 45-55 years old (42.25%). Approximately 89 % of the respondents were aware of open access.

The following graph (Fig. 1) presents faculty's awareness and opinion about open access scientific articles. The majority believes that open access promotes research dissemination and encourages publication and author recognition. Few of them believe that the publication quality decreases in open access.
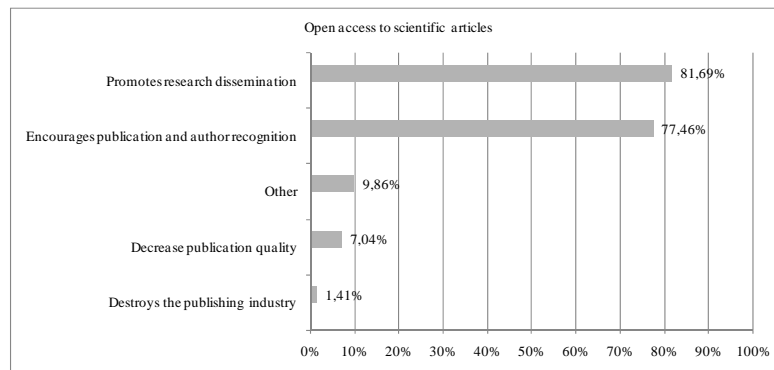


Fig. 1. Open access scientific articles.

The following graph (Fig. 2) presents faculty viewpoints regarding open access journal articles. The majority believes that open access articles receive more citations, as a result of their higher visibility. A small percentage believes that open access publications are vulnerable to plagiarism and that they don't follow peer review process.
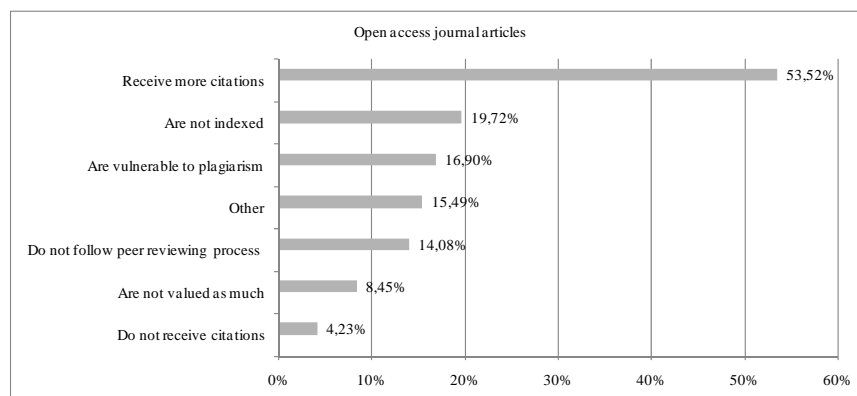


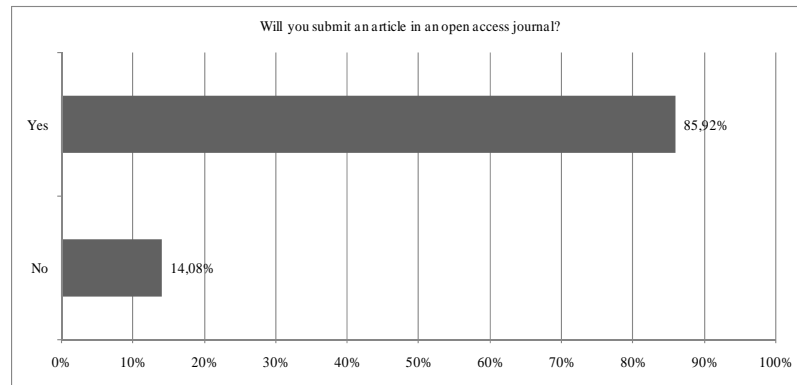Fig. 2. Open access journal articles.

Fig. 3. Faculty motivation to submit in an open access journal

Fig. 3 presents the intention of the faculty members to submit an article in an open access journal. The percentage (85.92%) is impressive and it is encouraging because the TEI of Athens faculty seems to rely on open access research value.

Fig. 4 indicates the need for the promotion of the TEI of Athens IR. The majority of the faculty members were not familiar with repositories however, if this is combined with Fig. 5, almost all faculty members (97.18%) were willing to submit content to the TEI of Athens repository. This is why the project team invested in setting up the communication mechanism as a tool for promoting the IR.Similar willingness on depositing content observed in UK repositories indicates that the majority believes in the IR value and visibility despite their concerns of plagiarism [4]. In addition, the IRs ensure the digital preservation and academics rely heavily on this[6].
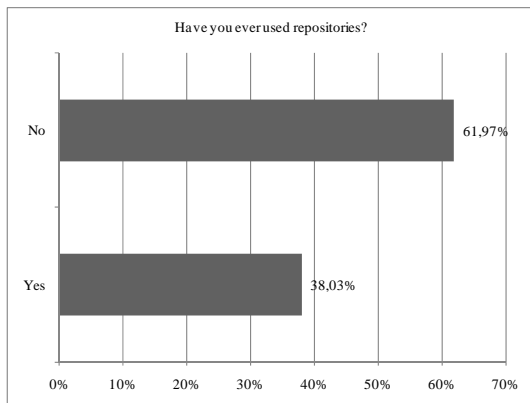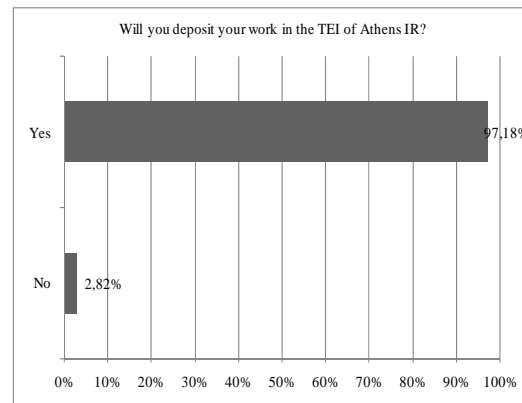


Fig. 4. Have ever user repositories?



Fig. 5. Will you deposit your work to the TEI of Athens IR?

Fig. 6is related to Fig. 5 and shows that the majority of faculty members are willing to deposit content in the IR. This is mostly due to their belief that the IR promotes the Institute's research visibility and that at the same time they receive more citations. The author's visibility is an important factor –according to other researchers [6]- that motivates academics to deposit content in IRs. If the visibility is also connected with a self-archiving mandate policy, the results are impressive [6].
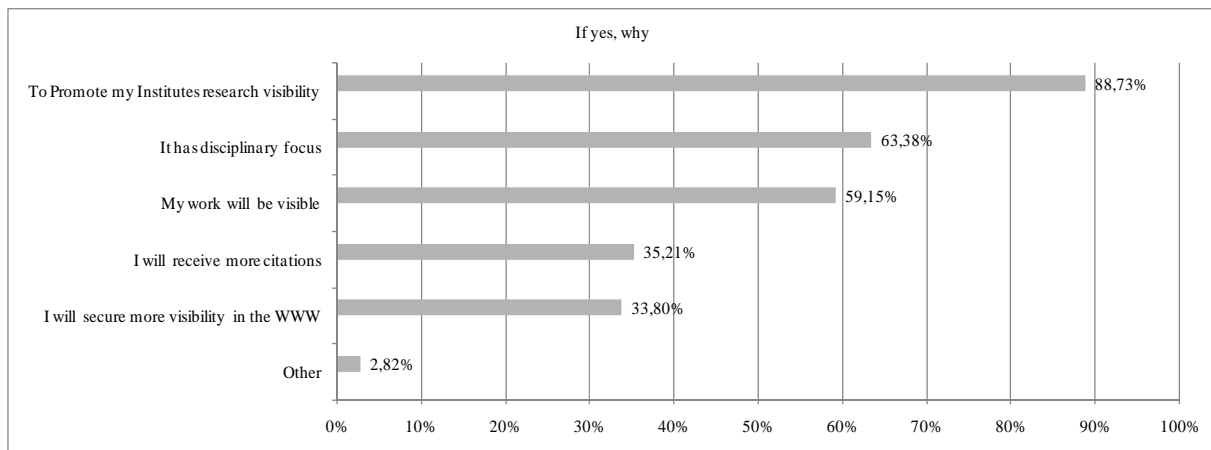
Fig. 6. Why deposit in the TEI of Athens IR

## 4. Policies and best practices

The LIS Department project team formulated the policies based on the survey results, the literature review of similar cases [3, 4, 5, 6] along with the use of the past experience. Policies that were developed this far are:

- The promotion of open access ideas to faculty members
- The encouragement of self archiving
- The metadata control by Library staff
- The IR management by the Library and
- The creation of communities and collections according to disciplines and based on Departmental structures.

The project team launched a campaign to promote open access ideas to faculty members. These notions were disseminated through the communication mechanism that was already in place for the promotion of the IR[2], and in addition though personal communication between the project team members and the faculty. The concept was to present faculty members with the advantages of the open access, in specific areas such as receiving more citations, in achieving authors' web-visibility, etc. Furthermore, self archiving was encouraged. The survey indicated that most of the faculty members choose to self-archive content on the condition that they have clear instructions from the library. Self archiving instructions had to be developed, setting out the parameters and creating customized workflows depending on content types to be submitted.

Copyright issues were to be dealt with using SHERPA/RoMEO along with the help of the Institute's legal department. The decision to provide copyright clearance service through the IR's project, solved many issues in content selection and deposit. A copyright help desk is set within the project. License agreements for the use of the repository have also been developed based on Creative Commons licenses.

In regards to metadata handling, the Library is to maintain the metadata control and the IR management.

The TEI of Athens IR is set on DSpace software (http://www.dspace.org). The majority of Greek repositories are set on the DSpace platform and this had played a definite role in the decision, as there is a support group for DSpace users. In addition, technical interoperability is ensured. The last but not least policy step is that the IR structure will be based on the DSpace communities, which will be formed according to disciplines, for example Information Science, Computer Science, Engineering, etc., and according to the departmental demands.

Finally, the IR should exploit fully all its capabilities in providing personalized services toits users. This will entail: each member is to havehis/her own space in the repository. This personal space may contain a personal profile, a publications list, statistics, etc. The faculty publications will be interconnected with the evaluation

procedures of the Hellenic Quality Assurance Agency (http://www.adip.gr). This function was also a demand deriving from the survey.

## 5. Conclusions

Results indicate that the faculty members are aware of the benefits of open access. They publish in open access journals and they are willing to submit content into the IR. They believe that the repository is a necessity for the Institute's and their own research visibility.

Furthermore, they support the idea of rebuilding trust between the Library and the users and they feelthat the IR will be the vehicle in this effort. The visibility and openness of their work will offer more citations, necessary for career development. The IR personalized services are very welcomed and much anticipated by all faculty members.

All of the above indicate that the project team has to continue to promote the IR to the rest of the faculty, in order to ensure the full participation of the TEI of Athens academic community.

## 6. Expected results and future work

It is expected that the IR will be the focal point for the amelioration and the enhancement of the TEI of Athens Library services. Our vision is to use self-archiving procedures in an obligatory basis for all the TEI of Athens academic community.

The creation of an interoperable repository seems to be essential not only for the collaboration among the Greek IRs but also for the collaboration among internationally distributed IRs. For example, the TEI of Athens IR should participate in synergetic schemas, like the Digital Library, Archive and Museum of Europe –*Europeana* (http://www.europeana.eu)- and this will promote further the Institute's reputation and research visibility.

Future work may contain the assessment of the repository's use and faculty attitudes and perceptions towards the library after the IR's full implementation. This will be done through a follow up questionnaire. After the full IR implementation and the evaluation through a new survey, further development and/or adjustment of best practices and policieswillfollow.We anticipate that will have as a result the change of the organizational culture in respect to the Library. This will be assessed through a follow up survey.

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