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## Exploratory research regarding faculty attitudes towards the Institutional Repository and self archiving

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### Abstract

Over the past year the Library of the TEI of Athens has launched an Institutional Repository containing Faculty's published and unpublished work, students' theses and a major collection called "Institutional Archives". The latter was also used as a vehicle for promoting the Repository and had attracted a lot of interest from all faculty members and the Institute's administration. While in the making, special effort was made to secure faculty's understanding of the undertaking and faculty's participation. Information was communicated through e- letters from the Library, the Deans and the Institute's President as well. A web site was developed and a feedback mechanism was set in place. A system of approaching individually each faculty member and create customized lists of publications to be incorporated in the IR had given surprisingly good results. The assessment of these measures in relation to faculty's willingness to participate in the IR is examined. Furthermore, faculty's attitude towards self archiving is also examined. A bibliographic review was carried out regarding faculty attitudes and factors that shape it. A questionnaire was distributed to all faculty members in order to assess the effectiveness of the communication system and the degree of their willingness to practice self archiving. This explored faculty reactions and determined the effectiveness of the IR.

Major findings include the faculty's positive reception of the IR due to the fact that the information was communicated properly through the aforementioned mechanism and their enthusiasm and overcoming of hesitations after understanding the capabilities of the IR.

Institutional Repositories, Faculty Attitudes, Best Practices, Open Access, Self archiving, Repository Policies

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## 1. Introduction

The Library of the TEI of Athens has launched an Institutional Repository containing Faculty's published and unpublished work, students' theses and a major "Institutional Archival Collection". The latter was also used as a vehicle for promoting the Repository and had attracted a lot of interest from all faculty members and the Institute's administration.

Special effort was made to secure faculty's understanding and participation in self archiving their work.

The study aimed at developing a communication mechanism that will secure the IR content and the Faculty's participation. This included:

- Informing faculty members through e- letters from the Library, the Faculty Deans and the President of the Institute.
- The development of a web site for the project
- The individual approach of each faculty member and presentations of the IR in departmental meetings
- The creation of customized lists of publications per faculty member indicating what was to be incorporated in the IR and offering copyright clearance services

## 2. Framework of the study

The study was held within the TEI of Athens, one of the largest higher education institutions in Greece. Its main objectives were:

- To determine Faculty's level of knowledge regarding open access and their attitudes towards it.
- To test the set system for collecting faculty's published and unpublished work for the repository and determining "best practices" for promoting the IR and thus enhancing the collection of scientific content.
- To explore faculty attitudes regarding self archiving and determine difficulties.
- To identify their attitudes regarding self archiving practices and their outlook in securing their work within the framework of the repository and open access policies.

### 2.1. Major issues and concerns

Major issues and concerns were identified in respect to all three parties involved: the library, the faculty members and the institute as a whole.

a) The library had a long history of mistrust, mainly deriving from its long periods of understaffing and poor services. This posed a threat for the success of the IR and the faculty's participation. In addition, this placed an additional strain on the task, as it was obvious that the academic community was going to be rather indifferent and uninterested feeling that the service will be once again poor. It was evident that if we wanted the IR to succeed we had to rebuild trust. There was a stake in making the repository a vehicle for promoting new and improved library services and at the same time present a "new" face of the library within the Institute's academic community.

To achieve that the Library had to provide and sustain a full communication mechanism addressed to the academic community. In addition, the library in order to gain the community's trust had to abide to international standards in handling copyright issues and to be careful not to infringe publisher's rights and publishing practices. At the same time, the library had to respect the demands of the faculty members and to promote the benefits of open access in research and education. All of the above had to be set out in policies and "best practices" adjusted to local attitudes and needs. It became evident that by providing personalized lists of publications and copyright clearance services was a good way to gain faculty trust and secure faculty participation and these practices became central part of the project.

b) Faculty members were identified as the key people for the success of the repository. They are both contributors as well as the users. They are creators and depositors of their work and at the same time users of

the wealth of information nesting within the repository. Therefore, it was evident that they had to be incorporated in the project and make sure that they were informed of the benefits and the practices of the international academic community in regards to repositories.

At the same time it was assumed that faculty members would be suspicious of open access policies and that they would be hesitant in depositing their work because of publishing rights and publishing policies not being as clear to them. Many of them were hesitant because they were not clear of what they had signed when submitting their work to international journals. Once, again the key to overcome these issues was to keep them informed and abide to all international and national rules and regulations regarding copyrights.

c) Although the Institute gave its approval for all action taken, it was initially reluctant as to the repository's capabilities. In addition, it was hesitant in trusting the library and it was very conservative towards any action taken regarding open access as it did not want to breach publishing policies.

In order to overcome the aforementioned concerns and minimize the risk of failing because of mistrust or indifference, this present study -after assessing the situation through a survey- proceeded in proposing a strategy for overcoming the problems.

## *2.2. The Repository of the TEI of Athens*

The TEI of Athens repository was financed by the European Union program "Digital Plan". The project focuses on the development of repositories and digital library services to academic communities. The program was giving the resources and the opportunity not only to develop the repository but to actually improve library services as a whole.

The project gave the library the opportunity to change its image within the Institute and in the outside world by strengthening and promoting its electronic services.

Other factors that affected the Library's role were the technological developments and the TEI's particular circumstances of the last decade. The TEI of Athens after the legislation of 2001[1] that granted to all Technological Educational Institutes of Greece status of higher education institutions, was still adjusting and it was trying to establish itself among the higher education institutions. The TEI of Athens had to prove its research capabilities and its research output. The repository was a means to present them to the outside world. The structure of the communities and collections of the TEI of Athens repository was such as to reflect its departments and its research activity.

As it is already mentioned, the TEI of Athens is one of the largest higher institutions of Greece and consists of five faculties and 36 departments, all in applied sciences, health sciences and one in the social sciences. There are no humanities. Academic staff is both tenured and on contract. Faculty members publish their work mostly in foreign journals and selectively in national journals. In addition, there are several research laboratories housed within the departments with strong research and publication activity.

## **3. Methodology**

A literature review was carried out in order to identify similar or relevant cases. The literature review focused on faculty attitudes regarding self archiving, repository services, open access concepts and copyright issues. In some cases faculty attitudes per specific disciplines were also recorded.

This was followed by the distribution of a questionnaire within the academic community in order to identify:

- The level of acceptance and testing the set system for collecting faculty's published and unpublished work for the repository
- Faculty perceptions and understanding of IR functions and benefits
- The ways for promoting the IR and enhancing the collection of scientific content
- Faculty attitudes regarding self archiving and determine the difficulties involved

The survey was conducted within the academic community. The questionnaire was administered to 140 permanent faculty members through e-mail. The questionnaire itself was uploaded to the web using open source software. There were 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 in the relevant section. Some survey questions were Likert type questions, with a suitable scale of five ordered response levels, corresponding to a numerical scale from 1 to 5. For the Likert style questions, an average score was calculated by converting the five ordered response levels to an 1 to 5 numerical scale, and calculating the number average.

In addition, several structured interviews were conducted with faculty members who:

- Had a significant scholarly involvement (more than 2 pubs per year)
- Had a strong educational stream (i.e. strong presence in e-class and production of educational material)
- Were involved in research projects

Data were analyzed and assessed issues included: the adequacy of the communication mechanism, the level of acceptance of the IR and the exploration of faculty expectations from the implementation of the IR. This was followed by the formulation of best practices and recommendations based on major findings.

#### **4. Literature review**

Jihyum Kim [2] identifies two types of factors affecting faculty participation in IRs. The one is cost factors and the other is benefit factors. In cost factors Kim recognizes copyright concerns and the additional time needed to participate. In benefit factors he distinguishes five external factors: 1. Accessibility, 2. Publicity, 3. Trustworthiness, 4. Academic reward, 5. Professional recognition and one internal: 6. Altruism. An earlier study by James Allen [3] stated that the uncertainty about copyright is one of the barriers impeding academic authors' participation in IRs. We believe that this is true and that professors appeared confused about the copyright policies and level of permits issued by publishers and copyright agencies [4]. Copyright issues were recognized by all parties involved in open access repositories and several efforts were made towards solving the issues. Complicated international and national legislations, publishers lobbying and authors hesitations were evident throughout the last decade, which is the first decade of the open access movement. The organized efforts of Creative Commons [5] and Sherpa/Romeo [6] had brought excellent results and have helped in clearing some issues. In addition, they have helped in clarifying certain parameters to authors and setting some rules of do's and don'ts in open access repositories. However, there are some other factors that affect a professor's decision to deposit or not his or her work. In those factors we recognize the influence of external factors, such as "is anybody else doing it?", or if grant funders encourage such practices or not. It should be mentioned though that European Union funded research has a pro "open access" policy as it requires all produced research through funds to be publically accessible and free of charge. Such practices do encourage open access and contribute to the creation of "an open access culture". This eventually will lead, driven by the need of identification and recognition of researchers, to the creation of a "self archiving culture" [7]

A decade after open access and the establishment of IRs, we can talk about self archiving culture among faculty members. Earlier studies had approached and presented the lack of self archiving culture or tried to define similarities with other forms of dissemination of research work such as the distribution of pre-prints [8].

Finally, one should mention here, that within institutions and across different disciplines [9] there are differences and diverse approaches [10]. There are embedded diverse "cultures" regarding not only open access and self archiving but also research approaches, degrees of acceptance or rejection of novelties, degrees of computer literacy and trust towards new technologies. In the case of the TEI of Athens we note that faculty members belong almost exclusively to applied sciences and only one school belongs to the social sciences. This created a somewhat more homogenous sample for the present study.

What we set to examine was the culture of the institute itself in regards to open access, self archiving and the development of the IR within the Library. It was important to explore the organizational culture as this was shaped by external factors such as the issuing of the legislation of 2001 that posed new research demands and the need to promote the institute’s profile. In addition, internal factors such as pride for the Institute and its emerging new profile, along with an expressed willingness to share knowledge within the local and the broader academic community were also part in the shaping of faculty attitudes regarding self archiving. Johnston [11] has pointed out similar patterns in the cases of IRs. Furthermore, the TEI of A had an additional factor contributing to the acceptance and encouragement of IR. The need to establish a research profile was vital as the departments were preparing for external evaluations. The need to have a platform to present their research and communicate it to the world was of great importance. Within this framework the study was of particular interest in exploring faculty attitudes regarding self archiving.

Finally, it should be noted that IR policies are normally based upon the guidelines formed by organizational cultures [12]. Based on those findings representing attitudes and practices of faculty self archiving processes, IR policies were formed and best practices were developed for the TEI of A repository.

## 5. Data analysis

The analysis that follows focuses on the following issues: a. exploring faculty opinions about the usefulness or not of the TEI of A repository. b. to assess the communication mechanism set up for informing faculty members about the IR and encouraging them to contribute with their work and c. to explore faculty attitudes regarding self archiving.

Fig. 1 presents the opinions of faculty members in assessing the uses and usefulness of the IR as the number average of the Likert scale score for each opinion (see methodology section above). It is an interesting observation to see that the notion that “the IR promotes the Institute” gets the highest rank presenting in a sense the need for the Institute’s promotion to the broad academic community.

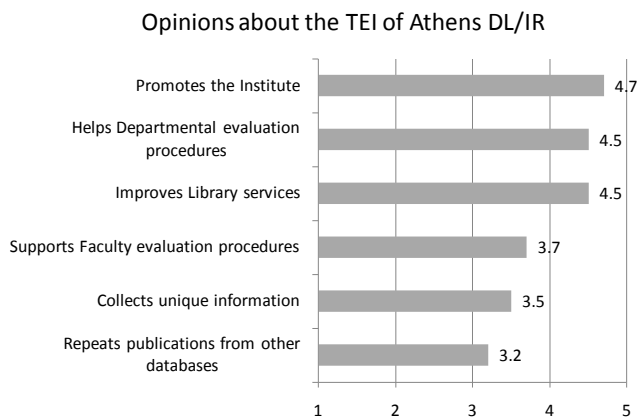


Fig. 1. Opinions about the TEI of Athens DL/IR (number average of the Likert scale score)

Figures 2 and 3 explore the adequacy of the communication mechanism that the Library had set for keeping faculty members informed and convey all necessary information in order to encourage them to deposit their work. At this point we should indicate that the Library took every possible action to communicate this information through:

- The sending of letters addressed by the Rector, the Deans of the Faculties and the Library
- The Development of a project website with feedback mechanism. This included all relevant information regarding open access, project plans, benefits of the IR, copyright policies, etc
- The participation of the IR team in departmental meetings in order to present the IR project
- The creation of individual publication lists per faculty member indicating what it could be deposited in the IR
- Copyright clearance services through SHERPA and advise from the Institute’s legal department

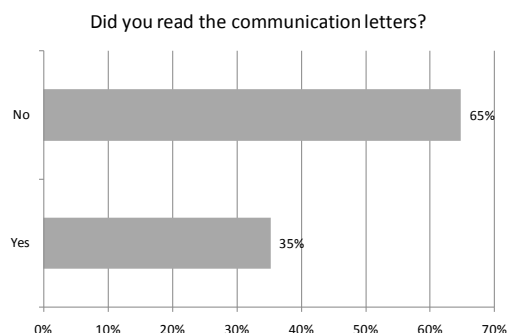


Fig. 2. Assessment of Communication letters

Letters were not actually read but acted as reminders as figures 2 and 3 show. They were taken into account and acted as links with the project’s web page. The project’s website contained all relevant information regarding open access, the repository and its uses and usefulness along with a section on FAQ. In addition, a response e mail was answering questions and offered further information.

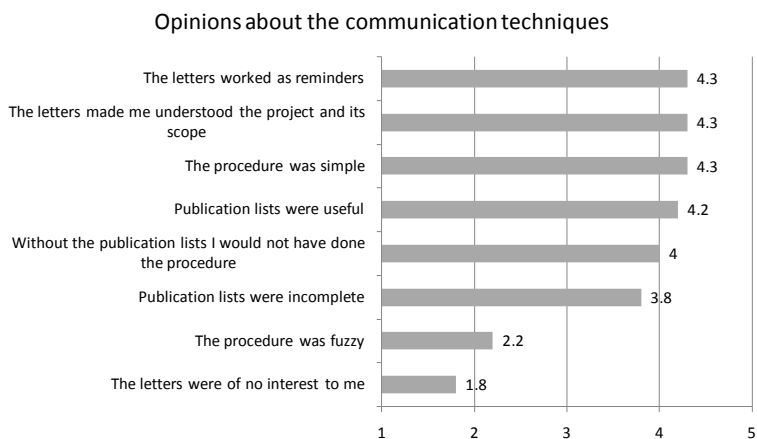


Fig. 3. Assessment of Communication techniques (number average of the Likert scale score)

Figure 3 presents the assessment of the measures taken by the Library and the project team to promote the IR, inform about its use and usefulness and encourage participation. It should be noted that the personalized lists of publications indeed had great results in securing content. The fact that many lists were incomplete was because they were compiled through personal web pages by faculty members that were not updated etc. An open ended question at the end of every list called for additions and people were eager to complete these lists. This resulted in augmenting significantly the materials to be deposited in the IR. Many of the professors remarked in individual interviews that those lists were very useful to them and acted as reminders for a series of procedures such as renewing web pages, CVs, submitting papers to the library and to departmental records for the evaluation procedures, etc. It also became evident that the publication lists minimized the work and time needed to participate in the repository, a fact that was accepted in great delight.

Figures 4 and 5 present faculty attitudes regarding their willingness to deposit their work at the IR. Also, they depict their intentions in doing this by themselves, using the self archiving module of the IR.

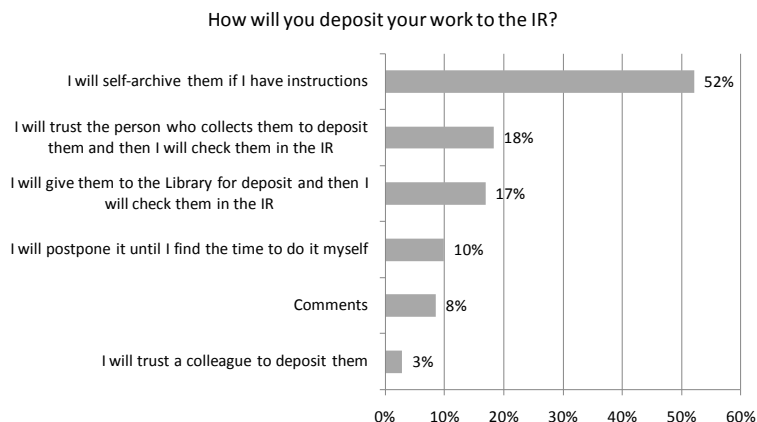


Fig. 4. Depositing work to the IR

The percentage responding positively to self archiving is 52%, a rather sufficient percentage ready and willing to follow the procedures. We still note the low rate of trust to the Library to do it (17%), whilst there is slightly higher trust to the team of the repository, which is also housed in the Library (18%), but it is somewhat more independent.

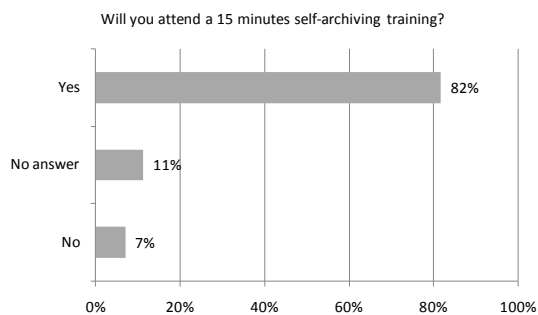


Fig. 5. Self archiving intentions

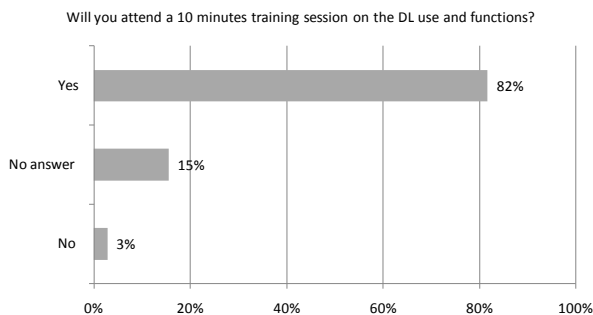


Fig. 6. Use of the IR intentions

Figure 5 depicts that the vast majority of faculty members are willing to follow self archiving procedures and that they will gladly participate in an informative seminar (82%). This is in full alignment with fig. 6 which represents a similar intention for the use of the IR.

Furthermore, from the 12 interviews that were conducted with faculty members during the spring term of 2011-2012 academic year at the school of Finance and Economics, it was evident that they all believed that

the IR was a good way to ameliorate library services and to introduce new electronic services much needed to the academic community. Trust to the library was still low but the information given in regards to the project made all 12 of them consider it to be a positive action. Interestingly enough, five of the interviewed faculty members mentioned that the IR could support evaluation procedures. All of them mentioned that the IR was good for enhancing the Institute's research profile.

## 6. Conclusions

Survey results indicate that faculty members responded positively to all information given in regards to the IR. They were all willing to deposit their work, whilst more than half of them indicated that they will proceed with self archiving procedures. More than 89% were willing to learn self archiving procedures as well as uses of the IR.

The IR could be used as the vehicle to rebuild trust to the Library. Through its services the library's own services could be enhanced. Through the use of the IR's capabilities new services can be offered to the academic community. Personalized services and access to new research material were considered to be the main benefits.

The interviews also brought to light another important role of the repository: its value as a supporting tool for departmental evaluations. Faculty members pointed out that the repository could serve as a platform of faculty's research and make it readily available during evaluation. Research and published work of the faculty members could be viewed easily through the repository's platform which acted both as a thematic point and a departmental portal through the shaping of its communities and collections. This gave the Repository a role that was directly related not only to research and education but also to evaluation procedures and the shaping of departmental profiles.

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