Scientific information management policies and information literacy schemes in Greek higher education institutions and libraries

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Abstract. Scientific information management and related policies may impact information literacy practices, models and policies. This paper demonstrates the current situation regarding information literacy in Greece with a focus on Greek higher education institutions and libraries. Presents recent developments in scientific information management in Greece and discusses possible interaction between information literacy and scientific information policies.

Keywords: Scientific information policies, information literacy, Greece, higher education, Hellenic qualifications framework

1. Introduction

Information Literacy (IL) has been defined, since 1989, by the American Library Association [2] as the knowledge enabling an individual to understand when and why he/she needs information and the possession of skills enabling him/her to find, evaluate and exploit it effectively, eventually equipping him/her with the 'learn how to learn' capacity. Scientific information policies refer to policies developed from institutions regarding their affiliates' ways of communicating with their scholar peers. Scholarly communication enters in a new era due to rapid development of open access publishing and alternative metrics. Discourse regarding the mutual influence between Information Literacy (IL) and Scientific Information (SI) should be initiated with the following elemental questions:

- What is the situation regarding IL and SI in Greece?
- Why IL and relative information policies are needed?
- How IL and SI policies should be developed, by whom and when?

2. Information literacy in Greece

Literature review shows that library user training evolved from simple building tours, through library instruction, to complex course-integrated Information Literacy activities and programmes, most of which are taking place in academic libraries [11,12,18,22]. Following the global pattern IL instruction developments in Greece have being mainly taking place in Higher Education (HE) libraries.

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The Greek HE sector in 2014 comprises of 36 institutions, 22 of which are Universities and 14 are Technological Educational Institutes (also known as TEIs). In 2013 the number of HE institutions was 39 and was reduced to 36 due to some mergers. None of these Greek Universities and TEIs has employed an institutional policy for Information Literacy student training, while academic libraries in these institutions have almost entirely undertaken related initiatives. In most cases library orientation and bibliographic instruction seminars are organized, while in very few cases these one-time sessions have been evolved in more mature IL activities. Yet, these few cases have taken place as experimentation products of libraries and they are not integrated into the curriculum [4].

According to rather recent research [4,13], libraries in about 80% of Greek HE institutions offer library instruction programmes. Yet only a 30% of them apply international or other IL standards during instruction planning [4]. Library instruction is offered in a variety of methods; the most popular one is stand-alone courses or classes. Advanced information handling skills like use and evaluation of information sources, use of citations and writing training was included by 35–40% of the libraries [4]. Usage of online web tutorials was rather low, since less than 15% of the libraries offering training sessions are using them [4,13], while it must be noted that nearly all libraries reported very limited cooperation with faculty [4]. Finally, according to the research data there were no comprehensive Information Literacy programmes in the true nature of the term in Greece [4,13], while after 2010 academic library services downsized due to lack of finance and even more in 2013 due to workforce cuts. Despite this fact there is a number of interesting web IL schemes in Greece which are presented in the following section.

2.1. Web IL schemes in Greek higher education

2.1.1. Orion
The first online IL service was developed during 2006–2008 by the library of the Alexandre Technological Educational Institute of Thessaloniki (ATEI of Thessaloniki). This service was called Orion (http://orion.lib.teithe.gr/) [15,16] and it was funded by the EPEAEK II operational programme. Orion (Fig. 1) was based on the ACRL Information Literacy Competency Standards for Higher Education [1] and it included a citation tool for creating references in four styles, namely APA, Harvard, MLA and Turabian. Orion was updated in 2012 and was renamed to Callisto (http://callisto.lib.teithe.gr/).

2.1.2. OWiL 2.0
University of Patras Library developed in 2012–2013 an Open Workshop in Information Literacy (OWiL 2.0) [14]. This workshop used Second Life as an educational platform [19] and it applied blended learning practices. This workshop consisted of five training modules [17]:

• Research Innovation and Creativity (September–October 2012)
• Information Literacy (December–January 2013)
• Research Methodology (February–March 2013)
• Survey Results – Writing, Publishing and Presentation of Scientific Publications (April 2013)
• Professional development (May 2013) in cooperation with the University of Patras Career Services Office.

2.1.3. ILSEAB
The Hellenic Academic Libraries Link (HEAL-Link) consortium is currently developing an information literacy online platform under the pilot name 'ILSEAB' – http://ilseab.lib.uth.gr. ILSEAB portal (Fig. 2) is developed as a HEAL-Link's project coordinated by the University of Thessaly Library and Information Centre and co-financed by Greece and the European Union under the "Digital Convergence"

Fig. 1. Orion IL tutorial home page (in Greek). (Colors are visible in the online version of the article; http://dx.doi.org/10.3233/ISU-140758)

Operational Programme. The portal is bilingual, in Greek and in English, and is currently being developed within the scope of offering an information literacy web service to both end-users and librarians. ILSEAB aims to offer an online training tool that may help its users to develop their skills in recognizing their information needs, forming a successful information search strategy, evaluating and using information in an effective way in their assignment-writing or problem-solving tasks.

ILSEAB is developed with SCORM-compliant open source systems (Joomla, Moodle, Exe, Xerte), to enable the educational material's interoperability, accessibility and reusability. The adopted architecture enables the ILSEAB development team to integrate open educational resources that are SCORM-compliant; end-users may also download ILSEAB modules, edit, configure and use them either locally or online in any other compatible software. ILSEAB end-users (undergraduate and graduate students, faculty, teaching assistants, etc.) and librarians will have access to the following services:

• Information Literacy Platforms
    • For End Users
    • For Librarians.
•   IL informational and educational materials in electronic form (FAQs, Best Practices, IL Policies, Reference lists, etc.).
•   Instructional material for using well-known HEAL-Link information resources, such Scopus, Web of Science, ScienceDirect, etc.
•   Access to Web 2.0 tools services (Blog, Rss feed, Podcasts/videocasts, social networking tools).

The IL platform for end-users provides IL training, allows them to become more independent learners and therefore contributes to their lifelong learning activities. A specific learning model is adopted and is
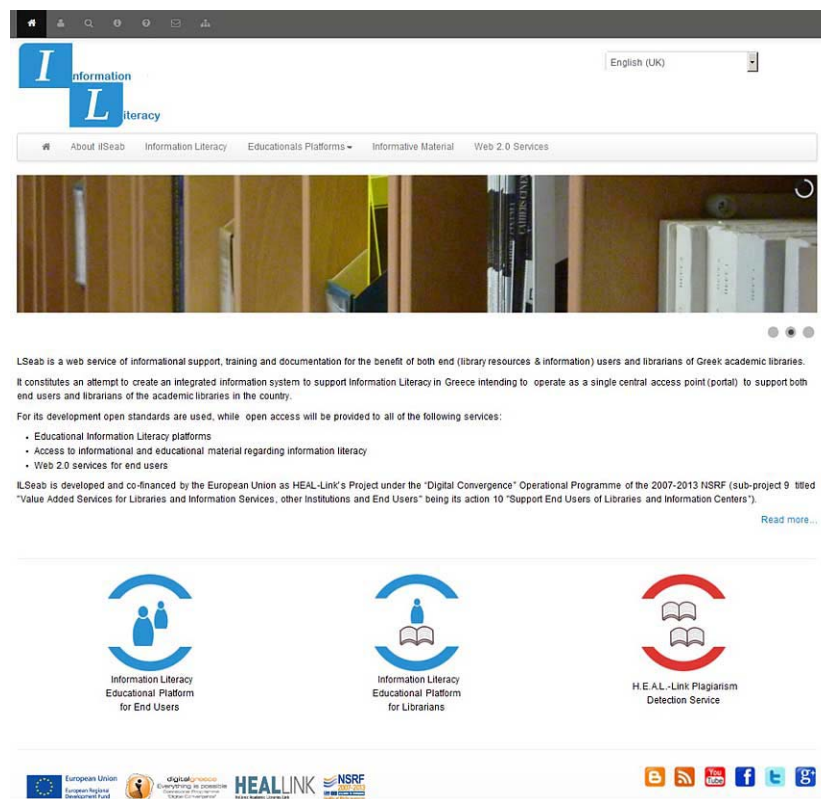
Fig. 2. ILSEAB beta portal (English version). (Colors are visible in the online version of the article; http://dx.doi.org/10.3233/ISU-140758)

to be implemented for IL teaching. The model is based on a flexible learning theory enabling creativity and interactivity through use of provided educational materials, different modes of communication and interaction between students and educational resources.

IL training courses will cover four general scientific fields:

- Social and Humanities Sciences
- Sciences and Engineering Sciences
- Life Sciences
- Economics Sciences.

Each field is divided into two categories: an IL course targeting undergraduate students and a second more advanced one targeting graduate students and faculty. The IL courses, are structured into independent sections (modules), will be interactive, at least in some cases, and implement, mainly, the Australian and New Zealand Information Literacy Framework [3]. The content of the modules (learning materials) has been created using free and open source authoring tools, in a way that will fit in a variety of learning styles (theoretical presentations, examples, exercises, activities, etc.).

The IL platform for librarians, which is coordinated by the National Technical University of Athens, aims at providing the Greek academic library community (librarians, information scientists and general staff of academic libraries) with IL information, training and educational materials about:

- Good practices and Policies
- Standards and rules
- IL methodologies and activities of any type of library
- References
- Programs and funding
- Library science tools.

2.2. Other IL actions in Greece

There is a growing number of researchers and research teams studying information literacy in Greece. Their findings are published in Greek and International conferences and journals and outline the evolution and status of information literacy education in Greece.

A major contribution in studying information literacy in Greece was the organization of two conferences. The first one entitled 'Information Literacy – the Key to Lifelong Learning' was organized in 2006 by the Goethe-Institut Athen [7]. Speakers from Greece, Egypt, Turkey, Germany, France, Great Britain, Spain, the Netherlands and the United States presented initiatives and best practice examples and conducted workshops. Nearly 250 participants from 50 libraries attended the conference. In 2008 another information literacy scientific event took place. It was the 1st scientific symposium entitled 'IL and Greek HE'. It was organized by the University of Thessaly Library and Information Centre and it was oriented to information literacy activities held in Greek HE institutions [21].

2.3. Information literacy policies and the Hellenic qualifications framework

As already stated true IL is actually in early stages for most of the Greek HE institutions and their libraries. There is no national policy regarding IL and no IL policy adopted in any of the Greek HE Institutions (i.e. Universities and TEIs) on an institutional, not on a library, basis. Very few Greek HE Academic Departments have included library instruction in their course structure, prospectuses or study guides [4]. Formation of IL policies aligned to international IL standards is a necessity. There should be a national IL policy to clearly state IL goals and objectives on a countrywide level. HE institutions should also formulate their own IL policies in order to better serve their educational goals. We think that the Hellenic Qualifications Framework (HQF) [8] that has been officially announced in 2013 by the Ministry of Education is an important infrastructure and should be taken under consideration in developing IL policies.

The Hellenic Qualifications Framework is being developed since 2009; in 2013 its "development and referencing stage of the National Framework to the European Qualifications Framework was completed" [9]. HQF is a tool for the classification of qualifications in terms of learning outcomes, namely knowledge, skills and competences that are acquired by people on completion of a learning process. There are 8 qualification types (levels) in HQF [10]:

1. Primary School certificate
2. Lower Secondary school certificate
3. Vocational training school (SEK) certificate
4. General upper secondary school certificate or vocational school certificate (EPAS, EPAL)
5. Vocational upper secondary school 'degree' (4-EPAL, IEK)
6. Bachelor's degree
7. Master's degree
8. Doctorate.

The last 3 types are related to Higher Education degrees. At each level there are different descriptors – qualifications involved. The learning outcomes at each level must be taken into account in IL policy formulating processes. There is also a need to study and design how specific skills may be taught in order to achieve the learning outcomes described at each level. The findings of these studies should be included in the development of IL policies.

3. Scientific information services and policies

In the recent years thanks to the Digital Convergence operational programme [6] and European funding new scientific information services and related policies are developed to better support Greek researchers in their scholarly communication activities.

3.1. Scientific information services

National Documentation Center and the Hellenic Academic Libraries Link cooperate in the Digital Convergence operational programme framework to design and develop a Current Research Information System (CRIS) software which would be installed in interested Greek HE institutions in order to document the work of the Greek research community. According to the European Organisation for International Research Information [20], a CRIS "is any informational tool dedicated to provide access to and disseminate research information. ...[it] aims at assisting the users in their recording, reporting and decision-making concerning the research process, whether they are developing programmes, allocating funding, assessing projects, executing projects, generating results, assessing results or transferring technology".

A national CRIS will support Greek HE and research institutions and Greek researchers uniformly. It is expected to provide data about research activity in Greece at the national and/or at the institutional level; to enable discovery of experts in a variety of disciplines and research fields; to highlight research results and data along with the research framework they were produced in; to enable dissemination and assessment of Greek research publications in a uniform way.

Greek Academic Libraries support the open access movement for over a decade now. They have developed digital libraries for out-of-copyright digitized materials and grey literature repositories. On the occasion of the Digital Convergence operational programme funding, the vast majority of Greek HE libraries have selected to use the granted funding for scholarly communication services. Institutional repositories are developed or enhanced in order to make publicly available faculty's papers, students' master theses and doctoral dissertations and research team's raw research data. Following the trends in academic librarianship electronic publishing services are also developed, such as support for publishing open textbooks, electronic journals and for hosting and disseminating scientific events' proceedings.

Greek academic libraries also actively participate in supporting the development of Massive Open Online Courses (MOOCs) by informing faculty and their teaching assistants about National and EU copyright law, copyright clearance, open educational resources and repositories, open licensing and Creative Commons licenses [5].

3.2. Scientific information policies

Our study of the status quo in Greek HE regarding IL and SI policies has demonstrated that related policy formulation is still in its very early stages. Yet, we believe that there are certain IL initiatives

and scientific information services that could function as important infrastructures for the development of scientific information policies. There are scientific information services that are accompanied by a related policy; to give an example the Aristotle University of Thessaloniki Library has developed policies regarding its institutional repository, its electronic journals management service and its scientific events management service. Moreover a few HE libraries are in the process of developing and/or offering SI services, inform their users about and constantly face issues regarding open access, copyright, scientific information (papers and data) management, scientific information dissemination, digital preservation, etc. We think that there is some experience and knowhow in scientific information policies that need to be formally articulated. Of course international experience from other libraries and EU projects should also be taken into account in IL and SI policy formulation processes.

4. Conclusions

Our study regarding the Greek status quo as far as Information Literacy and Scientific Information initiatives and policies are concerned has revealed that there is a lack of progress. Promising initiatives are in danger due to budget constraints and lack of coordination. A lot of actions regarding both IL and SI management are taking place parallel to each other and are not officially connected. For instance the project financing the development of MOOCs has as deliverable the formation of a MOOC policy at an institutional level. This is really an Open Access Policy, however in most cases policy formulation is taking place by HE Institutions' Network Operating Centres (i.e. the IT staff) together with some faculty members without the cooperation or knowledge of the library staff (and the relative faculty committee) who are responsible for IL activities, open access repositories or supporting dissemination of scientific information. Finally, top level University administration (rectors and vice-rectors) usually they are not so keen in supporting the formation of policies regarding such issues as IL or SI, because they do not consider it a priority since relative initiatives somehow work and are producing some tangible results, while HE libraries somehow fill in the gap and resolve arising problems. Therefore, drafting and implementing policy documents is rather postponed for the hopefully nearby future.

Despite some disappointing facts, we believe that Greek academia and libraries already have basic infrastructure (tools and services) at hand along with some valuable experience and knowhow in dealing with policies. All these need to be articulated into a formal policy document. A positive development and an opportunity at the same time is the development process of Greek HE institutions' organization statutes and internal regulation documents. These documents are expected to be under consultation process during 2014. Setting the agenda for IL–SI policy formulation in Greek HE during this process might prove a successful strategy towards the goal of initiating and IL–SI policy formulation in Greek HE institutions.

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