Approaching Information as an Integrated Field: Educating Information Professionals.

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Abstract: *This is a brief presentation of the framework and philosophy followed by the Department of Library Science and Information Systems in the development of its new curriculum. The belief that information organizations, such as libraries, archives and museums have common goals and manage the same resource; i.e. information, leads to the proposition presented here, that they should be regarded as an integrated unit. Furthermore, the development of new technologies offers a common platform via which all information organizations can acquire, organize and disseminate information in the form of electronic data and metadata.*

Keywords: *Information science, Education, Library science, Archival science, Museum studies.*

I. INFORMATION: AN INTEGRATED SCIENTIFIC FIELD

The integrated approach towards information is a result of combining the scientific framework with practical applications. Traditional sciences that were derived from professional practice are rapidly being transformed due to the use of new technologies thus shaping innovative professional fields. Library science, archives and museum studies are becoming all the more closely interconnected with informatics, not simply because technology has offered reliable tools to help organize the influx of information, but also because they comprise the media that in fact create information (Giannakopoulos, 2008).

The transition from holdings to access, the shift, that is, from holding tangible items to simply access the information in them, has brought about essential changes in the conceptions that were previously dominant in library science. The shift from owing and releasing information, often uniquely available, to offering access to a broad spectrum of information deriving from anywhere and addressed to all clients has created not only new fields, but also new attitudes (Otric, 2000; Ashcroft, 2008). Library science transformed itself into information science, whilst the technology development was creating informatics. The central core of information science is the resource of information and not the medium via which it is transmitted and diffused. Even though information science today seems to focus almost exclusively on digital information in essence it comprises the core of an integrated but also interdisciplinary scientific field,

as it draws the techniques, the philosophy and the theoretical approach from all forms of information regardless of the medium (Giannakopoulos, 2008).

Comprehensive treatment of information is no doubt a theoretical concept which attempts to take advantage of the common platform that was created by technology for the documentation, transmission and dissemination of information. Humans in an attempt to organize and store information fragmented it by classifying it to different organizations and physical areas. As a result, books went to libraries, manuscripts to archives and artifacts to museums. However, the human mind works in a thematic way, forming sequences that group knowledge by subject. If I need information on the Acropolis I would have to search it in a library, in a museum and in archives. Today, if I need information on the Acropolis I could search it in the Internet and see my electronic library, my digital archives and my digital museum, not to mention that this could be supported by a GIS system that will offer me a virtual tour on location.

Technology today, by offering an integrated electronic platform has once again brought about the unification of the lost integrity (wholeness), and serves the human need for "thematic information"; regardless from the point of access, medium of documentation, or distribution. This, of course, does not mean that the professional character of library science, archives and related information sciences has been abandoned. On the contrary, the notion of information management offers a solid scientific basis for the development of an integrated domain of information.

In Greece, the development of an integrated National Information System, while feasible, is still under discussion, while collaboration between interested parties (libraries, archives, museums) is conferred extensively but has not actually been implemented as yet. However, it should be pointed out that the issue has been brought about and some attempts have been made by individual libraries, archival organizations (Giannakopoulos and Bagias, 2004) and museums. More importantly, collaboration among professionals and academics of all information related fields, with the sound participation of computer scientists is actually, well established (Dendrinos, 2008). Libraries, historical archives and museums are regarded as related organizations as they play a key role in the management of cultural resources. Apart from this fundamental trait, the basis of their common mission in information management is what is actually creating their common

ground and their common future (Kyriaki-Manessi, 2003).

In order to change the mentality and create the links between information organizations, the transformation of education had to be the first step.

We strongly believe that professionalism is formed in universities and professional and academic ethics are the core of education. We targeted this part of our curriculum, along with the corpus of knowledge, in order to develop a sense of common goals, practices and principles applicable to all information organizations regardless of the medium that carries the information itself. In this respect, we also emphasized on the one hand the social aspect of the science and on the other hand the importance service oriented character of the field.

II. TOWARDS A DEPARTMENT OF INFORMATION SCIENCE

It is quite clear, that Education within any system which is evolving is absolutely crucial. The Department of Library Science and Information Systems, as part of a Technological Institute, had emphasized, even from its very early steps, the importance of applied knowledge. This proved to be of great importance for schools that are characterized as Professional. Its curriculum today, offers the necessary theoretical framework, required by the developments in the field of information science while at the same time, it maintains a high proportion of laboratory applications of knowledge with the based on information technology (Kyriaki-Manessi, 2008).

The Department is actually part of the Faculty of Management and Economics. This has pointed us to look at a broad spectrum of information organizations as potential employers of our graduates. Organizations, not necessarily of cultural character were targeted, such as corporate libraries and archives, bank archives, private collections, private information brokers, etc. This in fact had contributed to the shaping of the curriculum by enriching it with relevant courses. In fact, the needs of the job market had influenced the curriculum.

The Department of Library Science and Information Systems of TEI-A, is the oldest department of Information Management in the country. Its program and its profile are designed in such a way, that it is regarded as an educational unit, which offers a comprehensive Degree in the domain of information (Moniarou-Papakonstantinou *et al*, 2008).

This new curriculum has been in effect over the past three academic years. It aims at the formation of a contemporary profile, abiding to international standards and educational programs, while keeping up to date, with the latest scientific developments. The main objective of the program is to educate new graduates to give them the tools to manage information content, independent of the medium. This enables them to work in all kinds of information service: library, archives, museum, private information organizations, information brokerage, etc.

It is worth noting that the above viewpoints and approaches had to be integrated within a rather "classic" Department of Librarianship. In Greece, as is often the case in other countries, there is a tendency to place any development happening within the field of information under the umbrella of Librarianship. This has associated the Department in the minds of society almost exclusively to books and libraries and had created a rather blurry idea for the field. This is one of the reasons that the Department has now requested to be renamed as "Department of Information Science". No doubt, the word "Library" comprises a powerful brand name, and the use of this term does add legibility and prestige. Nonetheless, the concept of information sets forth a broad but disciplinary specific scientific field, which is necessary to an academic unit located in the domain of applied sciences. It is evident however, that the developments in the information field lead us to rethink and draw from the past while at the same time, ponder into the future. The scientific approach that has brought about this expansion is because information is regarded as an integrated field, regardless of the choice of terminology adopted to characterize its origin.

For example, what we now refer to as 'digital libraries' is nothing more than the technological application that allows for the management of library, archival and museum content in a digital form; a common language for better understanding the nature of information and knowledge access (Cronin, 1998). Another example, and certainly not a recent one from the professional field, is the "Presidential Libraries" in the USA. These libraries are monitored by the national archival service of the country (NARA) and owe, to a large extent, their popularity to the museum spaces which they also contain.

Based on all of the above, the Department has modified its curriculum[1] and has created two revised subject groups, thus placing the courses within the broader theoretical context of the following two domains:

a. Information Science Subject Group
b. General Education and Information Technologies Subject Group

The first subject group includes the courses of information science. A strong library science core is maintained via six courses in library science while, four courses in archives (one of which being Records Management) are introduced, as well as two in museum studies. The largest number of courses offered (11), appear under the umbrella of Information Science, serving all three modules (libraries, archives and museums) thus making up the core curriculum. In these courses, theoretical approaches, techniques, technological applications, standards and administrative models are studied. Emphasis is given to the fact that all organizations in question abide to the same principles, while at the same time a novel 'informatics' dimension

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[1] http://www.teiath.gr/sdo/lis/articles.php?mid=5260&lang=en

to subjects is introduced.

General education subjects that appear under the second subject group are primarily subjects from the area of "Humanities and Social Sciences". They are connected to a large degree with information or its constituent parts, giving thus emphasis to the interdisciplinary character of the program. For example, the radically revised subject of "Conservation and Preservation" deals with both the archival material of libraries and archives. It thus examines the preservation of information stored in historical and contemporary audiovisual substrates (analog and digital) as well as their digitalization, while all of this is within the sphere of Conservation Management. The General education courses offered is made off six prerequisites and 4 electives out of the total choice of eight.

Technological courses are also included in the second subject group. They provide the necessary infrastructure for the application of information technologies. There are five information technology courses which tie into corresponding information science courses (Dendrinos, 2008).

Finally, the curriculum is embellished by courses on terminology in English and an option of French or German languages. The curriculum is made up of forty four courses, a Thesis and a six month work experience program. For the completion of the degree 40 courses are required, along with the Thesis and the work experience. All of this is expected to be completed in 8 semesters (or 4 academic years) and is the equivalent of a 240 (ECTS) credits BA. The following table presents the breakdown of the courses:

Subject Group	Number of courses
General Education	10 (out of 14)
Information Technologies	5
English / French / German (Terminology)	2 (out of 3)
Information Science	11
Library Science	6
Archives	4
Museum Studies	2

Table 1. Subject groups and number of courses.
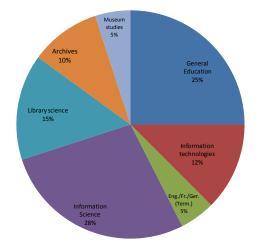

Figure 1. Percentages of courses in the subject groups.

The latter are being divided into theoretical (20), laboratory (2), and combined, which have both a theoretical and laboratory component (18).
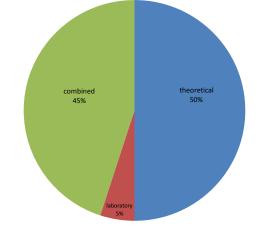

Figure 2. Percentages of theoretical, laboratory, and combined courses.

III. CONCLUSIONS

This curriculum reflects an effort to enhance the belief that, information science is an integrated interdisciplinary field and in a sense is the evolution of the traditional fields of library science, archives and partly museum studies.

In cases where this was not applicable we retained the particularities connected to traditional information fields, emphasizing their common elements and primarily treating them all under the light of a unified and integrated set of principles.

Technology provides the vehicle, through which information science is enhanced and at the same time it empowers the human and social character of information. It is also evident, that the curriculum of our department although comprises a dynamic model that is tested in practice, it is bound to undergo further changes and adjustments in order to achieve the objective of a continuously evolving integrated information field in education.

INTEGRATED INFORMATION

REFERENCES

Ashcroft, L., "Developing competences, critical analysis and personal transferable skills in future information professionals", *Library Review*, **53**, 82-88 (2008).

Cronin B., "Information Professionals in the Digital Age" *Intl. Inform. and Libr. Rev*, **30** (1), 37-50 (1998).

Dendrinos M.N., "Computer science professionals and Greek Library Science" *Education for Information*, **26**, 101-111 (2008).

Giannakopoulos G. and A. Bagias, "Aspects and perspectives of the Greek Archival System: Reflections and Suggestions for the formation of a National Archival Policy", *Archeiakos Desmos [Archival Bond]*, 11-65 (2004). [in Greek]

Giannakopoulos G., "In Search for Integrated Information", *Education for Information*, **26**, 113-119 (2008).

Kyriaki-Manesi D., "Divergence and convergence within Greek library Education: An applied vs a theoretical approach", *Education for Information*, **26**, 77-84, (2008)

Kyriaki-Manessi D., "Library Education in Greece: New challenges, New Dimentions: European Convergence and European Diversity", *Education for Information*, **21** 21-29 (2003).

Moniarou-Papakonstantinou V., S. Chatzimari and S. Tsafou, "Revampling the LIS curriculum in the Department of Library Science and Information Systems at the TEI of Athens", *Education for Information*, **26** (2), 121-132 (2008).

Otric J.T., "The virtual library: changing roles and ethical challenges for librarians" *Intl. Inform. and Libr. Rev*, 313-324 (2000).