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Foundations and methods for Knowledge Organization in European iSchools courses

Abstract
The teaching and learning of information and knowledge organization is essential when training an information professional. In order to formulate a common teaching strategy directed to information studies in the European area, this paper presents the preliminary results of an ongoing exploratory study related to how the foundations and methods of knowledge organization are taught in European iSchools. Despite the limited information in English regarding undergraduate studies, it is possible to explore a common framework of training in knowledge organization in both bachelor’s and master’s degrees.

Introduction
The teaching and learning of information and knowledge organization is essential when training an information professional. However, in order to reach consensus, a clarification of these concepts is necessary. Among academic courses developed in the field of information science, the options regarding the designations of curricular units/modules related to these subjects are not the same in most schools, and it is therefore necessary to explain our understanding of their meaning. The use of the two terms, information and knowledge, is due to the fact that they are often applied randomly, with no obvious distinction between their underlying meanings. On the other hand, curricular plans do show a differentiation, but that does not mean that these two branches of study should not both be considered as important constituents of the learning process in information science. The precise distinction between the terms needs to be further elaborated, as acknowledged by Pando and Almeida (2015), who say that terminological analysis still reveals no clear pattern.

It is thus clear that, underlying this study, there are both theoretical and practical teaching methods regarding ways of processing information with a view to its retrieval. This implies, therefore, a process of descriptive cataloging and subject indexing; that is, instruction in how to attribute descriptive metadata and authority control access points.

Research related to the teaching of information and knowledge organization are scarce and, in general, are related to the most targeted courses/modules for the technical treatment of bibliographic information. Nevertheless, such studies play a valuable role in determining the importance of teaching the aforementioned subjects in the scope of information science (Joudrey and McGinnis 2014; Hudon 2010; Pattuelli 2010; Joudrey 2008; Davis 2008; Bowman 2006; Ruiz-Perez and López-Cózar 2006; Taylor 2004; Taylor and Joudrey 2002).
The decision to study iSchools courses was taken due to the increasing growth of this network of university schools in the field of information, which is currently expanding into Asia, Europe and North America. Despite the differences existing between iSchools structures, and the courses and type of training provided, they share a common standpoint, which is an interest in the relations between information, people and technologies.

**Objectives and methodology**

In order to formulate a common teaching strategy, directed to information science studies in the European area, this paper presents the preliminary results of an ongoing exploratory study related to how the foundations and methods for knowledge organization are taught in European iSchools.

The study included undergraduate (bachelor) and graduate (master) courses for the following indicators: course designation, module designations, contents, fundamental methods and approaches, recommended bibliography, teaching methods, student assessment components and the statute of the module: compulsory or elective.

The data were collected and/or confirmed in September 2017 and again in January 2018 in order to obtain an updated picture of training provision. It was found that several courses had undergone some changes in the structure of their curriculum, as well as in the provision of curricular units/modules. This was due, in part, to the restructuring of schools where teaching is given, and also to mergers with other courses, with a view to broadening the scientific basis of the courses.

The websites of the 26 schools mentioned in the European directory of iSchools were consulted (available at http://ischools.org/stories/regions/european-ischools/european-directory/). It was verified that most of the undergraduate courses are taught in the country's official language and the contents of curricula and modules are not available in English. On the other hand, undergraduate study cycles are undergoing reorganization of their study plans in order to provide wider education opportunities and to allow several options in connection with master’s degrees. Nevertheless, data available in English or Spanish were collected. Information about master’s degrees is mostly available in English and international student exchange is expected in several courses.

**Results and discussion**

Data were collected from the websites of 9 iSchools, specifically regarding 3 undergraduate courses and 9 master’s courses. Comparing the available information, it can be seen that a similar approach is used in subjects dealing with knowledge organization, although corresponding modules are differently distributed and designated, with some courses, for example, offering several modules dedicated to knowledge organization. The curricular structure of the courses which offer these
subjects is also similar; in other words, providing education in the field of information science as distinct from computer science or management, even though courses have very diverse designations. They may range from Information Management, through Information Science, to Management of Information and Digital Contents.

Modules dedicated to knowledge organization in the undergraduate courses are named as follows: Description of Information Sources, Descriptive Metadata, Organization of Information, Indexing and Classification, Knowledge Organization and Representation, and also, Authority Control and Subject Indexing.

When comparing credits given to these modules, it is possible to conclude that the modules are considered important subjects, since the number of European Credit Transfer System (ECTS) goes from 5 to 9 credits. Almost all modules are compulsory and the electives (Description of Information Sources, and Indexing and Classification) are preceded by a compulsory module, which prepares students with the essential contents regarding cataloging and subject indexing. These modules have theoretical and practical classes, and their contents can be systematized according to the following items: basic concepts about organization of information, metadata schemes, international standards, controlled vocabularies, classification systems, automation of authority control, and collaborative representation of knowledge. Some basic bibliography is common, but each school mentions several titles in the country's official language. Assessment methods in all modules include assignments and final exams.

The educational provision of master’s courses in European iSchools is very extensive and the designations reflect the schools’ options in relation to the scientific specificity to be attended. Regarding the approaches to knowledge organization, the courses which include this subject are variously named as Digital Curation, Digital Library Management, Information Management, Information Science, Information Science and Cultural Communication, Librarianship, Libraries, Archives and Digital Continuity, Library and Information Services Management, and Library and Information Studies. Some schools offer the same modules related to knowledge organization in different courses, highlighting the importance of this subject. In most courses, information is less detailed than in undergraduate courses, explaining in general the topics included in the contents. ECTS assigned to the modules vary widely from one course to another and may range from between 6 and 15 credits, and the statute of the modules is almost always compulsory. As far as the designation of modules is concerned, there is no substantial difference between them, particularly when compared with undergraduate courses: Archives and Records Management in the Digital Environment, Cataloguing and Classification, Content Analysis and Indexing, Information Organization, Information Organization and Access, Knowledge Organization, Organization and Analysis of Information, and, lastly, Organization of Information, Cataloguing and Metadata. Module content and learning outcomes are
very similar to the items mentioned in the undergraduate courses; that is, preparation of students to organize information and knowledge in various domains, including business, web, archives, libraries, and museums. This fact can probably be explained by the circumstance that most schools offer only master’s courses. Nevertheless, teaching methods may contribute to a distinct approach to the subject. In fact, graduate courses include seminars, laboratory work, discussions, and workshops. The most common method of assessment is by assignments, followed by final exams. The selected bibliography is mentioned in a limited number of modules, but it is almost in English and some titles are common to several modules. In Appendix I there is a list of all references included in the bibliography section of module information (in English). This can contribute to the definition of a common list of compulsory bibliography to be applied in all courses, although it was identified that some references need to be revised to include updated editions.

Conclusions
Despite the limited amount of information in English regarding undergraduate studies, it is possible to explore a common framework of training in knowledge organization, both in bachelor’s and in master’s degrees. This common framework may enable the establishment of synergies between the targeted schools with a view to presenting a common or complementary training provision through online seminars or workshops, which could stimulate contact between students. The sharing of resources and teaching components, such as the provision of educational materials, can be enhanced, allowing closer contact between pedagogical practices and the eventual creation of collaborative research projects.

The limitation of this study is that data collection and interpretation is based on information available in English or Spanish from the course websites. Some important information regarding the courses offered at other schools would be relevant for the establishment of a common strategy for teaching knowledge organization. These issues will be explored in further stages of this research.

References


Appendix I

References mentioned in the modules