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# Challenges and Opportunities for Knowledge Organization in the Digital Age

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Organized by  
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ISKO Spain and Portugal Chapter  
University of Porto – Faculty of Arts and Humanities  
Research Centre in Communication, Information  
and Digital Culture (CIC.digital) – Porto

Edited by  
Fernanda Ribeiro  
Maria Elisa Cerveira

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## Is the massive incorporation of e-books into university libraries devaluing the technical processes related to the assigning of subject headings and classification codes?

### Abstract

In recent years, academic libraries have incorporated huge numbers of e-books into their catalogues. The increasing use of this new technology is having a significant impact on the technical processes involved in incorporating e-books into catalogues, as well as causing changes to library-user relationships and to the maintenance and management of collections. With this study, we intend to find out how e-books are affecting academic libraries in Portugal, Spain, the United Kingdom, the United States and Brazil, particularly with regard to the assignment of subject headings and classification codes. In order to gather this information, a web survey was prepared to obtain the opinions of the directors or technical process managers from nearly 500 academic libraries.

### 1. Introduction

University libraries are constantly incorporating numerous collections of e-books. A report by the Society of College, National and University Libraries (SCONUL 2015, p. 2) states that “e-books accounted for 24% of total book stock, on average, in 2013-14, compared to 11% in 2009-10”. In Spain, sales of e-books in 2016 experienced an increase of 41% compared to 2015 while in Latin America they rose by 110% (III Edition of the Spanish Markets Digital Evolution Report 2017, p. 3).

The following is an illustrative example of the incorporation of e-books in Spanish university libraries:

Table 1: Incorporation of e-books in university libraries

		2013	2014	2015	2016
Spain	Print books	29,858,894	28,718,064 (-3,82%)	30,029,980 (+4,36%)	31,008,371 (+3,15%)
	E-books	8,819,673	9,452,026 (+6,69%)	10,767,685 (+12,21%)	11,955,167 (+9,93%)

The emergence and expansion of e-books in libraries in the mid-2000s has led to talk of them being a disruptive technology or disruptive innovation (Frederick 2016, Buschow 2014, Wilson 2014 and Herrington 2013). The application of this new technology is causing major changes. Not only does the e-book raise questions about the survival of the printed book, but perhaps also librarians are faced with a possible paradigm shift in terms of their traditional way of working since different ways have

emerged to incorporate e-books into catalogues, involving alterations in technical processes, new forms of user-product relationships and modifications in the maintenance and management of collections.

Since the emergence and expansion of digital documents and their increased use for information browsing and searching in contrast to printed material, the future viability of indexing or controlled vocabularies has been questioned (see the special issue of *Knowledge Organization*, 2016, 43 (3) and in particular Dextre (2016)). Moreover, something similar has occurred with classification if we pay attention to what Hjørland (2012) indicates, namely that it is necessary to rethink classification to ensure its survival. Therefore, do e-books pose a new threat to the traditional librarians' task of assigning subject headings and classification codes to e-books? The incorporation of e-books into university libraries has meant the emergence of a significant production of literature related to printed book versus e-book, dealing with the issues of incorporating e-books into collections and how best to do so, in relation to their technical management, users' use and acceptance, as well as the problems, changes, challenges or even frustrations of librarians. We can thus offer an (albeit incomplete) outline of some examples of this literature.

The works of Frederick (2016), Pandey, S.K. (2016), Survey of Ebook Usage in U.S. Academic Libraries (2016) or Wells & Sallenbach (2015) address general aspects about e-books in academic libraries. Their usage has been analyzed in Yuan, W., Van Ballegoie, M. and Robertson, J. L. (2017), Horner (2017), Hsieh and Chen (2016) or Bischof and Plum (2016). Usability has also been studied in Wilson, D'Ambra and Drummond (2014), Miller (2014) or Mizrachi and Bates (2013); user experience with e-books in Zhang, Niu and Promann (2017). The models of acquisition, subscription or access in Georgas (2015) or Simon, (2014). Similarly, the cataloging workflow and e-book record management has been dealt with in Costello (2017), Chen, Kim and Montgomery (2016), Mune and Agee (2016) or Ravid and Dana (2015).

We have not found publications focused on further analyzing the issue of assigning subject headings and classification codes in e-books. Hence, the main objective of this study is to know what is happening in academic libraries in Portugal, Spain, the United Kingdom, the United States and Brazil with the technical processes undertaken with respect to e-books regarding the assignment of subject headings and classification codes.

## **2. Materials and methods**

To achieve the objectives set out in this research we will gather information and opinion from 500 academic libraries (Portugal, 20; Spain, 64; England, 160; United States, 120 and Brazil, 126) through their directors or heads of technical processes. The selected academic libraries from Spain, Brazil, England and Portugal are

practically all those that exist, while those from the United States can be considered a representative sample. The corresponding contact emails were readily available.

We have built a survey consisting of open-ended questions, closed questions and matrix questions, elaborated using the "Survey" platform of the University of Murcia to obtain information on possible changes in the processes of assigning subject headings and classification codes, the usefulness of metadata provided by publishers, the suitability of introducing automatic processes in assigning subject headings and classification, or as to whether we are facing a possible paradigm shift in relation to the technical processes involved with e-books, among other aspects.

The survey was conducted in English, Spanish and Portuguese, and an invitation was sent by email to the directors or technical process managers of almost 500 university libraries in Portugal, Spain, England, the United States and Brazil to be completed through a web browser. Eighty completed questionnaires were obtained after three weeks, which represented a 16% response.

### **3. Results**

#### **3.1. Assignment of subject headings and classification codes to e-books**

Subject headings are assigned to purchased or subscribed e-books by 41% of respondents, 36% assign them to some e-books, and 23% do not assign subject headings. On the other hand, it seems that the process of assigning subject headings remains the same for e-books as for printed books, with 88% of respondents saying that there are no differences.

Classification codes are not assigned by 53% of respondents, 25% do assign them, and 22% assign them only to some e-books. On the other hand, 81% of respondents indicated that the processes for assigning classification codes are the same as for printed books, while 19% indicated that it is not the same process.

The assignment of subject headings is normally reserved for individual e-books, purchased and with permanent links, and for the recommended bibliographies of lecturers. E-books can provide sufficient and quality subject headings or require assignment of subject headings for different reasons: absence, need for translation, use of automatic assignment tools, or because more specific subjects are required, or a thesaurus is used. At the same time, classification code assignment is also reserved for individual e-books and purchased property, just like subject headings. In general, they are not used since the effort of assigning classification codes does not compensate for their limited use, and they are not useful for the discovery and retrieval of information by the user.

### 3.2. Characteristics of metadata related to indexing and classification provided by publishers/suppliers

Regarding metadata relative to the subject headings of e-books provided by publishers/suppliers, 39% of respondents considered them adequate; 37% were unclear and 24% did not agree that they were adequate. Concerning the issue of whether subject headings were sufficient and not worth modifying, 43% of respondents agreed; 31% said they did not agree; and 27% disagreed. The same question was asked in relation to classification codes: 40% think they are adequate; 29% do not consider them clear; and 31% disagree. Furthermore, 46% consider them to be sufficient and not worth modifying; 26% do not consider them clear; and 28% think that they are insufficient and do need modifications.

Figure 1: Metadata related to subject headings of e-books is adequate / sufficient

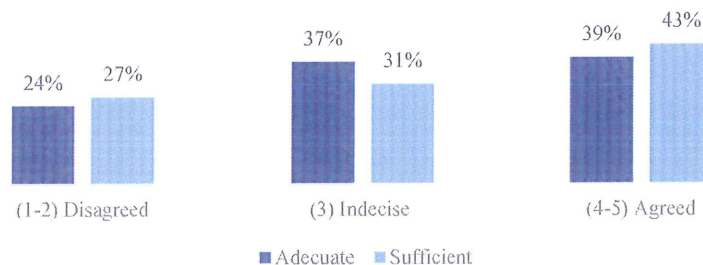
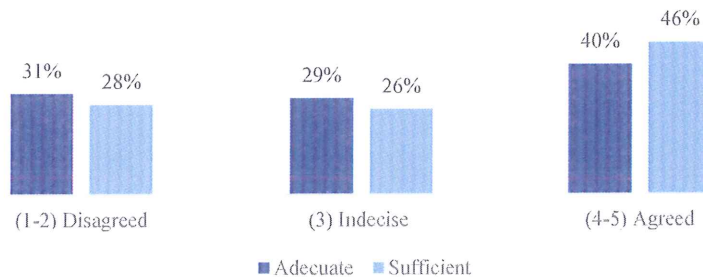


Figure 2: Metadata related to classification codes of e-books is adequate / sufficient



### 3.3. Processes

50.65% of librarians consider that the high number of e-books purchased / subscribed in the library makes an adequate assignment of subject headings unfeasible, while 14.29% are undecided and 35.06 do not agree with this affirmation.



In relation to classification codes, 56% of librarians consider that the high number of e-books purchased/subscribed in the library makes an adequate assignment of classification codes unfeasible, while 13.33% are uncertain and 30.67% disagree with this affirmation.

On the other hand, we also wanted to know if the same number of subject headings are assigned to e-books as to printed books: 70% of respondents said that they assign the same number of subject headings to e-books as for printed books, 21.25% did not assign the same number of subject headings and 8.75% said they did not know. We also wished to find out if there have been any changes in the application of technical processes to e-books in relation to indexing and classification, and if those changes have been introduced in the library's procedures manual: 54.67% of respondents answered yes, 42.67% said no, and 2.67% did not know.

#### **3.4. Authorship of subject headings and classification**

55.13% consider that headings should be provided by publishers/suppliers, 20.51% do not have a clear idea, while 24.36% consider that to be a task for librarians.

54.05% say that classification codes should be provided by publishers/providers of e-books, 21.62% are unclear, while 24.33% think that it is the job of librarians.

#### **3.5. Influence of metadata quality on the selection of publishers/suppliers**

We asked if in the selection of e-book packages for purchase or subscription, the quality of the metadata related to the subject headings and the classification codes provided by the publishers/suppliers is taken into account. 50.65% consider that the quality of the metadata provided is not considered in the selection, while 40.26% believe that it is.

#### **3.6. Automation of the assignment of subject headings and classification codes**

27.63% indicate that it is not appropriate to implement the automatic assignment of subject headings. It is not clear for 22.37% whether it is helpful to introduce automation while 50% clearly prefer to introduce automatic assignment, although there are doubts about the quality and adequacy of the automatic assignment of subject headings, since it could be incorrect or inadequate. Some respondents consider OCLC's FAST project to be interesting, although currently it only appears to provide subjects in English.

33.78% indicate that it is not appropriate to introduce the automatic assignment of classification codes, 22.97% do not know if it is appropriate to do so, and 43.24% clearly prefer to proceed with automatic assignment.

#### **3.7. Paradigm shift**

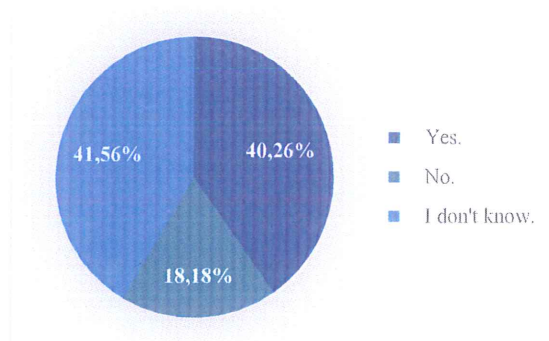
There seems to be no consensus on this issue. Respondents consider the volume



of e-books to be increasing and that a reorganization of the library system is required. It would be important for publishers and librarians to work together to develop a model that addresses all user service needs. On the other hand, if librarians work in publishing houses, indexing and classification would be more effective. The main change that should occur is for large publishers to think of the librarian as an essential professional.

Furthermore, we may consider that the access to an increasing amount of information (including e-book databases) through the traditional forms offered by library catalogues and discovery services, based only on metadata rather than full text, no longer fully serve the user, who wants to obtain the information, and not the book. The user ignores the format of the resource: it is thus the resource itself that someone may be looking for and must be discoverable.

Figure 3: Paradigm shift



#### 4. Conclusions

In accordance with the results achieved, the following conclusions can be established:

- 1) Most librarians assign subject headings to e-books following the same processes as for printed books; fewer than half of librarians assign classification codes, also following the same process as for printed books.
- 2) In relation to the subject headings and classification codes provided by the publishers/suppliers, there does not seem to be a consensus among the respondents on whether they are adequate and sufficient.
- 3) Most librarians have pointed out that due to the high number of e-books purchased (or subscribed to) by libraries, a proper assignment of subject headings and classification codes becomes unfeasible.

- 4) Most respondents consider that the subject headings and classification codes of e-books should be provided by publishers/suppliers.
- 5) It appears that the quality of metadata relating to subject headings and classification codes is not taken into consideration when buying or subscribing to e-books from publishers (suppliers).
- 6) Half of the respondents consider that the current environment is suited to the introduction of processes for automatic procurement of subject headings and classification codes.
- 7) It is not possible to establish if we are facing a paradigm shift.

Finally, in terms of how users encounter subject headings and classification codes provided by publishers or suppliers and regarding the records in which the indexing and classification is performed by librarians, it seems that there has been a devaluation of the processes relating to subject headings and classification codes in university libraries.

### References

- III Edition of the Spanish Digital Evolution Markets Report (2017). Distribution International Publishing Association.
- Buschow, Christopher, Nolle, Isabelle & Schneider, Beate. (2014). German Book Publishers' Barriers to Disruptive Innovations: The Case of E-Book Adoption. *Publishing Research Quarterly*, 30(1): 63-76.
- Chen Mingyu, Kim, Missu & Montgomery, Debbie. (2016). Ebook record management at The University of Texas at Dallas. *Technical Services Quarterly*, 33(3): 251-267.
- Costello, Laura. (2017). Comparison of e-book acquisitions strategies across disciplines Finds Differences in cost and usage. *Evidence Based Library and Information Practice*, 12(1): 109-111.
- Dextre, Clarke Stella G. (2016). Origins and Trajectory of the Long Thesaurus Debate. *Knowledge Organization*, 43(3): 138-144.
- Frederick, Donna E. (2016). *EBook Managing Metadata in Academic Libraries: Taming the Tiger*. Amsterdam: Chandos Publishing.
- Georgas, Helen (2015). The Case of the Disappearing E-Book: Academic Libraries and Subscription Packages. *College & Research Libraries*, 77(11): 883-898.
- Herrington, Verlene J. (2013). The Academic Library: Cowpath or Path to the Future? *Journal of Library Innovation*, 4(2): 54-68.
- Hjørland, Birger. (2012). Is Necessary classification after Google? *Journal of Documentation*, 68(3): 299-317.
- Horner, Jan C. (2017). E-preferred approval books at the University of Manitoba: a comparison of print and ebook usage. *Evidence Based Library and Information Practice*, 12(2): 90-105.