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Copyright literacy and LIS education: analysis of its inclusion in the curricula of master's degree programs



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ABSTRACT

The close relationship between copyright laws and the development of library activities has become more intense and complex in recent years due to the impact of the digital setting. For this reason, librarians must have adequate knowledge about copyright, whether it be to carry out their own functions and tasks, or to help co-workers and users as efficiently as possible. The aim of the present paper is to determine the type of copyright instruction offered, plus its focus and depth, to students of master's programs in library and information studies at today's outstanding universities in this field. The results show that very few LIS programs provide the minimal training required for professionals to be copyright literate. Very few courses are dedicated specifically to copyright issues, as these subjects are usually studied in an excessively generic and superficial manner within broader courses dedicated to information policy, information ethics, or legal issues regarding information. If we also bear in mind that most of these courses are elective, not required, the conclusion is that very few LIS graduates attain the minimal instruction required. The best results are obtained by US and Canadian universities accredited by the American Library Association (ALA), since copyright issues are included in the list of core competences required to achieve accreditation. The solution to this problem may lie in two complementary approaches. One would be to follow the ALA model and the IFLA recommendation and include copyright contents in the LIS curricula worldwide, and the other would be to provide institutional support for those professionals interested in obtaining the required training.

1. Introduction

The importance and impact of copyright in the development of academic activities, and therefore in the proper functioning of university libraries, has grown steadily since the end of the 20th century. This growth spurt is not due to the mere fact that most intellectual works used by faculty and students are copyrighted, which was true in previous decades; rather it reflects the rapid development of the digital setting, which has meant an increase in both the relevance and the complexity of copyright issues. On the one hand, the broadened possibilities of creation, distribution, use and modification of the digital information exert positive effects, yet on the other hand the array of copyright infractions increases. Meanwhile, as a reaction to this background, copyright legislation has been reinforced and complemented with technological (DRM systems) and contractual (licensing agreements) protection causing in many cases an imbalance: in favor of the interests of the rightsholders, in detriment to users. In addition to these general considerations, we should add an element of enormous impact specifically applicable to the academic realm —namely the open access and open science initiatives, meant to make intellectual works and scientific information freely accessible for all citizens, regardless of their capacity to pay for access and use.

The diversity and complexity of relations between copyright legislation and open science initiatives are a main source of uncertainties and conflicts that come up daily among members of the university community. They range anywhere from the possibilities of use of scientific articles already published and whose copyrights were transferred to the Publisher —and the possibility of recovering these rights— to the conflicts between the free availability of theses and dissertations and the justified

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exploitation of their results in other publications, going through the questions of the ownership and management of research data. Resolving such conflicts without infringing the law and without becoming an obstacle for academic and research activities does not only call for sound knowledge of copyright legislation, but also for a good command of how the world of scholarly communication works. Numerous studies show that university students are very far from having such knowledge (Chou et al., 2007; Wu et al., 2010; Datig and Russell, 2015; Muriel-Torrado and Fernández-Molina, 2015; Tella and Oyeyemi, 2017). Their professors, despite having a somewhat higher level of knowledge, likewise do not reach the threshold required to successfully face doubts and problems arising in this field (Smith et al., 2006; Fernández-Molina et al., 2011; Di Valentino, 2015; Kohn and Lange, 2018).

This situation is acknowledged by academic librarians, who first individually and later as an institution, have gradually taken on new functions as educators and advisors for their users, faculty and students, about everything related to copyright and teaching or research activities. Indeed, first in the US and subsequently in other countries, especially Anglo-Saxon ones, we now find the figure of "copyright officer" within academic libraries (Ferullo, 2004; Dames, 2008; Albitz, 2013; Jaguszewski and Williams, 2013; Frederiksen, 2015; Kawooya2015; Patterson, 2016), attaining such a level of development that they have created their own units within the structure of university libraries: copyright offices (Crews, 2014; Schmidt, 2019; Fernández-Molina et al., 2020). Still, in order to perform this new professional role with some assurance of success, librarians must have sufficient knowledge about copyright, not just basic notions. Studies to this regard make manifest that most librarians lack the required level of knowledge, however (Eye, 2013; Charbonneau and Priehs, 2014; Estell and Saunders, 2016; Fernández-Molina et al., 2017; Morrison and Secker, 2017). In this sense, it is worthwhile to underline the recent appearance of the concept of "copyright literacy" as a fundamental element in the training of librarians, well beyond simple familiarity with the basic rules of copyright (Todorova et al., 2014, 2017; Morrison and Secker, 2015; Secker and Morrison, 2018; Secker et al., 2019; Arias-Coello et al., 2020; Orlandi et al., 2021).

This generalized lack of copyright training on the part of librarians causes major problems for libraries to provide these services so demanded by their users (Norris et al., 2019). Finding professionals with the proper profile has become very complicated, and as a result either these functions are neglected or they are undertaken by professionals lacking sufficient training, which can also lead to serious problems (Carson and Greenhill, 2015). For example, there may be individual or institutional copyright infringements that could have been prevented (Jamali, 2017; Algenio, 2018; Chauham and Willet, 2019); a lack of confidence on the part of users with respect to the quality of the services they receive; or even, due to the lack of adequate personnel, the intervention of a legal office outside the library (Harris, 2015), which might imply that the focus is on avoiding legal problems instead of facilitating access to knowledge.

The urgent need for professionals having thorough instruction in copyright was addressed by the IFLA (2018) in their recent Statement on Copyright Education and Copyright Literacy. It recommends guaranteeing adequate coverage of copyright in the curriculum of LIS degrees, as well as collaboration with relevant professional associations, so that the inclusion of copyright literacy be required for accreditation in the curricula of LIS programs. In this context, the aim of the present study is to determine what training in copyright is being offered, and with what focus, so as to discover which level of knowledge students actually receive in the master's programs in library and information studies of the universities worldwide held to be most prestigious in this field.

2. Literature review

Not many studies look into the copyright training provided in LIS schools, and nearly all the studies existing to date are rooted in North America. One pioneer in this arena was K. M. Dames (2006), who explained in a short article that among the 49 universities offering

ALA-accredited LIS programs, only two (Syracuse and Emporia State) had a course specifically dedicated to copyright; and just 24 of the 49 offered a course addressing information policy or legal issues on any level. Shortly thereafter, in a much longer and more detailed article, Gathegi and Burke (2008) examined 59 member schools of the Association for Library and Information Science Education (ALISE) plus four members of the then incipient I-School community to determine to what extent they included contents about the convergence between law and information. Although they found that these topics were habitually included, especially issues of intellectual freedom and ethics, the authors were surprised by the paucity of the courses in copyright/intellectual property. With a focus on the needs of archivists, Dryden (2010) analyzed the study plans of nine graduate LIS programs in Canada, finding that not one offered a course dedicated entirely to copyright, although elements of information policy, information and society or information ethics could be found in certain courses. Also in North America, to explore the state of legal education for graduate LIS programs, Cross and Edwards (2011) carried out the most exhaustive study to (that) date about the matter, examining the curricula and faculty composition at all 57 institutions that offered ALA-accredited graduate degrees. Only nine courses were found to be dedicated specifically to copyright and/or intellectual property, though some "spillover" on the subject was detected in more generic courses.

Under a slightly different spotlight, Schmidt and English (2015) analyzed the curricula of 51 ALA-accredited programs. A total of 11 courses were found to be specifically dedicated to copyright, yet all of them elective, not required; another 42 courses were dedicated to other topics, but their contents made some reference to copyright. Their study finished with a survey directed to professionals of all library realms (academic, public, school/media, and special) in order to compare their daily copyright and intellectual property knowledge needs vs. their actual knowledge and education in this area. The results obtained by the combination of both studies made evident that, even if recent graduates probably had a better grasp of this subject matter, the LIS programs did not provide a sufficiently broad or detailed training so as to successfully face the needs of today's work arena.

In a recent study, Kawooya et al. (2019) analyzed the syllabi of courses dedicated to copyright and intellectual property offered in 13 LIS programs in the US. Unlike previous studies, the sample of courses was fairly small, allowing for a more in-depth analysis of course contents; hence, they aspired to detect curricular changes over time (breaking down graduates into pre- and post-2010). Their results show that few programs offer courses with a sufficiently rigorous and dynamic curriculum. For this reason, they call for a greater level of coordination among programs, to share best practices and agree upon minimal standards for the core curriculum of copyright courses.

3. Methodology

Universities may offer undergraduate and/or graduate programs in library and information studies. In recent years the trend has been to transmit this knowledge exclusively through master's programs —especially in Anglo-Saxon countries, which usually mark the way for other countries in this field. However, there are still certain countries where both Bachelor and Master's degrees are offered, for instance, China, Portugal, Spain and even Canada. To facilitate comparative analysis of the curricula and derive more relevant results, we opted to focus exclusively on master's programs, as is reflected in the title of this article.

When defining the sample to be studied, a main consideration was to include the most prestigious universities in LIS studies, attempting as well to involve a geographically broad sample, because many previous studies on this subject focus only on the US. Just two university rankings include in their classification by subject the Library and Information Science field: Shanghai and QS.

Using Shanghai was problematic in that it includes universities according to their level of research in the field of knowledge "library & information science", which does not necessarily mean that they offer degree studies in LIS. Some top schools on the listing, e.g. Harvard, Columbia, Pennsylvania or Stanford, are indeed prestigious, but they do not have LIS programs. The methodology used by the QS ranking makes it easier to identify universities that actually teach the subject "library and information management". In fact, if one looks at the universities occupying the top spots of the ranking, there would appear to be wide consensus about their quality in this field of knowledge. For this reason, and bearing in mind that the total number of universities in the 2021 ranking was 51, a very manageable number, we chose to adopt this referential source.

LIS is a vast area of knowledge, meaning that the scope of the degrees can vary considerably, some being centered on the traditional realm of library science, while others have a profile closer to computer science or management. As our study focuses on the training needed to work in the library setting, we opted to discard those universities whose degree programs had a focus other than that of the library. This analysis proved to be very simple in the case of the US and Canada, since their ALA accreditation guarantees that the degree programs share the focus required, but for other countries the analysis had to be more detailed. In view of this circumstance, a total of 11 universities were excluded from the sample. Not being accredited, we left out: California-Berkeley, Cornell, and California-San Francisco (USA), and McMaster (Canada). For being oriented toward business, computer science or information systems, we discarded: Monash, RMIT, and Technology Sydney (Australia), Tampere (Finland), Amsterdam and Erasmus University Rotterdam (The Netherlands), and Loughborough University (UK).

In addition to ensuring that the study program had the right focus, for our analysis it was necessary that their web page gave information with some detail about the structure and contents of their study plan, and moreover, that the information was in a language we could understand. Peking University (China) and Sungkyunkwan University (SKKU) (South Korea) were excluded for not providing contents in English. A different case is that of Nanjing University (China) and University Malaya (Malaysia), whose web pages offer the names of subjects in English, but no descriptions of their contents in English. Nanjing University did not offer any subject whose title referred specifically to copyright or intellectual property, though one subject (The Research on the Practice of Editing and Publishing) probably included contents addressing copyright. Notwithstanding, even if this were the case, it would have pertained to the realm of publishing and not of libraries per se. In the case of the Malaysian University, there was likewise one subject (Libraries, Information and Society) with a name that suggested copyright-related contents, but we could not be certain. Given the lack of information on which to base appraisals, we decided to discard both schools. After this stage of pruning, the final result was a sample taking in 36 universities, 17 from the US, 5 from Canada, 4 in the UK, 2 in Spain, and 1 each in China, Germany, Ireland, Japan, New Zealand, Portugal, Singapore, and Sweden.

A number of universities offer more than one degree in this field, with a different focus or orientation, yet our objective was to evaluate one degree per university. Again, the criterion applied was to choose the degree most closely related to the library. For example, for Sheffield University we chose "librarianship" instead of "information management". The final result, the universities and LIS programs selected, including the URL, can be consulted in Table 1.

For each course, we analyzed all the information that was available in the syllabus, including the course description, objectives, topics, etc., to the greatest level of detail as possible. When the same course was offered in different years or by different instructors, we considered the most recent section or syllabus available. In every program, we were looking for contents related to copyright or intellectual property.

Certain methodological limitations deserve mention here. Only information available over the web was used, implying the possibility that in some cases the information was not fully updated or that relevant information was difficult to access and could not be found. Furthermore, the quality and reliability of our analysis of the available information depends to a good extent on how thorough it is. It is not the same to consult a detailed program of the subject matter as opposed to one having only a paragraph or a sentence describing its contents. If we had a detailed program, ascertaining the focus of the subject and the relative weight of copyright issues (essential or marginal?) was a straightforward matter. The briefer the description, the more difficult to derive conclusions with some depth. In this vein, the information disseminated on the websites is not only a sign of the quality of the service offered by the institution, but also a marketing tool for their studies and information for future students and professional. This aspect should be the subject of another study.

4. Results

Analyzing the information available for the 36 universities of our sample, we found that only four had no subject with copyright content: the two Spanish universities (Barcelona and Carlos III of Madrid), Boras (Sweden) and University College London. Interestingly, the latter offered a subject (Information governance) whose description had a section dedicated to "Information law and ethics"; but the detailed description of its contents made no mention of the terms "copyright" or "intellectual property". Either these matters are not dealt with, or they are treated in such a marginal way that it was not worthwhile to include them in the description.

To analyze the bulk of subjects, they were divided into two groups: a) those dedicated specifically to copyright, whether exclusively or mainly; b) those dedicated to more general ethical-legal matters, yet including a more or less substantial part on copyright. For inclusion in the first group, the name of the subject had to expressly include the term "copyright" and/or "intellectual property", although in some cases there were also other terms referring to other related topics. This gave a list of nine subjects, whose names and corresponding schools can be found in Table 2. For inclusion in the second group (Table 3), it sufficed to have express mention of "copyright" and/or "intellectual property" under the content description.

4.1. Courses totally or mainly dedicated to copyright

The number of universities offering specific subjects was very small, and all were US schools except for Wuhan (China). Content analysis showed that just four (Arizona, Illinois, Syracuse, and Toronto) focus exclusively on copyright and were adapted to the context of professional librarians. Their focus was very similar: a general introduction to copyright is followed by a look at its norms and rules, bearing in mind how it may affect the usual professional tasks of librarians, serving as guidelines and orientation for making informed decisions about copyright issues. The concept of fair use is accented, as is the need to achieve balance between the interests of rightholders and those of society on a whole. While in all cases the general principles behind copyright are addressed, they are logically presented in the context of national legislation (i.e. US or Canadian). It is noteworthy that in Arizona these courses reveal a strong emphasis on the need to promote the public domain. Also interesting is the case of Illinois, in that it develops a totally applied approach, with a clear intention to "demystify the concept", thereby acknowledging copyright as a complicated legal concept. One university offers a subject dedicated exclusively to copyright, Texas-Austin, albeit with a somewhat different focus than the others: its contents (as the name suggests) is less oriented to the professional librarian, offering a more global view, with special attention to political-cultural implications.

Though different in meaning, the more generic term intellectual property is often used as a synonym of copyright (which denotes a part of the whole). In the courses taught at Michigan, Pittsburgh, and Washington, however, alongside copyright issues, parts of intellectual property such as patents or trademarks are dealt with. That is, copyright takes up a small section of the contents, which also embrace matters of intellectual freedom, censorship, privacy, professional liability, or ethics.

Table 1. LIS programs analyzed.

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University	Program name and URL
City University of London	Master in Libray Science https://www.city.ac.uk/prospective-students/courses/postgraduate/library-science
Drexel University	Master in Library and Information Science https://drexel.edu/cci/academics/graduate-programs/library-information-science/library-science-graduate-program-major/
Humboldt University Berlin	Master in Library and Information Science https://www.ibi.hu-berlin.de/en/teaching/study-programs/master
Indiana University Bloomington	Master of Libray Science https://ils.indiana.edu/programs/master-library-science.html
McGill University	 Master of Information Studies https://www.mcgill.ca/sis/programs/mist
Nanyang Technological University, Singapore	 Master in Information Studies https://www.ntu.edu.sg/education/graduate-programme/master-of-science-in-information-studies
Rutgers University	Master in Information
Syracuse University	https://comminfo.rutgers.edu/graduate-and-professional-programs/master-information Master of Library and Information Science
University at Buffalo SUNY	https://ischool.syr.edu/academics/library-and-information-science-masters-degree Master in Information and Library Science
University Carlos III, Madrid	http://ed.buffalo.edu/information/academics/masters/library-science.html Master in Libraries, Archives and Digital Continuity
University College Boras	https://www.uc3m.es/master/libraries-archives Master in Library and Information Science, Digital Library and Information Services
University Conege Bolas	 Muster in Library and Information Science, Digital Library and Information Services https://www.hb.se/en/international-student/program/programmes/masters-programme-library-and-information-science-di gital-library-and-information-services
University College Dublin	 Master of Library and Information Studies https://hub.ucd.ie/usis/IW_HU_MENU.P_PUBLISH?P_tag=PROG&MAJR=W006
University College London	 Master in Library and Information Studies https://www.ucl.ac.uk/information-studies/study/postgraduate-study/ma-library-and-information-studies
University of Arizona	 Master of Library and Information Science https://ischool.arizona.edu/ma-library-information-science
University of Barcelona	 Master in Management and Direction of Library and Information Services https://www.ub.edu/portal/web/information-audiovisual-media/university-master-s-degrees/-/ensenyament/detallEnsen vament/6080119
University of British Columbia	 Master of Library and Information Studies https://ischool.ubc.ca/programs/degrees/mlis/
University of California, Los Angeles	Master of Library and Information Science https://seis.ucla.edu/departments-and-degrees/department-of-information-studies/master-of-library-and-information-science
University of Illinois, Urbana-Champaign	Master of Library and Information Science https://ischool.illinois.edu/degrees-programs/ms-library-and-information-science
University of Maryland	Master of Library and Information Science https://ischool.umd.edu/academics/master-of-library-and-information-science
University of Michigan	Master of Science in Information https://www.si.umich.edu/programs/master-science-information
University of Montreal	 Master of Information Sciences https://ebsi.umontreal.ca/programmes-cours/cycles-superieurs/maitrise-en-sciences-information/
University of North Carolina, Chapel Hill	 Master in Library Science https://sils.unc.edu/programs/graduate/msls
University of Pittsburg	Master of Library and Information Science https://www.sci.pitt.edu/academics/masters-degrees/library-and-information-science-mlis
University of Porto	 Master in Information Science https://sigarra.up.pt/feup/pt/cur_geral.cur_view?pv_curso_id=737
University of Sheffield	 Master in Librarianship https://www.sheffield.ac.uk/postgraduate/taught/courses/2021/librarianship-ma-pg-certificate-pg-diploma
University of Southern California	 Master in Library and Information Science https://librarysciencedegree.usc.edu/curriculum/
University of Strathclyde	 Master in Information and Library Studies https://www.strath.ac.uk/courses/postgraduatetaught/informationlibrarystudies
University of Texas, Austin	Master in Information Studies https://www.ischool.utexas.edu/programs/master-science-information-studies
University of Toronto	Master of Information
University of Tsukuba	https://ischool.utoronto.ca/current-students/programs-courses/programs-of-study/master-of-information Master in Informatics http://www.elis.teukuba.ac.in/grad/anglich/aducation/ap_macter.html
University of Washington	http://www.slis.tsukuba.ac.jp/grad/english/education/ep_master.html Master of Library and Information Science http://imbaol.ymu.odu/programm/mlin
University of Wisconsin, Madison	https://ischool.uw.edu/programs/mlis Master in Library and Information Studies
	https://ischool.wisc.edu/current-students/masters-degree-program

Table 1 (continued)

University	Program name and URL
University of Wisconsin, Milwaukee	 Master of Library and Information Science https://uwm.edu/informationstudies/academics/graduate/mlis/
Victoria University of Wellington	Master of Information Studies https://www.wgtn.ac.nz/explore/postgraduate-programmes/master-of-information-studies/overview
Western University	 Master of Library and Information Science https://www.fims.uwo.ca/programs/graduate_programs/master_of_library_and_information_science/index.htmll
Wuhan University	 Master of Library Science http://sim.whu.edu.cn/info/1179/5853.htm

Table 2. Courses totally or mainly dedicated to copyright.

University	Course title
University of Arizona	Introduction to copyright
University of Illinois, Urbana Champaign	Copyright for Information Professions
University of Michigan	Intellectual Property and Information Law
University of Pittsburg	Intellectual property and "open movements"
Syracuse University	Copyright for Information Professionals
University of Texas, Austin	Copyright: Legal and Cultural Perspectives
University of Toronto	Copyright for Information Professionals
University of Washington	Information Ownership and Control: Intellectual Property, Privacy, and Freedom of Speech
Wuhan University	Intellectual property in information resources

Probably the tightest focus on the library setting would be that of Pittsburgh, with an accent on copyright, and attention to open movements and their impact on scholarly communication. Michigan and Washington roughly share contents that are very diverse and hardly related to librarianship, versing on matters as distant as trade secrets or plant genetics. Finally, the university of Wuhan is unique in that the name of its subject includes the term intellectual property, and is related with information resources; nonetheless, it proving impossible to obtain reliable information about the real contents, we cannot make full or accurate appraisal of its relevance.

The result of the analysis of these nine subjects with full or partial content dedicated to copyright is somewhat disappointing. Only four appear to meet the requisites ensuring basic knowledge about copyright for librarians. The rest —though Texas-Austin and Pittsburg to a lesser degree— pay scanty attention to copyright issues, diluted among other quite diverse topics, making it virtually impossible for students to come away with a solid command of these matters.

4.2. Courses partially dedicated to copyright

A total of 29 universities out of our sample offered courses having contents partly focused on copyright issues. They include the nine specified above —except Arizona, Toronto, and Wuhan, which only offered the specific course we just analyzed. The array is very diverse, with a variety of focuses and contents, some universities offering more than one. The global result is presented in Table 3.

Despite their diversity, the copyright courses can be grouped in four major categories: those having a main focus on information policy, those dedicated to ethical issues, those focusing on legal issues of information (or information law) and finally, those emphasizing matters of collection development. This could be seen as three general approaches (political, ethical and legal) as opposed to one specific contest. Obviously, there was also a fair number of subjects that mixed two or more of these focuses.

The first focus, information policy, is the most common; nine subjects were taught by several US or Canadian universities, in addition to the Irish and New Zealand schools. Their contents appeared to be quite similar overall, including numerous and diverse sub-topics. Aside from copyright/intellectual property, the most common ones were privacy,

censorship, open government, surveillance, access to public information, and universal access, alongside some very specific points such as facial recognition technology (Dublin) or traditional knowledge (British Columbia). In general terms, all underline the importance of having a good understanding of the main stakeholders intervening in information policy and of their importance and impact for information professionals.

Table 3. Courses partially dedicated to copyright.

Drexel UniversityInformation Professionals and Information EthicsHumboldt University BerlinInformation LawIndiana University BloomingtonInformation LawMcGill UniversityKnowledge Management FoundationsNanyang TechnologicalCollection Development and Management University, SingaporeRutgers UniversityInformation policySyracuse UniversityInformation PolicyUniversity College DublinScholarly Communication Digital PolicyUniversity of British ColumbiaInformation PolicyUniversity of Strish ColumbiaInformation PolicyUniversity of California, Los AngelesCyberspace Law and Policy Data Curation EthicsUniversity of MarylandInformation Ethics Information EthicsUniversity of MarylandInformation Ethics Information EthicsUniversity of North Carolina, Chapel HillInformation EthicsUniversity of StaffieldInformation EthicsUniversity of StaffieldInformation LawUniversity of StathelydeInformation LawUniversity of StathelydeInformation in Social and Cultural ContexUniversity of StathelydeInformation and SocietyUniversity of StathelydeInformation and StrategicUniversity of StathelydeInformation and SocietyUniversity of StathelydeInformation and SocietyUniversity of StathelydeInformation and SocietyUniversity o	University	Course title
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The ethical perspective took in four subjects, all offered at US universities. In fact, in addition to very specific topics such as ethical codes of conduct, the topics included are very similar to the above ones: privacy and surveillance; intellectual property; open access and open data; intellectual freedom and censorship; or cybersecurity, but with an accent on comprehending and applying ethical frameworks to all these points. Special attention is given to knowing how to articulate the values pertaining to the information profession, together with understanding the values of others when analyzing and evaluating information-related controversies.

The group of subjects with a more legal orientation made up the second most numerous group (six in all), with denominations such as "information law" or "legal aspects...". This is the most diverse group from a geographical standpoint, taking in (along with schools from the US, Canada and UK) the only universities from Germany, Japan and Portugal included in our sample. Such geographic and cultural diversity is hardly reflected in their course contents, however. They have many elements in common. In all, to some extent, copyright, privacy and data protection, and access to information are dealt with. Moreover, matters of professional liability (Porto), unfair competition (Tsukuba), library legislation (Humboldt), freedom of expression (Strathclyde), or archives legislation (Montréal) are addressed.

A fourth group of subjects, surrounding the notion of collection management, are only part of two curricular offerings, at Nanyang (Singapore) and Washington. Given this high level of specificity, their contents have little in common with the other subjects analyzed thus far. In addition to dealing with all the technical, economic and management-related matters of library collections, they pay some attention to licensing agreement issues, whether related to contract law or to copyright legislation.

Obviously, the last group of subjects is the most numerous as well as the most diverse insofar as contents go. Still, if a global analysis of the topics included is made, we find no relevant novelties. Despite the different combinations of contents, with different scopes or perspectives, the topics are the habitual ones: intellectual property, privacy and data protection, intellectual freedom and censorship; cybersecurity and surveillance, etc. Most gloss over these themes, though in some cases a more specific context may be studied, for instance digital curation (Maryland), Web archiving (Michigan), or data curation (UCLA).

Our analysis of all these courses partially dedicated to copyright reveals that, excepting the two specially dedicated to collection management, they follow the same script with just minor variations. That is, they provide for a fairly general view of the legal, ethical and political problems surrounding information transfer, with different doses of this or that focus, meaning that copyright issues occupy a small portion of the entire, broad contents. Consequently, the knowledge to be obtained about the matter at hand would be superficial, simple notions of a very general nature. And if the focus is more ethical or political than legal, the likelihood of acquiring the minimal tools necessary to face copyright problems or doubtful situations within the professional realm would be nearly inexistent.

5. Discussion and final consideration

The previously mentioned IFLA recommendation (2018) appears to have met with little success, at least for the time being. The results of our study show that very few courses at the master's level provide for the minimal requirements in terms of copyright literacy for professionals —whether to carry out their own tasks and functions, or else to aid coworkers or users as effectively as possible. Most subject have excessively general contents, dedicating sparse attention to copyright issues. Furthermore, given that most are elective, not obligatory "core" courses, it may be concluded that very few LIS graduates attain the required level of training.

Only the universities accredited by the ALA (US and Canadian institutions) include at least a minimal portion of copyright contents in their curricula. Yet their situation is far from ideal; just five offer a course specifically dedicated to copyright application/implications in the context of the library. The rest scatter copyright information over an array of subjects with much broader contents, bordering on ethical, political or cultural perspectives, which prove clearly insufficient to face real problems in one's professional functions with some guarantee of success.

It is not surprising that degrees from the universities having ALA accreditation are found here to be the most adequate, as the presence of copyright issues among their list of core competences (ALA, 2009) obligates schools to take them well into account. Both the updated version of 2009 and the draft of their most recent update (ALA, 2021) feature a section 1G addressing the "legal framework within which libraries operate", with express mention of copyright legislation. Notwithstanding, the newer version does not appear to consider copyright issues as more relevant now, or calling for a newer focus; there are barely no significant differences between the two versions. Aside from the ALA, further professional associations contemplate knowledge of copyright as something essential for the professional workplace. One good example is CILIP (2021) in the UK, whose document "The Professional Knowledge and Skills Base" (PKSB) has a section (Information governance and compliance) with contents on "copyright, intellectual property and licensing". We will need some years to see if this has an effect on the study plans of UK schools offering degrees in LIS.

The overall extension of the Master's degree in the field —in detriment to the Bachelor's degree- as the means to acquire university level education in LIS means time has become scarce. Instruction is more and more general, so that there are many subject matters that "compete" to enter the curricula. Hence, many relevant topics are not included, or are dealt with in a superficial manner. In fact, the large amount of general contents that must be covered in such a short period of time and the limited number of credits included in a Master's degree is one of the reasons why it is so difficult to specialize or deepen into specific areas of LIS. It is no doubt highly useful to determine and comprehend the philosophical, ethical, political and cultural corners of copyright issues. Alone, however, they are insufficient to handle situations that come up in the everyday activities of professional librarians. Efficient and reliable service, with some assurance that the law will not be infringed (or that fear of infringement will make one's work ineffective) relies on in-depth knowledge of copyright legislation, its norms and its application to the library setting.

This generalized lack of specific instruction at sufficient depth means that professionals interested in acquiring proper knowledge have no other option than to search out on their own for training, perhaps with an additional degree in the legal field —complicated for a working professional— or more probably through self-education. In order that this will not eventually depend solely on individual initiative, we could urge libraries to adopt an active role providing some form of institutional support. One good example to follow is the program denominated "Copyright First Responders" (https://copyrightfirstresponders.com), introduced by Harvard University. Its success has spread to universities elsewhere, producing a network that provides educational programs for all sorts of information professionals and cultural agents, always with an emphasis on the practical, applied component.

As a conclusion, we believe the results present an international picture of librarian training in copyright issues that is of particular interest to non-English speaking countries, as the study provides examples of good practice on the topic and a benchmark for schools worldwide. If a good education for librarians is to be provided, this is an issue that should be addressed for working professionals and library administrators, as shown by the IFLA recommendations that highlighted the necessity to include competences that go beyond the superficial ethical considerations in the curricula.

Declarations

Author contribution statement

Juan-Carlos Fernández-Molina, Daniel Martínez-Ávila: Conceived and designed the experiments; Performed the experiments; Analyzed and

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interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

José Augusto Chaves Guimarães, Eduardo Graziosi Silva: Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data.

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Data availability statement

Data will be made available on request.

Declaration of interests statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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