Copyright Literacy of Doctoral Students in France

Joumana Boustany[1(✉)] and Annaïg Mahé[2]

[1] DICEN IDF EA 7339, Université Paris Descartes, Paris, France
jboustany@gmail.com
[2] DICEN IDF EA 7339, Urfist de Paris/Ecole nationale des Chartes, Paris, France
annaig.mahe@enc.sorbonne.fr

Abstract. This paper aims to produce comprehensive knowledge of the copyright literacy of doctoral students in France and to know how familiar they are with copyright issues. In order to achieve this objective, a web-based survey has been conducted. Results show a significant lack of awareness of copyright and intellectual property issues. Furthermore, there is a gap between the general copyright and intellectual property competencies they assess and the level of awareness about more specific items. It also reveals the existence of a relationship between levels of awareness and disciplines, as well as gender and year of study. Students lack training and show preferences for certain types of training and topics.

Keywords: Copyright literacy · France · Doctoral students · Higher education

1 Introduction

Doctoral students today are facing permanent and unprecedented challenges dealing with copyright issues. The Internet and Digital technology have created a new territory for copyright laws and changed the way we conduct research, including easier ways to access and use information, and reproduce documents. Even the publishing process has been affected by the open access movement and Creative Commons licenses. Doctoral students in most disciplines must complete a thesis as a requirement for their diploma and, as copyright issues are getting more and more complex, unwitting infringement of copyright laws can happen. To avoid this problem, copyright literacy awareness is important.

This state of affairs led us to study the copyright literacy of doctoral students in France. How familiar are they with copyright issues such as intellectual property, publishing rights, and the open rights movement? Are they sufficiently well prepared to face the complexity of copyright rules in their everyday academic lives? Is their background, including training and formal education, well adapted to their needs? Is there a significant disparity between the copyright literacy of doctoral students and the subject disciplines to which they belong? Is there any difference in awareness of the doctoral students, depending on gender or year of study?

S. Kurbanoğlu et al. (Eds.): ECIL 2015, CCIS 552, pp. 210–219, 2015.
DOI: 10.1007/978-3-319-28197-1_22

2 Literature Review

In recent years, the development of the Internet, of communication and information technology, and of digital media, has dramatically increased opportunities to access, use, reproduce and reuse all kinds of documents. The general public, and researchers within the academic realm all the more, became active consumers and producers of information. Therefore, intellectual property and copyright issues are now more important. This importance is coupled with a growing complexity as national and international copyright legislation evolves and tries to adapt to the rapidly evolving digital reality. These issues are being addressed consistently, stressing the need for copyright awareness and education for all actors in the specific context of higher education, research and universities [1–3], and the prominent role academic librarians can and should play towards students and faculty [4–6].

A number of publications describe initiatives related to these issues developed within universities, mostly by librarians. Other studies have also analyzed the librarians' competencies and stressed the need for librarians themselves to become more knowledgeable on these issues [6–8] in order to assume this education, such as the proposal of specialized services [9], guidelines [10] or online tools, and different kinds of ethics and copyright-related curricula [11–13].

Such analyses of the intellectual property-related competencies within the academic community in general are lacking. A great majority of studies are focused on the problematic behaviors of undergraduate or college students concerning plagiarism, mainly due to a widespread lack of copyright knowledge, a reduced physical presence in the library as online access increases, and also a lack of legislative framework in developing countries [14–17]. Two studies devoted to faculty, one comparing the results of two campuses in health science [18] and another one concerning the use of online teaching materials by Spanish professors [2] reach the same conclusion, that is, an insufficient knowledge of copyright law and fair use.

The analysis of doctoral students' competencies on these issues has not received much attention either. In its wide-ranging study on the information-seeking and research behavior of doctoral students, the Researchers of Tomorrow report indicates "an overall lack of understanding about the networked information and scholarly communications environment in which the students work" in general, and about copyright and intellectual property rights in particular. The report also highlights the fact that half of them have never used research support services on these issues, and that another 15 % are unaware of their availability [19]. Two other and more localized studies, one on research assistants in a Turkish university and another on doctoral students on an Indian campus, reveal that the respondents might be prone to plagiarize for several reasons, among which, again, is a lack of knowledge of these issues [20–21]. In her research, Torras [22] calls for the investigation of Ph.D. students' information searching behaviour and information needs in order to enhance evidence-based library practice.

3 Research Methodology

In order to answer these questions, we conducted a web-based survey during one month (from 17th March to 17th April 2015). The questionnaire included four groups of questions: the first group of questions was intended to measure the level of doctoral students' awareness of copyright issues based on a five-point Likert scale, from *not at all aware* to *extremely aware*. The second group dealt with the students' practices related to intellectual property and copyright. The third group concerned training, and the fourth focused on demographic information. The questionnaire was mailed to the directors of 284 doctoral schools in France[1] asking them to spread the survey among their students. This approach enabled us to collect 1,110 completed answers. This sample represented around 2 % (n = 61 707) of doctoral students in France[2]. Quantitative data were entered, coded, and analyzed using the SPSS statistical package. Descriptive statistics were used to analyze the findings and Chi-square tests of independence to compare different factors.

Females represented 57.4 % of our sample and 42.6 % were male. Ages ranged from 19 to 72 years old. This fact created a distortion in the age distribution (scored to the left at the low values). The mean became insignificant, which led us to consider the median age of 28 years old: Md = 28 (IQR: 26, 32), calculated for 1,102 respondents, eight respondents having given a wrong or incomplete date of birth. Students in the first year of their doctoral research represented 37.1 % (n = 412) of the sample; 25.4 % (n = 282) were in the second year, and 20.9 % (n = 232) in the third. Doctoral students in the fourth year were less represented with only 9.5 % (n = 106). Those in the fifth year or more represented less than 5 % (n = 78) of the respondents, which is why we chose to merge all the responses equal to the fifth year or more into one category "Over five".

4 Findings

4.1 Levels of Awareness

The first two questions in the survey dealt with doctoral students' awareness of copyright and intellectual property. These two questions aimed to evaluate the level of self-assessment by the students of their general knowledge of intellectual property and copyright issues before addressing more specific questions. Eight percent (n = 89) of the respondents considered that they were extremely aware, and 27.4 % (n = 304) that they were moderately aware concerning *copyright in general*. Contrariwise, 9.5 % (n = 105) considered that they were not at all aware and 29.1 % (n = 323) that they were slightly aware.

[1] Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche. Écoles doctorales en open data. http://goo.gl/8xR2LZ23/04/2014.

[2] Ministère de l'éducation nationale de l'enseignement supérieur et de la recherche. Repères & références statistiques : enseignements, formation, recherche. Paris: MENESR, 2014.

The results were more or less the same concerning *intellectual property in general* with 6.9 % (n = 77) who were extremely aware and 28.4 % (n = 315) who were moderately aware. Contrariwise, 10.5 % (n = 117) were not at all aware and 27.8 % (n = 309) were slightly aware (Fig. 1).

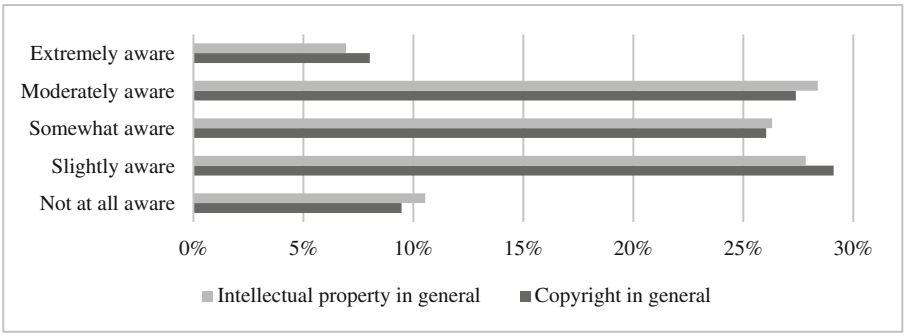

Fig. 1. Copyright and intellectual property awareness in general

The same statement applies for other more specific questions of copyright and intellectual property (Fig. 2):

- For *image rights*, 7.3 % (n = 81) of students declare being extremely aware and 23.7 % (n = 263) moderately aware, whereas 13.7 % (n = 152) were not at all aware and 30.3 % (n = 336) slightly aware.
- For *rights to copy*, 6.3 % (n = 70) were extremely aware, and 22.1 % (n = 245) moderately aware, whereas 15.1 % (n = 168) not at all aware, and 30.2 % (n = 335) were slightly aware.

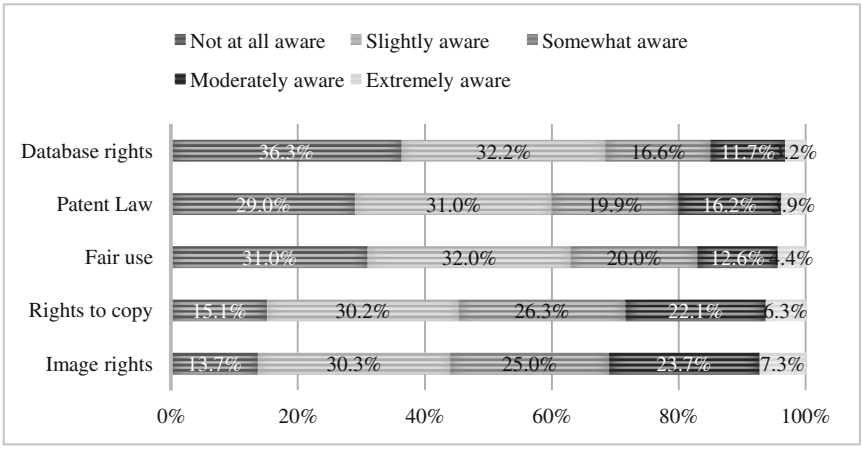

Fig. 2. Intellectual property awareness of respondents

However, the pattern was different concerning *patent law*, *fair use* and *database rights*, where the proportion of respondents who were not at all aware was much higher, respectively 29 % (n = 322), 31 % (n = 344), and 36.3 % (n = 403); whereas the proportion of slightly aware remained quite identical to the previous items, respectively 31 % (n = 344), 32 % (n = 355) and 32.2 % (n = 357).

The same scenario was again reproduced with the publishing and sharing rights issues (Fig. 3). Except for *public domain works* where only 24.4 % (n = 271) of respondents declared being not at all aware, the level of awareness failed tremendously. The rate of not at all aware respondents actually exceeded 60 %, especially with questions regarding *embargo* (65.8 %, n = 730) and *orphan works* (62.3 %, n = 691). The level of unawareness was also high concerning *out of print works* (52.8 %, n = 586), *digitized corpus* (49.9 %, n = 554), *online content licenses* (45.9 %, n = 510) and *online file sharing* (39.3 %, n = 436). Concerning *publishing license and contract*, only 2.5 % (n = 28) of students were extremely aware and 11.4 % (n = 127) moderately aware, whereas 37.7 % (n = 419) were slightly aware and 32.6 % (n = 362) were not at all aware.

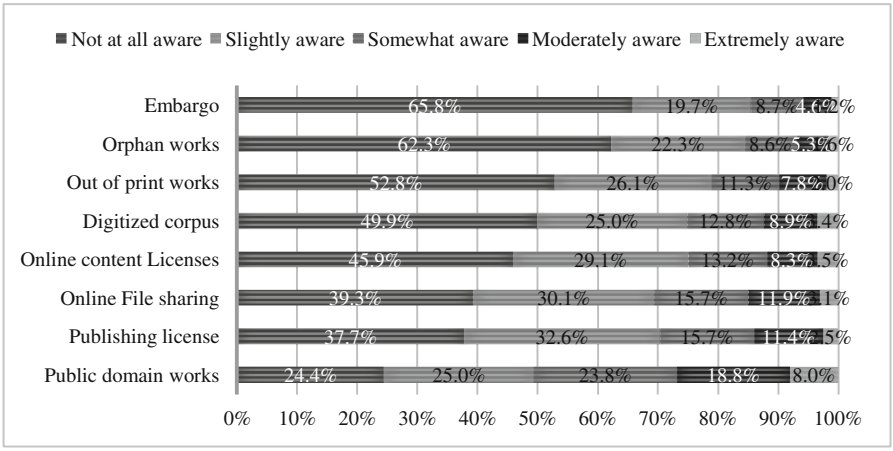

Fig. 3. Publishing and sharing rights awareness of respondents

The results concerning open rights were no better than the other topics (Fig. 4). The obvious gap was for *copyleft* where 68.8 % (n = 764) of respondents were not at all aware and for *Creative Commons licenses* with 50.1 % (n = 556). Concerning *open access*, they were only 6.7 % (n = 74) to be extremely aware and 19.5 % (n = 217) moderately aware, whereas 21.4 % (n = 238) declared being not at all aware, and 26.5 % (n = 294) slightly aware.

4.2 Relationship Between Level of Awareness and Discipline

In the research hypothesis, we postulated that there is a relationship between the doctoral students' awareness of copyright and the discipline to which they belong. In order to verify this, the data was analyzed using a *chi* square goodness of fit test. In the questionnaire, 24

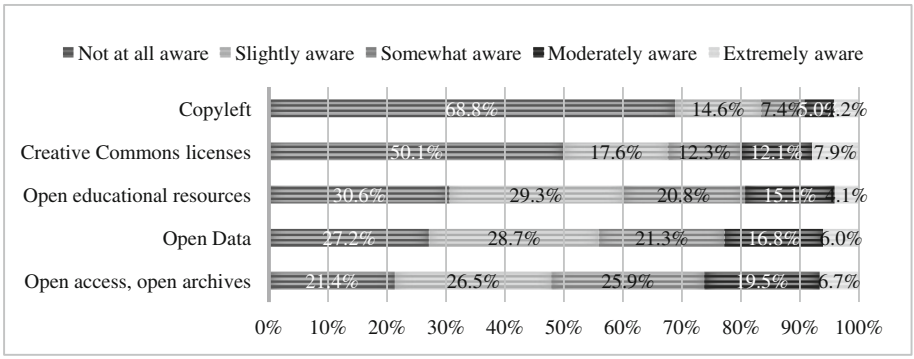

Fig. 4. Open rights movement awareness of respondents

disciplines were suggested. As three of the disciplines received fewer than five answers (Social Work and Social Policy, Political Science and Public Administration, Public Health and Health Care Science), we classified them within the "Other" category, resulting in a figure of 19 disciplines remaining (Fig. 5). Three respondents did not fill the discipline field which reduced the number of respondents to 1,107.

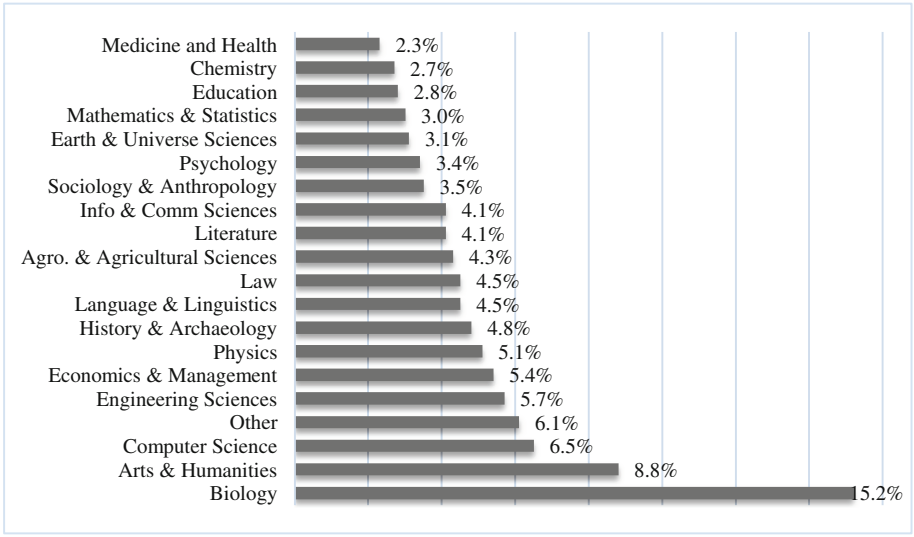

Fig. 5. Repartition of respondents by discipline

As one of the assumptions for the chi square test was violated - minimum expectation of five occurrences in each category - we combined the items *not at all aware* with *slightly aware,* and *moderately aware* with *extremely aware*. In spite of this, some disciplines could not satisfy the assumptions of the chi square test.

For many points, the null hypothesis was rejected, which meant there was a strong relationship between the competencies of doctoral students and the discipline to which they

belong. This was the case for *copyright* $\left(\chi^2\,(38) = 68.902, p \leq .05\right)$ and *intellectual property in general* $\left(\chi^2\,(38) = 56.265, p \leq .05\right)$, *image rights* $\left(\chi^2\,(38) = 66.619, p \leq .05\right)$, *rights to copy,* $\left(\chi^2\,(38) = 93.334, p \leq .05\right)$, *patent law* $\left(\chi^2\,(38) = 120.539, p \leq .05\right)$, *public domain works* $\left(\chi^2\,(38) = 115.652, p \leq .05\right)$ as well as *open access*, *open archives* $\left(\chi^2\,(38) = 53.353, p \leq .05\right)$, *open data* $\left(\chi^2\,(38) = 65.783, p \leq .05\right)$, and *open educational resources* $\left(\chi^2\,(38) = 56.687, p \leq .05\right)$. Concerning the other competencies - *fair use*, *database rights*, *publishing license and contract*, *embargo*, *out of print works*, *orphan works*, *copyleft*, *Creative Commons licenses*, *online file sharing*, *online content licenses, digitized corpus* – the chi square assumptions were violated and it was impossible to measure. It was then necessary to gather the different disciplines into two general groups: Science, Technology, Engineering, Mathematics, and Medicine (STEMM), and Arts, Humanities and Social sciences (AHSS).

Except for patent law, respondents in AHSS seemed to be more aware than respondents in STEMM regarding copyright in general, image rights, rights to copy, database rights, fair use, embargo or moving wall publishing license and contract, open educational resources, digitized corpus, public domain, out of print, and orphan works. Contrariwise, the null hypothesis of the chi square test has been verified concerning, publishing licenses, online content licenses, online file sharing, open access, Creative Commons licenses, and copyleft, which meant that there was no relationship between discipline and level of awareness. It is important to notice that when the disciplines were regrouped, the relationship between intellectual property and open data could not be verified as it was the case previously.

4.3 Relationships Among Awareness, Year of Study and Gender

In order to see whether the year of study had an incidence on the doctoral students' awareness, data was analyzed using a chi square goodness of fit test. The null hypothesis had been rejected for some issues where students in the fourth year and more were more aware. This was the case for *rights to copy, fair use*, *embargo* or *moving wall, digitized corpus, public domain* and *out of print works.* The *Creative Commons licenses* topic was more relevant to students in the fourth year, *publishing license* for students in the third and fourth years, and *open access* for the third year.

Performing a comparison to see whether there was a gender difference in the respondents' awareness, the null hypothesis had been rejected, except for issues such as *image rights*, *rights to copy*, *database rights*, *fair use*, d*igitized corpus* and *public domain* where there was no independence, meaning no relationship with the gender issue.

4.4 Difficulties

It is important to note that 44.1 % (n = 489) of doctoral students in France agreed that it is difficult to know whether the use of a source, in certain circumstances, constitutes plagiarism or not. In addition, 58.9 % (n = 654) admitted that they had difficulties being aware of the law on intellectual property and copyright, and 77 % (n = 802) answered that it was hard to know which legislation to refer to for a production published abroad. None of the respondents disagreed with the last assertion.

As part of their research, 49.3 % (n = 547) of the respondents had already published: a paper in a scientific journal for 38.6 % (n = 428), and a chapter in a book for 21.5 % (n = 239). Among those having already published, 14.9 % (n = 165) had signed a contract and 34.4 % (n = 382) had not. Interestingly, 50.9 % (n = 84) of those who had signed a contract found it not complicated and 24.8 % (n = 41) found it complicated.

4.5 Training

Only 23.1 % (n = 256) of doctoral students declared that they had been trained in intellectual property and copyright. Concerning the type of training they preferred, 40.2 % (n = 446) said they were in favor of *consultations on request*, followed by *training courses* (38.6 %, n = 429) and *thematic workshop*s (36.8 %, n = 409). The least preferred options were *self-training* (77.7 %, n = 862) and *round table discussion*s (76.7 %, n = 851).

Concerning the training topics they wished for, the most requested concerned *reusing data or content* (83.8 %, n = 930), *publishing license and contract* (77.8 %, n = 864), followed by *open access* (61.2 %, n = 679). The least requested topics related to *patent law* (50.2 %, n = 557), *Creative Commons licenses* (47 %, n = 522) and *copyleft* (44.8 %, n = 497).

5 Discussion

It is interesting to note that the gap between the general copyright and intellectual property competencies and the level of unawareness declared about more specific items is quite significant: more than 25 % concerning online publishing, for example. Even *open access* was not mastered, which is a considerable lack in the copyright knowledge of doctoral students when we know the importance of the open access movement for the strategic science outreach. Furthermore, with the "publish or perish" motto that applies also to French doctoral students, we could have expected a high level of awareness concerning publishing licenses and contracts. But only 2.5 % of respondents declared being extremely aware and 37.7 % not at all aware. However, we also noted that among those who had signed a publishing contract, a majority found it not complicated. One explanation could be that knowing comes by doing and that skills and understanding can be reached through experience.

Such a high level of unawareness on so many topics dealing with copyright is not surprising when we know that only 23.1 % (n = 256) of doctoral students had been trained on these topics. The comparison between the weak levels of awareness about *Creative Commons licenses* and *copyleft* and the low levels of request for training on these topics was also noteworthy: is it because they are not interested in these topics or because they do not know what they imply by lack of training? Our study also revealed the existence of a relationship between levels of awareness, disciplines and gender but the size of our sample, although quite large, did not allow for a sufficiently thorough analysis of these particularities. This implies a need for detailed analysis of doctoral students' practices and needs as suggested by Torras [22]. This would help the design

of appropriate training, services and communication by the institutions in order to improve the intellectual property and copyright literacy within the academic community, and would also help the systematic integration of copyright literacy as another form of information literacy [23, 24]. In fact, 43.3 % (n = 481) of doctoral students assessed that there was nobody in their institutional environment dealing with copyright issues and 22.3 % (n = 248) did not know if there was such a person.

6 Conclusion

The results of this study filled a gap by shedding light on the copyright literacy of doctoral students, although our sample represented two percent of the total surveyed population. We hope this will help doctoral schools to adjust their curricula for training or counseling students.

This research produced comprehensive knowledge regarding the copyright literacy of French doctoral students, especially considering that this kind of study has never been done before in France.

We were able to measure the levels of their awareness as well as the levels of their ability to master the subtleties of the publishers' different license agreements. We also addressed questions concerning the relationship between discipline, gender and the level of awareness.

As this was a web-based questionnaire, the results are declarative and may not reflect the participants' true abilities. It will also be necessary to complete this study by investigating further the disciplinary particularities with a larger sample.

References

1. Wagner, K.I.: Intellectual property. Copyright implications for higher education. J. Acad. Libr. **24**(1), 11–19 (1998)
2. Fernández-Molina, J.C., Muriel, E., Vives-Gràcia, J., et al. (eds.): Copyright and E-learning: Professors' Level of Knowledge About the New Spanish Law, vol. 63. Emerald Group Publishing Limited, Bingley (2011)
3. Gilliland, A.T., Bradigan, P.S.: Copyright information queries in the health sciences. J. Med. Libr. Assoc. **102**(2), 114–117 (2014). doi:10.3163/1536-5050.102.2.011
4. Nollan, R.: Campus intellectual property policy development. Ref. Ser. Rev. **32**(1), 31–34 (2004). doi:10.1108/0090732041051935
5. Horava, T.: Copyright communication in Canadian academic libraries. A national survey. Can. J. Inf. Libr. Sci. **34**(1), 1–38 (2010). doi:10.1353/ils.0.0002
6. Charbonneau, D.H., Priehs, M.: Copyright awareness, partnerships, and training issues in academic libraries. J. Acad. Libr. **40**(3–4), 228–233 (2014). doi:10.1016/j.acalib.2014.03.009
7. Gadd, E., Gaston, R.: Copyright questions asked by libraries. Libr. Manag. **22**(8/9), 387–394 (2001)
8. Boustany, J.: Copyright literacy of librarians in France. In: Kurbanoğlu, S., Špiranec, S., Grassian, E., Mizrachi, D., Catts, R. (eds.) ECIL 2014. CCIS, vol. 492, pp. 91–100. Springer, Heidelberg (2014)

9. Duncan, J., Clement, S., Rozum, B.: Teaching our faculty. Developing copyright and scholarly communication outreach programs. In: Davis-Kahl, S., Hensley, M.K. (eds.) Common Ground at the Nexus of Information Literacy and Scholarly Communication, pp. 269–285. Association of College and Research Library, Chicago (2013)
10. Ferullo, D.L.: Copyright services for students. Managing Copyright in Higher Education: a Guidebook, pp. 131–138. Rowman & Littlefield, Lanham (2014)
11. Quartey, S.: Developing a campus copyright education program. Conquering the challenge. J. Interlibr. Loan **18**(1), 93–100 (2007). doi:10.1300/J474v18n01_10
12. Datig, I., Russell, B.: Instructing college students on the ethics of information use at the reference desk. A guide and literature review. Ref. Libr. **55**(3), 234–246 (2014). doi: 10.1080/02763877.2014.912458
13. Rodriguez, J.E., Greer, K., Shipman, B.: Copyright and you. copyright instruction for college students in the digital age. J. Acad. Libr. **40**(5), 486–491 (2014). doi:10.1016/j.acalib. 2014.06.001
14. Mahesh, G., Mittal, R.: Digital content creation and copyright issues. Electron. Libr. **27**(4), 676–683 (2009). doi:10.1108/02640470910979615
15. Wu, H.-C., Chou, C., Ke, H.-R., Wang, M.-H.: College students' misunderstandings about copyright laws for digital library resources. Electron. Libr. **28**(2), 197–209 (2010)
16. Ali, W.Z.W., Ismail, H., Cheat, T.T.: Plagiarism. to what extent it is understood? Procedia – Soc. Behav. Sci. **59**, 604–611 (2012). doi:10.1016/j.sbspro.2012.09.320
17. Isiakpona, C.: Undergraduate students' perception of undergraduate students' perception of copyright infringement. A case study of the University of Ibadan, library philosophy and practice (e-journal). Oyo State (2012)
18. Smith, K.H., Tobia, R.C., Plutchak, T.S., Howell, L.M., Pfeiffer, S.J., Fitts, M.S.: Copyright knowledge of faculty at two academic health science campuses. Results Surv. Ser. Rev. **32**(2), 59–67 (2006). doi:10.1016/j.serrev.2006.03.001
19. Carpenter, J., Wetheridge, L., Tanner, S., Smith, N.: Others: researchers of tomorrow. The research behaviour of generation Y doctoral students. J. Inf. Serv. Use **32**(1–2), 3–17 (2012)
20. Eret, E., Gokmenoglu, T.: Plagiarism in higher education. A case study with prospective academicians. Procedia-Soc. Behav. Sci. **2**(2), 3303–3307 (2010)
21. Vasudevan, T.M., Suchithra, K.M.: Copyright awareness of doctoral students in Calicut University campus. Int. J. Digit. Libr. Serv. **3**(4), 94–110 (2013)
22. Torras, M.-C.: Comment Soutenir la Recherche Doctorale. Les Doctorants, la Littératie Informationnelle et la Formation à l'Utilisation des Bibliothèques. In: Denecker, C., Durand-Barthez, M. (eds.) La Formation des Doctorants à l'Information Scientifique et Technique. 10e rencontres FORMIST, Villeurbanne, 3 et 4 juin 2010, pp. 39–52. Presses de l'Enssib, Villeurbanne (2011)
23. Association of College and Research Libraries: Intersections of Scholarly Communication and Information Literacy. Creating Strategic Collaborations for a Changing Academic Environment. Association of College and Research Libraries, Chicago (2013)
24. Ogburn, J.L.: Foreword. closing the gap between information literacy and scholarly communication. In: Davis-Kahl, S., Hensley, M.K. (eds.) Common Ground at the Nexus of Information Literacy and Scholarly communication, pp. v–viii. Association of College & Research Libraries, Chicago (2013)