Chapter 17
Course and Learning Objective in the Teaching of Grey Literature: The Role of Library and Information Science Education

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17.1 Introduction

A study of grey literature in the context of scholarly communication is intrinsically related to the role of grey literature in the knowledge chain and as part of the changing landscape of knowledge dissemination. The established role of libraries as agents of dissemination of scholarly content was, until the advent of digital libraries, guided by commercial vendors who perceived libraries as a venue to promote their business models. Commercial vendors encourage and promote the dependence of libraries on vendors for subscription content (Allardice, 1997). In recent years, increase in subscription costs and low usage by library patrons (University of California), have librarians looking elsewhere for high quality content, paving the way for grey literature to play a more prominent role in collection development.

While the role of libraries in the dissemination of scholarly content has been addressed in the literature (Mackenzie Owen 2002) the responsibility of library and information science (LIS) schools in the knowledge chain with regard to grey literature, has not received much attention. In order to better understand how LIS schools are preparing future information professionals to work with grey literature, a preliminary survey was conducted in 2007 (Rabina, 2008). This research updates results from the 2007 study and further situates grey literature in the landscape of scholarly communication. More specifically, this study asks the following research questions:

RQ1: Is education for grey literature in LIS education in North America non-specific and embedded within larger topic themes or does it receive unique treatment in the curriculum?

RQ2: Are LIS students aware of grey literature and can accurately describe it?

RQ3: Within the grey literature community, who are the most likely disseminators of education for grey literature among LIS students?
17.2 Development and maturation of grey literature as a scientific discipline

The most-cited definition for grey literature is “that which is produced by government, academics, business, and industries, both in print and electronic formats, but which is not controlled by commercial publishing interests and where publishing is not the primary activity of the organization” (Farace, 1998). ODLIS (Online Dictionary of Library and Information Science) provides a slightly broader definition focusing on the essence of the literature rather than on its origin: “Documentary material in print and electronic formats, such as reports, preprints, internal documents (memoranda, newsletters, market surveys, etc.), theses and dissertations, conference proceedings, technical specification and standards, trade literature etc., not readily available through regular market channels because it was never commercially published/listed or was not widely distributed” (Reitz, 2004). While definitions proliferate, there is agreement on the main characteristics of grey literature: they are materials that are published by entities whose core interests are not in publishing and, as a result, are typically not marketed or distributed by commercial publishing organizations (Mackenzie Owen, 1997). In summary, grey literature is discussed in terms of its origins, its methods of dissemination, or both.

The research conducted by Sulouff et al. (2005), whose paper is most closely related to the theme of this study, points out that grey literature “takes different forms in different departmental settings” so that a working definition is often based on circumstance. The library sector carries responsibility for the management and processing of grey literature. This role is acknowledged by several researchers (Mackenzie Owen, 1997; Sulouff et al, 2005) although they have written largely about the role that librarians take with regard to grey literature, but little about how librarians learn about grey literature. The role of librarians is described as promoting dissemination and use of grey literature through cataloging, searching, archiving and preservation (Mackenzie Owen, 1997). Gelfand believes that these roles, at least with regard to grey literature, are learned on the job: “training and bibliographic familiarity… does not follow a curriculum or a set of readers or textbooks, but instead studies by doing (Gelfand, 1998).

Research regarding grey literature in libraries has focused more on case studies in particular libraries (see Aina, 2000) than on grey literature in LIS education. A review of LIS syllabi, described in more detail below, supports Gelfand’s view that education in grey literature is mostly field, and not curriculum, driven.

Thomas Kuhn’s theory of the structure of scientific revolutions argues that the point when scientific disciplines change and a paradigm shift occurs within them is the point in which the existing paradigm can no longer account for the observed phenomena taking place with it (Kuhn, 1996). Kuhn’s framework has been applied in the library and information science field to identify paradigm shifts in the research and teaching of LIS areas (Richardson, 1986; Smiraglia and Leazer, 1994). Kuhn signals the textbook as a tool that has served as a staple since the
nineteenth century of establishment of a scientific field noting that textbooks “ex-
pound the body of accepted theory, illustrate many or all of its successful applica-
tions, and compare these applications with exemplary observations and experiments (Kuhn, 1996, p. 10). As a relatively young field of research, grey literature has not developed an established textbook and instructional curriculum, but this should not be interpreted as lack of establishment of the field, but rather as an indication of the field’s adaptability, particularly in an era where textbooks are being criticized and their sales declining (Howard, 2008).

Library and information professionals are a vital link in the chain that makes grey literature available to researchers, students and the interested public. While on-the-job training is invaluable, the purpose of graduate-level training is that professionals are hired with some baseline knowledge that they bring to the workplace upon graduation. Courses that educate future information professionals in areas relating to grey literature are critical training ground if awareness to grey literature is to increase.

This study aims to identify what students currently enrolled in LIS graduate programs know about grey literature and where they are learning it. Once we have a clearer picture of the training currently available, we can open a discussion between LIS professionals, LIS educators and LIS students to determine how LIS education can best assist in meeting the needs of the current workplace and use LIS education to strengthen the relevance of current graduates to the workplace.

17.3 Methodology and data collection

To gauge the current place of grey literature in library and information science education, data was collected by several means and from several sources. The first research question, asking whether education for grey literature in LIS education in North America is non-specific and embedded within larger topic themes or does it receive unique treatment in the curriculum, was tested by means of course review from the top ten LIS programs in the United States.

The second research question, asking about LIS students’ awareness of and knowledge about grey literature, was tested using a closed-form questionnaire, and finally, the third research question, asking who are the most likely disseminators of education for grey literature among LIS students, was tested by examining the bibliometric output of presenters in the grey literature conferences.

To understand where grey literature fits within the courses offered at LIS program, the researcher examined course descriptions and syllabi of the 2009 top ten LIS graduate programs in the United States (U.S. News and World Report, 2009). Data collection from syllabi is often limited by publication practices and policies of individual LIS programs. There is a very wide range of materials available from different programs, from those programs and/or professors that make all syllabi, slides, and notes available on the course open website, to those that provide only a short course description and make syllabi available only through password pro-
ected learning managements systems (such as Moodle, Blackboard, etc.). Data for this research was collected from all sources available at each of the LIS programs reviewed, which included in all cases course descriptions from the university’s official bulletin, and in some cases, syllabi for individual courses. In addition, the research interests and publications of faculty members in each school were reviewed to identify faculty with research interests in grey literature.

Students’ awareness of and knowledge about grey literature was assessed by administrating a closed-form questionnaire to LIS students at a mid-size urban LIS program in the United States. The questionnaire was distributed in hard copy during June 2009 in classrooms. In total forty-eight questionnaires were collected with a response rate of 100%. The survey contained four questions in which students were asked of their knowledge about grey literature and where this knowledge was obtained. Data from the completed questionnaires was entered into an online survey program for further analysis. Limitations of surveys as a data collection method are inherent in the instrument; results are self reported and could be skewed by intentional deception, misinterpretation of the questions, and a desire to please the researcher. To avoid these limitations to the greatest degree possible, the questionnaire was tested for reliability in a pilot study conducted with a small group of students during late May 2009 and the final version was based on their feedback.

To identify the main agents of dissemination of research and scholarship about grey literature, bibliometric data was collected about the output of researchers publishing in the area of grey literature. Data was collected for one hundred and three researchers who have published in the first four volumes of *The Grey Journal*. Data included role and affiliation of each researcher (librarian, researcher, LIS faculty member), extent of LIS teaching activity (part time, full time or none), total number of publications in *The Grey Journal*, total number of publications in other journals, and h-index of the researcher. Researchers were awarded points for each of these factors with the highest scores identifying the likeliest disseminators of information about grey literature. Data about publications in *The Grey Journal* was collected from the table-of-contents pages. Data about other publications was collected from three journal databases (Library Literature, Emerald and Library and Information Science Abstracts). Data about journal impact factor was collected from Web of Science and finally, the h-index was taken from Scopus.

Limitations of data collection for testing the research question include difficulties in identifying authors by name (e.g., there may be several authors with the same name) and difficulties in establishing the teaching statues of each of the researchers in the study. By using multiple sources and databases the researcher tried to achieve the most accurate results possible. An additional limitation is that data was collected only from traditional forums of scholarly communication such as articles and conference proceedings, and did not address web 2.0 forums such as blogs or professional forums, and it is entirely possible that individuals who communicate about grey literature through blogs or listservs contribute to grey literature education in not insignificant ways.
17.4 Results

In order to test the first research question, asking whether education for grey literature in LIS education in North America is non-specific and embedded within larger topic themes, the researcher examined course syllabi, faculty publications and faculty research interests at the top ten LIS programs in the United States, to see how prominent a presented grey literature has in each one on these indicators. Results showed very little activity in all these areas. No courses devoted to grey literature were identified and no courses specifically mentioned grey literature in the course description, or where available, in course syllabi. Very few faculty members in these schools conduct research in the area of grey literature.

These results indicate that education for grey literature is not specific, i.e., not offered in designated courses. The extent to which education about grey literature is covered in other courses such as collection development, knowledge organization or special collections, could not be fully determined from the information available from the population studied. Only by drawing on the results of students’ questionnaire, indicating overall familiarity with the term ‘grey literature’ can we assume the LIS education covers the concepts and characteristics of grey literature in some courses offered in LIS programs.

The second research question, examining whether despite the lack of structure in education for grey literature, most LIS students are aware of its existence and can accurately describe it was tested by administrating a questionnaire to students, as described in the section above. Of the responses collected, 54.2% of respondents indicated that they had heard of the terms grey literature. These results are significantly higher from the 25% found in earlier research (Rabina, 2008) and are
attributed to the distribution of the questionnaire in a smaller number of LIS schools than in the earlier study. While the result found in the 2007 study is likely more true to reality, the high result of the 2009 study is supported by the findings of the third research question below.

In order to determine if students understand the nature of grey literature, they were asked to read ten statements and indicate how well the statements describe grey literature. Responses were on a Likert scale with 5 meaning the statement described grey literature very well and 1 meaning that it does not describe it well. The results, in table 17.1, indicate that students accurately identify grey literature and recognize its main characteristics.

Table 1: How well does each of the following statements describe grey literature?

<table>
<thead>
<tr>
<th>Very well</th>
<th>Statement</th>
<th>Not well</th>
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<tbody>
<tr>
<td>58.6%</td>
<td>Grey literature are materials not indexed by commercial indexers</td>
<td>20.6%</td>
</tr>
<tr>
<td>50%</td>
<td>Grey literature describes materials published by non-commercial publishers</td>
<td>23.4%</td>
</tr>
<tr>
<td>43.4%</td>
<td>Grey literature describes materials not available in OPACs</td>
<td>19.2%</td>
</tr>
<tr>
<td>39.9%</td>
<td>Grey literature describes materials of unknown origin (where the author or publisher can’t be identified)</td>
<td>46.5%</td>
</tr>
<tr>
<td>24.1%</td>
<td>Grey literature refers to any ephemeral materials</td>
<td>62%</td>
</tr>
<tr>
<td>20.7%</td>
<td>Grey literature describes materials not picked by commercial search engines (such as Google and Yahoo)</td>
<td>44.8%</td>
</tr>
<tr>
<td>16.7%</td>
<td>Grey literature is similar to open access journals</td>
<td>66.6%</td>
</tr>
<tr>
<td>14.3%</td>
<td>Grey literature refers to materials guarded by institutional gatekeepers who deny access to them</td>
<td>75%</td>
</tr>
<tr>
<td>10.7%</td>
<td>Grey literature is government information that is not available in the Catalog of Government Publications</td>
<td>53.6%</td>
</tr>
<tr>
<td>7.1%</td>
<td>Grey literature refers to materials stored in dark archives that are intended for long term preservation</td>
<td>92.9%</td>
</tr>
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The third research question, asking who within the grey literature community are the most active disseminators of education for grey, was answered by evaluating the research productivity (number of publications, citations, and h-index) of individuals publishing in The Grey Journal, as well as their teaching activity. Each author was given points for research productivity and points for teaching activity. The results, in table 17.2 indicate there is a correlation between teaching and research activity: full time teachers are engaged in higher volume research compared to non or part time teachers.
Table 2: Correlation between teaching and research productivity (N=99; shaded area=correlation)

<table>
<thead>
<tr>
<th></th>
<th>Non teachers</th>
<th>Part-time teachers</th>
<th>Full-time teachers</th>
</tr>
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<tr>
<td>Low research activity</td>
<td>78.7%</td>
<td>50%</td>
<td>7.1%</td>
</tr>
<tr>
<td>Medium research activity</td>
<td>13.1%</td>
<td>29.2%</td>
<td>0%</td>
</tr>
<tr>
<td>High research activity</td>
<td>8.2%</td>
<td>20.8%</td>
<td>92.9%</td>
</tr>
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17.5 Discussion

The results of this study clarify the state of LIS education regarding grey literature. Regarding the prevalence of grey literature in master’s level programs of library and information science in the United States, results indicate that grey literature receives little attention in the curriculum. In the master’s programs examined, no courses dealing with grey literature were identified and very few occurrences of the term within course materials or scholarly activity within the masters’ program were found. The current situation implies that thorough knowledge and working practices with grey literature are acquired in the workplace and not through graduate course work.

In spite of scant evidence of teaching grey literature, a large number of students surveyed were able to correctly describe that nature and characteristics of grey literature, indicating that notwithstanding the lack of structure in education for grey literature, most LIS students are aware of its existence and can accurately describe it. Students perceive grey literature as lacking in bibliographic control (not indexed by commercial indexers and not available in online public access catalogs) and created by non-commercial publishers.

This finding suggests that the scope and depth of knowledge acquired throughout the master’s program, allows students to make informed judgments regarding the accuracy of the statements provided in the questionnaire.

The third research question, asking who are the strongest disseminators of grey literature education within the grey literature community, indicate those engaged in teaching are likely to be engaged in high research volume, and are most likely to be powerful agents for teaching future information professionals about grey literature. Knowledge is disseminated in academia through scholarly activities that include teaching and research. While many engage in one or the other, those engaged in both are positioned to have the greatest impact. The data confirms a correlation between the two variables – individuals engaged in full time teaching activity are also engaged in high volume research activity. These two venues, teaching and publishing, provide the opportunity to reach a wide audience.
These findings can assist LIS educators in increasing students’ knowledge of grey literature and help establish best practices for grey literature education.

17.6 Recommendations for best practices for grey literature education

When identifying gaps in LIS education, the more common approach has been to suggest and outline a suitable course curriculum for that topic (Heintz, 2004; Weimer and Reehling, 2006), but there are several arguments to be made in favor of a cross-curricular approach for grey literature education, mainly, the opportunity to expose more students to grey literature than would be possible through a designated course. The cross-curricular approach to teaching grey literature in accordance with the interdisciplinary scope of grey literature content.

A cross-curricular approach to grey literature education is best offered in several courses, including some that are traditionally part of schools’ core offerings, such as knowledge organization and reference, as well as courses that are usually offered as electives, such as collection development and specialized reference courses (for example, scientific information sources, government information sources, statistical information, health information and more). Distribution across the curriculum will address the main areas of importance to library and information professionals dealing with grey literature on two levels: working with the public and working behind the scene. Working with the public addresses the question of the grey literature needed by reference librarians for their work with library patrons seeking information in all areas, whether health information, scientific information or information in the arts and humanities. Working behind the scenes will address questions about the best ways to locate grey literature, to gain bibliographic control over it, to incorporate it in the library’s OPAC, website, subject guides and more.

References


Appendices

This monograph contains five appendices that may well help in understanding, learning, researching, and accessing grey literature.

Appendix I is a compilation of biographical notes provided by the authors in this monograph. More information on authors in grey literature can be found on the WHOIS webpage of TextRelease, the Program and Conference Bureau for the International Series on Grey Literature.

Appendix II provides examples of grey literature and profiles organizations responsible for its production and/or processing. Only web-based resources that explicitly refer to the term grey literature (or its equivalent in any language) are listed. The web-based resources appear within categories derived from the CO-SATI (American) and SIGLE (European) Classification Systems.

Appendix III produces a list of grey document types that was first compiled in 2004 during a study on citation analysis and grey literature. Since then, this list has been maintained on GreyNet’s website and further developed by the international grey literature community. It is interesting in that it illustrates the wide range and heterogeneity of grey literature.

Appendix IV provides the titles of volumes in the International Conference Series on Grey Literature from 1993 to 2010 along with links to these collections available in the OpenSIGLE Repository.

Appendix V provides the thematic titles of the volume/issues in The Grey Journal from 2005 to 2010. The Grey Journal (TGJ) is currently the only international journal on grey literature and is published by TextRelease in Amsterdam. TGJ is indexed in the Scopus database as well as by other A&I services.