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Evolution of Scholarly Communication: How Small and Medium-Sized Libraries are Adapting

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Evolution of Scholarly Communication: How Small and Medium-Sized Libraries are Adapting

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Introduction

The Internet and digital technology have caused a shift in the delivery of scholarly content from print to electronic and have made the sharing of scholarly work much easier. While this should result in broader access to scholarly research, the increase in the cost of scholarly journals, copyright restrictions, and licensing restrictions have served to limit access to this content.

The library community is committed to the development of more accessible and cost-effective scholarly communication models in collaboration with their academic institutions and their faculty, as well as scholarly societies and publishers. With that goal in mind, libraries have engaged the faculty, graduate and undergraduate students, and campus administrators at their institutions on issues related to open access and author rights management, and have developed digital repositories to showcase, disseminate and preserve their institution's scholarship.

Much of the recent literature pertaining to scholarly communication focuses on the experiences of major research institutions where faculty research and scholarship are heavily emphasized. Building faculty buy-in may be facilitated by institutional cultures or other factors that emphasize the heavy scholarly output of the faculty. Larger budgetary commitments for research support, in general, coupled with greater proportions of federal funding, associated with mandates (such as the NIH Public Access Policy) may lend greater influence in raising awareness of, and ultimately support for, modifications to the scholarly communication system at these institutions.

Small and medium-sized institutions face challenges distinct from those of major research institutions, demanding strategies that reflect the nature of such institutions. The smaller institutions tend to place greater emphasis on teaching rather than faculty research and often have few, if any, graduate programs. Researchers at such institutions, therefore, may feel they are in a more tenuous position and may be less willing to take steps they view as risky. Consequently, faculty at these institutions may not consider scholarly communication issues to be compelling or even relevant. Libraries at these institutions may wish to engage with their institutions on scholarly communication issues yet are impeded by a lack of staff or monetary resources. They may not have the resources to implement institutional repositories, and they are less likely to have staff devoted to scholarly communication. Furthermore, they may have limited funds to dedicate to educating library staff, faculty and campus administration on the issues. Yet, small to medium-sized institutions would benefit greatly from the shar-

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ing of research and scholarship. The open access publishing model could provide the faculty and students at their institutions with resources that they otherwise could not afford and it would also make their research more broadly accessible, raising the visibility and prestige of their institutions.

This study was designed to determine what kinds of initiatives small and medium-sized academic libraries have used or plan to use to educate faculty, researchers, administrators, students, and library staff at their institutions about scholarly communication issues.

Methodology

An online survey of academic library directors/deans was used as the primary means of data collection for this study. Since the basis of the study's hypothesis is that institutional size is a determinant in the types of scholarly communication activities taking place at academic institutions throughout the United States, the authors identified potential respondents from among four-year academic institutions with less than 15,000 students. Identification of the pool of respondents was accomplished by isolating appropriate institutions from the Size and Setting classifications in the Carnegie Classification of Institutions of Higher Education. All four-year institutions in the "Very Small," "Small," and "Medium" classifications were included, as were selected institutions of 15,000 students or fewer from among those institutions in the "Large" classification. Further, institutions that were represented in the 2007 Association of Research Libraries survey, *Scholarly Communication Education Initiatives* (Newman, Blecic, & Armstrong), were omitted from our sample in order to avoid duplication of institutions in the two surveys. Email addresses were found and compiled for the library deans or directors for each institution via searches of the institutions' web sites and/or searches in standard library directories. This process yielded a total sample population of 1313 institutions: 374 "Very Small" institutions; 536 "Small" institutions; 385 "Medium" institutions; and 18 "Large" institutions.

The authors of this study were granted permission to largely replicate the ARL survey in order to draw direct comparisons between the responses of the major research libraries and those in the current study's sample. Some additional questions were added about general scholarly communication activities at the institutions and the questions were updated to bring them to the current year. An online survey was created and distributed via email. A three-week response time in mid-Fall 2010 was originally allotted, however a one-week extension was subsequently added to increase the participation rate. The survey questions comprised several groupings to elicit information about (a) general scholarly communication initiatives at the institution; (b) organizational structure and leadership regarding scholarly communication initiatives; and (c) the types and effectiveness of educational activities directed to various campus constituencies. Three hundred and four responses were received for a total response rate of 23%. Among the four institutional size classifications, the response rates were 11% from Very Small institutions; 24% for Small institutions; 30% among Medium institutions; and 106% for Large institutions (the additional response was due to one multi-campus institution responding on behalf of all campuses rather than the individual campuses in its system).

Discussion

Of the 304 respondents, 103 (34%) addressed issues related to scholarly communication in their library's strategic plan or mission statement while only 44 institutions (14.8%) reported that the issue was addressed in their parent institution's strategic plan or mission statement. A library's initial involvement in scholarly communication is often via the implementation of an institutional repository. One half of the respondents either have an operational institutional repository (25%) or are in the planning stages (25%). For most, implementation occurred in 2000 or later with the majority of respondents reporting that implementation had occurred in the last three years. The other 50% of respondents have no immediate plans to develop one. In terms of engagement in education activities on scholarly communication issues, nearly half (47%) have done or are planning to do so. 149 respondents (49.8%) have not been engaged, and nine institutions indicated that this is the responsibility of another unit on campus. An open access mandate is a significant step and an indication of institutional commitment. Eight institutions have an open access mandate, and a mandate has been proposed and is currently being discussed at 45 institutions. For those who did adopt a mandate, it has been in the last two years.

With regard to institution size, in general, the larger the institution, the more likely there is involvement in scholarly communication initiatives. For example, 66.7% of Large libraries, 46.1% of Medium libraries, 23.4% of Small libraries and 19.4% of Very Small libraries addressed issues related to scholarly communication in their strategic plan or mission statement. With regard to engagement in education activities on scholarly communication issues, 77.8% of Large libraries, 56.2% of Medium libraries, 40% of Small libraries, and 30.5% of Very Small libraries reported having been engaged in such activities or are planning to do so. Large libraries were more likely to have operational institutional repositories (55.6% Large libraries, 33.3% Medium libraries, 17.6% Small libraries, and 13.5% Very Small libraries had operational institutional repositories). However, Medium and Small libraries were more likely to be in the planning stages for an institutional repository. Thirty-three percent of Medium libraries and 25.6% of Small libraries were in the planning stages as compared to 11.1% of Large libraries and 8.1% of Very Small libraries.

Leadership

Of the 165 positive responses describing their leadership structure for scholarly communication education initiatives, one half indicated that leadership is provided by a group, committee or task force. Forty-six institutions (27.5%) have a group/committee/task force within the library, and 38 institutions (23%) have designated a group outside the library that includes library staff. In nearly one-third of the 165 responses, an individual has the responsibility for scholarly communication education initiatives. Twenty-nine libraries (17%) have a chief scholarly communication librarian while 26 libraries (15.5%) have designated another library staff member. Responses to the ARL survey of 2007 indicated that research libraries follow much the same patterns, but to an even greater degree. Seventy-one percent of ARL institutions provide leadership for scholarly communication initiatives by a group, committee or task force (54% internal to the library; 17% outside the library, the one instance that is fewer than small and medium-sized libraries). Sixty percent assign these responsibilities to an individual (32% have a chief scholarly communication officer and 28% have designated another library staff member), who in some cases work with another group or individual as well.

For those Small and Medium institutions who have a chief scholarly communication librarian, three respondents indicated that 100% of their time was devoted to scholarly communication education-related work, and six libraries indicated that the librarian devoted between 50 and 65% of their time to such activities. Not surprisingly, Large and Medium libraries were more likely to have a chief scholarly communication librarian. Large and Medium libraries were also more likely to have a group/committee/task force within the library that provides leadership for scholarly communication activities. Small and Very Small libraries were more likely to rely on another library staff member (frequently the library director) or a group/committee/task force outside the library to lead scholarly communication education activities.

Several job titles use the term "scholarly" including Scholarly Communication Librarian, Scholarly Outreach Librarian or Scholarly Resources Librarian while others use the term "digital" including Digital Initiatives and Scholarly Communications Librarian, Digital Services Librarian, and Digital Repository Librarian. Some job titles denoted a combination of scholarly communication responsibilities with other library functions such as Cataloger and Digital Commons Librarian, Special Collections and Archives Librarian, Coordinator for Acquisitions and Electronic Resources, Instruction Librarian, Outreach Librarian (who is responsible for scholarly outreach and community development) and Science Subject Specialist. Twenty-four libraries reported that the library director was primarily responsible for scholarly communication education initiatives, some spending 15–20% of their time on such activities, and others spending minimal amounts of time (5% or less). Several respondents indicated that the responsibility for scholarly communication education activities is shared among select staff such as the Digital Initiatives Librarian who had success getting the masters' theses into the institutional repository and the Periodicals Librarian who presented to faculty on open access and self-archiving in one library. In another library, their Discovery Systems Department is responsible for the institutional repository while the Information Literacy librarians take care of intellectual property education. In some cases, all librarians participate either formally or through informal contact with faculty. For those respondents who use groups reporting to the library, most groups have five to six members. Five respon-

dents reported having members from outside the library. Some libraries have well-defined structures. For example, one respondent reported the existence of a digital assets management group consisting of librarians and IT staff, a scholarly communication working group of library staff and a scholarly publishing committee of faculty, library staff and a student. Several libraries indicated that these initiatives are covered by another group within the library, such as the assessment committee, or that the library's management team is responsible for scholarly communication initiatives. With regard to groups/committees/task forces that report outside of the library but include library staff, a variety of configurations exist including those with a focus on information technology or research and scholarship. In some cases, the institution's faculty governing body has charged a committee with this task. Chairs of these groups include the Associate Provost for Scholarship, the Chief Information Officer, the Director of the Center for Excellence in Teaching, Learning and Assessment, and the Library Director.

Scholarly Communication Education Initiatives

This part of the survey asked about educational activities and their intended audiences such as faculty, non-faculty researchers, administrators, graduate students, undergraduate students, and librarians and other library staff. Twelve topics related to scholarly communication were listed so that respondents could report which issues they covered for each audience:

- Economics of scholarly publishing
- Author rights management
- Contributing to digital repositories
- Benefits and examples of open access journals
- Implications for teaching of giving away copyright
- Author activism (e.g. refusing to publish in expensive journals)
- Future of scholarly society publishing
- Impact of new models on peer review, promotion and tenure, etc.
- National/international public access developments such as Federal Research Public Access Act of 2006, NIH policy, etc.
- Editor activism (e.g. working within scholarly societies to improve access to articles)
- Future of the scholarly monograph
- Disciplinary differences in communication practices

The survey also asked respondents to report their use of and to assess the efficacy of several listed delivery methods with the various audiences. A total of 77 institutions responded to this section and there was a very wide variability in numbers of answers to specific questions, with a low of seven. Three Very Small institutions, 29 Small, 33 Medium and 12 Large institutions began this section. Only one Very Small school reported scholarly communication educational activities for faculty but provided no further information such, as topics or methods and reported nothing for any other audience. Among all institutions, the most commonly addressed topics were benefits and examples of open access journals, contributing to digital repositories, author rights management, and economics of scholarly publishing. The most common delivery methods were one-on-one conversations and formal group presentations.

Faculty

Forty-eight respondents (62.3%) have addressed educational efforts with all faculty while only four (5.2%) report targeting faculty from specific departments. Identified disciplines include science, education, nursing, psychology, engineering and philosophy. More than two-thirds of respondents addressed author rights management, contributing to digital repositories, and benefits and examples of open access journals. The next most common pair included the implications for teaching of giving away copyright and the economics of scholarly publishing at about 60% each. The future of scholarly society publishing; the impact of new models of peer review, promotion and tenure, etc.; and national/international public access developments were each covered by just over 50% of respondents. The least-addressed topic was editor activism. Medium institutions were the only size for which the teaching implications of giving away copyright was in the highest grouping of topics addressed, although it was not uncommon in the other subgroups. One-on-one conversations were the most commonly used as well as the most effective method with 41% of respondents characterizing them as somewhat or most effective. Formal group presentations followed with 32%, then informal group discussions at 27%. Brochures and other documents were the least used method, and newsletter articles were deemed least effective. Methods did not differ by size of institution although the other methods used, podcasts and poster sessions, were both reported by Large institutions.

Non-faculty Researchers

Non-faculty researchers are not a common audience for scholarly communication educational efforts, with only 14 institutions addressing this group. Since the ARL results also show a dip in the number of respondents answering this question, this may not be a size factor but rather reflect that this population is relatively small. The most frequently covered topic was benefits and examples of open access journals by 38% followed by contributing to digital repositories, economics of scholarly publishing, and author rights management, each at approximately 30%. Medium institutions again emphasized the teaching implications of giving copyright relative to other sizes. The most effective methods also match the results for faculty with one-to-one conversations and formal group presentations judged most or somewhat effective by 42% and 31%, respectively. Brochures and other documents rated as least effective while e-mail messages were the least used. All Large institutions rated one-on-one conversations as most or somewhat effective and were more likely to use web pages to reach this audience.

Institutional Administrators

With this audience, institutions were much more likely to target specific administrators (42% of respondents) rather than all administrators (16%). The academic-side administrators such as Provost, Vice President for Academic Affairs, Deans and Department Chairs were most often named but President, President's Cabinet and Chief Financial Officer were reported by a few respondents. The topic most often covered with administrators was contributing to digital repositories, with 44% targeting specific administrators and 29% addressing all administrators. Other commonly-addressed topics were benefits and examples of open access journals, author rights management, economics of scholarly publishing, and the future of scholarly society publishing. For this audience, Medium and Large institutions covered the most popular topics at similar rates ranging from 25% to 36%. One exception was contributing to digital repositories, covered by 47% (the highest of any topic) of Medium versus 30% of Large institutions, reflecting the finding reported above that Medium institutions are more likely to be in the planning stages of institutional repositories than are Large universities. A popular topic at Medium institutions with 44% was the implications for teaching of giving away copyright. ARL institutions were much more likely to address administrators, with popular topics being addressed by 89–98% of respondents. Once again the most used and most successful method was one-on-one conversations with 57% rating it as somewhat or most effective. Formal group presentations and informal group discussions followed in rank in each regard. The least used and least effective method employed with administrators was web pages. One respondent wrote, "We will make presentations to the administration once content is in the IR. They need to see actual examples." Attitudes of institutional leaders can drive scholarly communication forward regardless of size. A Small institution reported, "Our new president is an economist. One 15-minute conversation with him was all it took," and this comment came from a Large institution, "The Provost is a leader in this area and an educator rather than an educatee."

Graduate Students

Virtually all responses were from Medium and Large institutions, and the overall trend of larger institutions being more likely to engage in scholarly communication educational activities held true with this audience. The most commonly addressed topics were the benefits and examples of open access journals, contributing to digital repositories, and author rights management, with 58% of Medium, 70–80% of Large, and 100% of ARL institutions covering all three. The economics of scholarly publishing followed this pattern for Large and ARL institutions but was addressed by only 25% of Medium institutions. Some respondents reported addressing the issue of electronic theses and dissertations or using contact with graduate students when they were writing their dissertations or theses, via either workshops or consultations, as an opportunity to raise scholarly communication issues with this population. The least common topic was editor activism. Only one Small institution addressed this audience but had a positive experience with their education students, stating, "We have an MAT program, and have encouraged students to share their work via our repository. They have used it for sharing curricular plans and have had many, many hits. They love it." The delivery methods judged most or somewhat effective were formal group presentations with 38%, closely followed by one-on-one conversations at 35%. Large institutions again used web pages to ad-

dress this audience more than other sized institutions. One Large institution included a very positive report: "Our graduate students have been in the forefront of lobbying for required deposit for all government sponsored research."

Undergraduate Students

Thirty-six percent of respondents targeted all undergraduate students, and four percent focused on specific groups such as distance students and freshmen. Contributing to digital repositories was covered by 44% and benefits and examples of open access journals by 43%. Author rights management, economics of scholarly publishing—again driven by Large institutions—and implications for teaching of giving away copyright were other popular topics. ARL institutions reported remarkable coverage for this audience, with eleven topics (excluding only the impact of new models on peer review, P&T, etc.) being addressed by 83–100%. One respondent reported that "[w]ork has been primarily with student senate on issues of federal policy—e.g., Federal Research Public Access Act." Impact of new models on peer review, promotion and tenure, etc.; author activism; and the future of the scholarly monograph were least often covered with undergraduates.

Librarians and Other Library Staff

All library personnel were targeted for scholarly communication educational activities by 58% of respondents while 17% targeted subgroups, generally librarians, subject liaisons or specific departments. Not surprisingly, more topics were covered with this internal audience than for any other group. Eleven of the 12 listed topics were covered by more than half of the respondents, with even the perennial last place finisher, editor activism, still making 47%. The most popular topic was benefits and examples of open access journals at 80%. More than 70% addressed contributing to digital repositories, author rights management, economics of scholarly publishing, future of scholarly society publishing, and the future of the scholarly monograph. The typical association between size and scholarly communication education was seen in this audience as well. The most commonly used method (reported by 82%) and the method viewed as most valuable (70% reporting most or somewhat effective) was informal group discussions. One-on-one conversations and formal group presentations round out the usual 'top three' in both measures. The least used method was newsletter articles and the least effective was brochures. Webinars were included by two respondents and judged somewhat effective.

Other Audience

Only seven institutions answered this question. Two cited the Board of Trustees as the group being addressed. Nearly all of them (6 or 86%) covered contributing to digital repositories and the economics of scholarly publishing. Four (57%) addressed the future of scholarly society publishing and three (43%) included author rights management and benefits and examples of open access journals. The most effective method was formal group presentations with 4 (21%) followed by one-on-one conversations and informal group discussions.

Collaborative Activities

To the question of whether activities have been undertaken or are being planned by the library in collaboration with the faculty governance body at the institution, more than half of the respondents (52%) made presentations to the faculty governance body. Forty percent developed policy statements and sponsored education programs while 28% proposed resolutions and/or reported to the body. Among the ARL institutions surveyed in 2007, the same three collaborative activities were most often undertaken, with 62% making presentations to the governing body, 49% reporting to the body, and 40% developing policy statements.

Most Effective Activities

When asked to identify the scholarly communication education activities that have been particularly effective at their institution, the most common response was open access and institutional repositories, followed closely by authors' rights and economic concerns such as budget and the cost of journals. A couple of institutions reported sharing information on journal inflation as it happens. One respondent listed discussing open access issues in the context of a serials cancellation and another framed the issue as, "Who will control the product of 'your' scholarship." The format most often listed as effective was formal group presentations, followed by workshops/seminars/symposia and discussions associated with social events such as lunches or teas. Departmental meet-

ings and discussions were also mentioned as effective venues.

Assessment/Outcomes

While only six libraries reported that their scholarly communication education activities had been evaluated using surveys and informal feedback, many libraries reported positive outcomes as a result of their scholarly communication education activities. These included:

- Open access mandates or other faculty resolutions
- Start of an open access journal by the faculty
- Increased adoption of Creative Commons attribution-only licenses
- Launch of a campus open access fund
- Increased deposit in the institutional repository
- Graduate students designating their theses and dissertations as open access
- Greater campus awareness of scholarly communication issues
- Increased visibility of the library as the resource for issues related to open access and scholarly communication.

Challenges

The survey asked about challenges the institutions faced in educating users and library staff on scholarly communication issues. It asked who presented challenges and asked for categories as well. The group most often cited (16 times) as a challenge was faculty, followed by librarians and 'everyone,' each with five, and administrators with four. Eight respondents categorized their challenge as faculty doubts about open access such as quality, peer review and prestige. Six listed apathy and the same number reported a lack of time, either on the part of the library staff or the faculty. Three frustrated respondents listed 'everything' as the biggest challenge.

Challenges or barriers to the promotion of scholarly communication issues often stem from lack of staff and resources coupled with other pressing issues that libraries face such as building projects, reaccreditation, and the push to integrate information literacy into the curriculum. Many institutions are not research focused, and with faculty members occupied primarily with teaching, there is little interest in these issues. Lack of interest can be at any level. For example, librarians may be providing scholarly communication related education, but faculty are not interested or there is some interest from individual faculty but nothing on the institutional level. ARL institutions also cited lack of funding, staffing and faculty interest as major challenges, but unlike small and medium-sized institutions, faculty concerns related to promotion and tenure were also significant. Another area identified by ARL institutions was the challenge presented by the complex nature of scholarly communication issues. Perhaps these issues are now better understood, and resources on the issues are more plentiful and widely available. In some cases, there needs to be buy-in not only from the faculty but also the librarians. Furthermore, a major change generally is met with a certain level of resistance. One respondent indicated that an increased awareness of copyright issues may provide the impetus while another stated that it may take some serious budget cuts to bring scholarly communication to the surface. Sometimes it just takes persistence. One library reported that the faculty at their institution needs to hear something multiple times before it sinks in so they continue meeting with them and talking to them one-on-one. The climate of the institution also informs the strategy that will be most effective. For instance, one respondent indicated that the library can plant the seed, but such an initiative must come from the faculty. Another indicated that top down ideas do not work at their institution so grassroots efforts must be used. At one institution, scholarly communication has been elevated to a university issue; however, the issue has stalled on the university level and had not been given attention by the library since it is not within its purview.

Conclusion

The survey results show that small and medium-sized institutions are less likely to engage in activities related to scholarly communication including education initiatives, the creation of institutional repositories and the passage of open access mandates/resolutions as compared to larger institutions that participated either in this study or the 2007 survey of ARL institutions. Since the ARL survey was conducted three years earlier, it can be assumed that most of those respondents are now further along in their scholarly communication efforts and there is even a greater difference between those institutions and small and medium-sized institutions who participated in this study.

In order to combat the notion that scholarly communication issues are not relevant since their focus is teaching rather than research, small and medium-sized institutions need to emphasize the importance of increased access to research in support of teaching and learning on their campuses. The library profession must continue to raise awareness of the issues with all libraries but with a greater focus on smaller institutions. Libraries must educate their librarians and library staff on scholarly communication issues and then encourage them to engage in one-on-one conversations with faculty, students and administrators which have been identified as the most effective method. This can be accomplished without a significant amount of funding or staff time, which is vital since a lack of resources and staff time remains a challenge for institutions regardless of size. Small and medium-sized institutions comprise a significant number of academic institutions. For the transformation of scholarly publishing to succeed, it is imperative that small and medium institutions are actively engaged in scholarly communication initiatives.

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