Faculty Adoption of Open Access Publishing in the University System of Georgia

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Keywords: open access, institutional repository development, diffusion of innovation, faculty

Introduction

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cholarly communication has changed dramatically since the development of the Internet. The ability to publish, access and store scholarly works digitally has transformed not only how libraries store information, but how academic research is published. Libraries, traditionally storehouses of print publications, are expanding services by collecting digital content and are becoming content providers by digitizing archival and special collections. By providing access to electronic documents, libraries are adding to the choice and diversity of scholarly publishing. Different models are being developed to provide access, manage costs and manage the scholarly output of institutions – especially at colleges and universities providing faculty members with multiple avenues for publishing the research that they do.

Scholarly Communication

Electronic publishing and electronic access have wrought tremendous changes in scholarly communication. In the traditional model, researchers submitted scholarly articles to publishers and frequently signed away any copyright control in order to publish. Scholarly publishers then sell the content back to the academic community, primarily libraries, through print and now electronic journal subscriptions. The development of the Internet and the use of electronic documents that can be stored online have changed the way researchers share and publish material. Researchers can easily email articles and papers directly to a colleague or post copies in online repositories to share within a scholarly community. Organizations and groups have developed to assist researchers and promote free access to scholarly materials.

The Scholarly Publishing and Academic Resources Coalition (SPARC), the Open Archives Initiative (OAI), and the Budapest Open Access Initiative have been established to bring about change in scholarly publishing. SPARC, a coalition of academic and research libraries, was developed to be “…a constructive response to market dysfunctions in the scholarly communication system” (SPARC, 2006). As such, SPARC is focusing on access to peer-reviewed scholarship, promoting open access, and the retention of copyright by authors. “…[S]upporting the emergence of new scholarly communication models that expand the dissemination of scholarly research and reduce financial pressures on libraries and create a more open system of scholarly communications,” SPARC continues to “promote changes to infrastructure and culture” that advance an open system of scholarly communication (SPARC, 2013). OAI, seeks to “facilitate the efficient dissemination of content,” focusing on the technology and standards necessary to promote access to scholarly information (OAI, n.d.). The Budapest Open Access Initiative was formed in 2001 to “accelerate progress in the international effort to make research articles in all academic fields freely available on the Internet” (Budapest, n.d.). Together these organizations are working to provide free standardized access to scholarly communication through the development of repositories and repository software, one solution to manage this scholarly output.

Open Access

Faculty members may choose to share scholarly works through an open access repository or through an individual website or blog. Essentially, a repository is a digital library of scholarly content that is freely available. Materials may be placed in a subject repository hosted by a scholarly association or in an institutional repository (IR), hosted by a college, university, or research organization. In addition formal repositories, many researchers host or post their own works on a personal website that may be associated with the university or belong to the individual faculty member.

According to Suber (2005), self-archiving, whether through an IR or through the web, allows authors to expand access to their works, by providing additional access points. High impact journals are more likely to permit authors to self-archive, though the article is usually a pre-print or post-print rather than an electronic copy in Portable Document Format (PDF) of the original document (Suber, 2005). Harnad and Brody (2004) found more than 50% of publishers identified by the RoMEO Project (Rights MEtadata for Open archiving) allowed authors to self-archive. Wren (2005) found correlation between a journal’s impact factor and the availability of its articles on the web. Harnad and Brody (2004) also found that OA articles were more frequently cited in physics. Publications are increasingly available online, posted through repositories, personal web sites or publisher sites. With enhanced access, it becomes even more important to place items in a digital collection. By incorporating faculty publications in an IR, not only is the article provided the benefits of metadata and preservation, but the article is placed in context among a faculty member’s publications. This level of indexing and preservation is usually not delivered from a personal web site.

Publishers have embraced two models of open access publishing: Green and Gold. Scholarly materials may be posted to an open repository under the Green model, while the Gold model requires the author or an organization to pay a fee to post content to a repository. The Gold model does allow publishers to recoup costs associated with publication; however it creates a financial burden on the author or an organization especially if there is an institutional mandate to publish in an open access repository (Morgan, Campbell and Teleen, 2012).

Faculty Perceptions of Open Access

Nichols and Rowland (2005) found that the more faculty published, the more frequently they turned to open access resources. It is unclear whether the faculty saw a benefit to publishing via an open access channel or if the faculty member had the freedom to choose where he or she published after gaining tenure. Coonan (2011) examined the open access publishing habits of business faculty members in the United States found that the difference between online and open access was not always clear to faculty. Faculty members were also unable to make a distinction between open access, freely available articles, and self-archiving, placing one’s articles online on a website or blog. In addition to conceptual difficulties, Kim (2010) and Shen (2011) identified additional barriers to depositing materials in an open access repository. Copyright concerns and the extra time and effort it takes to add content were frequently identified by faculty (Kim, 2010). Shen (2011) found that fees negatively impacted open access journals, but that a majority of faculty surveyed had published in an open access resource.

While the open access movement has been gaining support over the last decade, there are still barriers to adoption. Faculty have to become more aware of publishing options and their rights as authors. If an institutional repository is developed at a college or university, faculty, librarians and staff have to work together to collect the scholarly output of an organization.

The GALILEO Knowledge Repository

The GALILEO Knowledge Repository (GKR) is an IMLS grant funded project that seeks to develop an open access repository umbrella for the University System of Georgia colleges and universities. The GKR initative developed the infrastructure, policies and support of branded repositories at multiple institutions. Despite libraries and organizations in the USG system holding activities aimed at educating authors and showcasing open access, faculty participation with the project has not met anticipated goals. A survey associated with the grant initiative gathered data about the issues associated with open access and author rights, identify faculty already publishing in open access journals, and ascertain their use and perceptions of institutional repositories.

Methodology

Based partly on Rowlands and Nicholas (2005) and Rowlands, Nicholas and Huntingdon (2004), the questionnaire will contain specific questions based on the respondent’s role within the university (administration, faculty, librarian). The survey will include questions about open access publishing, author rights, and usage.

All of the faculty members at 35 colleges and universities in Georgia (four research universities, two regional universities, 13 state universities, eight state colleges, and eight two-year colleges) were included in the potential study population. According to a 2008 report, the university system employed 11,654 faculty members. The Vice Chancellor for Academic Affairs for the USG sent an initial email to college and university VPAAs with a survey link and a letter describing the GKR project. Follow up emails were sent to library directors on each campus. The survey was available for forty-five days and closed April 30, 2012.

Research Questions

1. To what extent do faculty in the USG publish in open access journals or repositories?

2. To what extent are faculty aware of the individual rights of authors?

3. Who is publishing in open access journals and repositories?

USG Faculty Participant Demographics

Released during the Spring Semester of 2012, 674 respondents began the survey. 80% (539) of the surveys are considered complete by SurveyMonkey, the survey tool used for the project. Responses were received from 26 of the 35 USG colleges and universities. Since the survey, the USG has combined several campuses.

Ten partner sites were identified in the IMLS grant: Albany State University, College of Coastal Georgia, Georgia Gwinnett College, Georgia Health Sciences University (Identified as Medical College of Georgia in USG documents), Georgia Institute of Technology, Georgia Southern University, Georgia State University, Kennesaw State University, University of Georgia and Valdosta State University (Table 1.1). Statistics will be provided for both the Partner Sites and for all USG institutions in this report. Fifty percent of the participants were from Partner Sites.

Table 1.1: Partner Institution Participation

|  |  |  |  |
| --- | --- | --- | --- |
| Institution | USG Description | Total Number of Responses (n=339) | Percentage of Partner Responses |
| Albany State University | State University | 5 | 1.5% |
| College of Coastal Georgia | State College | 21 | 6.2% |
| Georgia Gwinnett College | State College | 1 | 0.3% |
| Georgia Health Science University | Research University | 47 | 13.9% |
| Georgia Institute of Technology | Research University | 59 | 17.4% |
| Georgia Southern University | Regional University | 34 | 10.0% |
| Georgia State University | Research University | 1 | 0.3% |
| Kennesaw State University | State University | 59 | 17.4% |
| University of Georgia | Research University | 77 | 22.7% |
| Valdosta University | Regional University | 35 | 10.3% |

Source: University System of Georgia. (2009).

Based on the initial number of participants, the confidence interval at 95% confidence is 3.66. Faculty respondents identified rank (Table 1.2) and age (Table 1.3) for demographics. In both the Partner Sites and for All Participants, the greatest number of faculty participants were Professors (28.16% and 27.60%), followed by Associate Professors (25.57% and 24.93%) and Assistant Professors (22.65% and 24.33%).

Table 1.2: Survey Participants by Rank

|  |  |  |
| --- | --- | --- |
|  | *Partner Sites*  *(n=337)* | *All Participants*  *(n=674)* |
| *Professor* | 113 (33.53%) | 186 (27.60%) |
| *Associate Professor* | 81 (24.04%) | 168 (24.93%) |
| *Assistant Professor* | 70 (20.77%) | 164 (24.33%) |
| *Instructor* | 25 (7.42%) | 81 (12.02%) |
| *Other* | 48 (14.24%) | 75 (11.13%) |

Respondents self-identified Other (Table 1.2) as graduate students, professors of practice, administrators, research scientists, emeritus professors and librarians.

Table 1.3: Survey Participants by Age

|  |  |  |
| --- | --- | --- |
|  | *Partner Sites*  *(n=328)* | *All Participants*  *(n=662)* |
| *Under 26* | 2 (0.61%) | 2 (0.30%) |
| *26-35* | 42 (12.80%) | 87 (13.14%) |
| *36-45* | 85 (25.91%) | 176 (26.59%) |
| *46-55* | 91 (27.74%) | 182 (27.49%) |
| *56-65* | 90 (27.44%) | 182 (27.49%) |
| *Over 65* | 18 (5.49%) | 33 (4.98%) |

In addition to collecting basic demographic information, faculty respondents were asked about the GKR project. For All Participants as well as Partner Sites, 80% of respondents were not aware of the project. While the survey may be the first introduction faculty members have had to the GKR Project, it provided faculty with an opportunity to reflect on their individual scholarly communication practices.

Table 1.4: Faculty Awareness of the GKR initiative

|  |  |  |
| --- | --- | --- |
| ***Prior to this survey, were you aware or the GKR initiative? Check all that apply*** | | |
|  | *Partner Responses Percentage (n=280)* | *All Responses Percentage*  *(n=536)* |
| *Yes, I am involved in the project* | 3.9% | 2.4% |
| *Yes, I read about it in the AJC* | 0.4% | 0.9% |
| *Yes, I saw a conference presentation about the project* | 1.4% | 2.2% |
| *Yes, I have heard people talk about it on campus* | 15.4% | 15.5% |
| *No, I didn’t know about the project* | 80.7% | 81.2% |

Despite several years of work at the Partner Sites, very few participants were aware of the initiative to develop a repository on campus. According to the results, 81.2% of faculty (95% CI, 77.07, 85.33) of faculty did not know about the project. During the previous two years, an article about the grant initiative appeared in the Atlanta Journal Constitution (AJC). Many campus libraries presented information about the project or open access publishing. If faculty are not aware of local open access initiatives, what are their perceptions of the open access movement? Why are they not aware of the initiative?

USG Faculty Experiences with Open Access

While faculty members were not aware of the GKR project, 32.6% of respondents had knowingly shared materials in an open access repository (Table 1.5).One hundred and sixty-six faculty members reported publishing in open access journals and repositories. The majority of respondents (41.6%) publishing in open access resources were from research institutions (University of Georgia, Georgia Institute of Technology and Georgia Health Sciences University). Scientific communities were among the first to adopt open access practices, with the focus on doctoral research and medical information, it was expected that the participant group would have a larger percentage of faculty aware of open access publishing options.

Table 1.5 Faculty open access publishing habits

|  |  |  |
| --- | --- | --- |
| ***Prior to this survey, were you aware or the GKR initiative? Check all that apply*** | | |
|  | *Partner Responses Percentage (n=316)* | *All Responses Percentage*  *(n=590)* |
| *Yes, I publish in open access journals whenever possible* | 18.2% | 10.2% |
| *Yes, I deposit conference materials in open access repositories* | 11.2% | 8.8% |
| *Yes, I publish an deposit in open access repositories, but it is not a major issue for me* | 20.5% | 13.6% |
| *No* | 60.9% | 57.6% |
| *I don’t know* | 11.6% | 9.8% |

In addition, faculty were asked about publishing to an institutional repository. Universities and colleges have been collected materials from faculty and students for more than ten years. With over 300 active repositories in higher education in the United States alone, it is expected that some faculty will have submitted dissertations, articles or slides to a repository at some point in their careers. However, 72.6% of participants had not deposited any materials and only 14.4% voluntarily deposited materials in a repository (Table 1.6).

Table 1.6: Survey Participants Open Access Publishing Habits

|  |  |  |
| --- | --- | --- |
| Prior to this survey, were you aware or the GKR initiative? Check all that apply | | |
|  | *Partner Responses Percentage (n=278)* | *All Responses Percentage*  *(n=533)* |
| *Yes, I did so voluntarily* | 17.3% | 14.4% |
| *Yes, I was required to do so* | 11.5% | 12.9% |
| *No* | 71.2% | 72.6% |

Before posting to a repository or sharing materials online through the internet, it is important to understand what agreements are in place with between authors and publishers. With the different types of open access agreements (green or gold) and the type of materials that can published in a repository (pre-prints or post-prints), authors have to be aware of what rights they hold when signing copyright agreements. While 79.1% of respondents took a detailed interest or some interest in the agreement, reading the agreement does not necessarily mean understanding one’s rights (Table 1.7).

Table 1.7: Reading Copyright Agreements for Published Articles

|  |  |  |
| --- | --- | --- |
|  | *Partner Sites*  *Percentage*  *(n=303)* | *All Participants*  *Percentage*  *(n=554)* |
| *I took a detailed interest* | 22.8% | 24.5% |
| *I took some interest* | 57.8% | 54.5% |
| *I took no interest* | 19.5% | 20.9% |

USG Faculty Publishing in Open Access Journals or Repositories

The majority of faculty members in the USG system who publish in OA resources are tenured professors. Of the 174 participants who publish in an OA resource, 34.5% were Professors and 23.0% were associate professors (Table 1.8). With tenure, faculty members have more flexibility to choose where they are going to publish and how. Junior faculty, on the other hand, may be more interested in getting research published than in publishing in an open access journal or they may be required to publish in journals identified by their school or department. Faculty participants were asked to identify frequently used open access resources to verify understanding of the concept. Many of the resources identified were in fact fee-based resources, like JSTOR and SAGE, but faculty did identify open access journals, projects and government documents.

Table 1.8: OA Publishing by Rank

|  |  |
| --- | --- |
|  | *Rank of all faculty participants who publish in OA resources (percentage; n=174)* |
| *Professor* | 34.5% |
| *Associate Professor* | 23.0% |
| *Assistant Professor* | 21.8% |
| *Instructor* | 6.3% |
| *Other* | 14.4% |

USG Faculty Perceptions of Open Access

In the survey, USG faculty participants answered several questions about open access publications and publishing. 51.4% Strongly Agreed or Agreed that fewer articles would be rejected in an open access journal. 47.1% either Disagreed or Strongly Disagreed that article quality would improve with open access publishing. More than 30% Agreed or Strongly Agreed that articles would become less concise. In other words, open access leads to an increase in the quantity of articles and quality may suffer.

Despite the growth in open access publishing options, a majority of USG survey participants associate open access journals with “predatory publishers” or “author pays to publish”. Faculty do not associate (30.9% of the partner responses and 25.9% of all responses) high quality with open access journals. More than half of respondents quite strongly associated or very strongly associated “no hard copy journal” with open access journal.

Adoption and Diffusion of Innovation

As new technologies and practices are introduced, they are adopted by members of a community over time. According to Rogers (2003), adoption of an innovation is divided into five categories: Innovators, Early Adopters, Early Majority, Late Majority, and Laggards. In a normal distribution, the first 2.5% of adopters are considered Innovators while the following 13.5% are the Early Adopters. Early Majority (34%) and the Late Majority (34%) fall in the center of the distribution. The Laggards compose the final 16% in the distribution’s tail. The process of adoption over time can be represented by a bell curve or a normal distribution. Based on the participant surveys, 28.1% (95% CI, 24.2, 32.1) of USG faculty members are publishing in open access journals or repositories placing adoption of open access publishing at the Early Majority stage. However, individual adoption and author submission of articles does not correlate to GKR publishing habits.

Interpersonal relationships may affect adoption rate because interpersonal networks and relationships increase diffusion (Rogers, 2003). Those developing the repositories, liaison librarians identifying content, and faculty may or may not have relationships with each other. This may be especially true if the repository project is located in technical services or a systems department with in the library that does not regularly interact with faculty members. Repository developers from these areas need to develop relationships with other librarians and faculty; relationships that may not have been necessary before repository development.

Starkweather and Wallin (1999) examined faculty adoption and use of computer technologies in libraries. They found that late majority faculty “preferred to learn about new technologies only when they actually needed them” (Starkweather & Wallin, 1999, p.660). If this preference is true for institutional repositories, some faculty may never participate in a collection because the current scholarly publishing outlets serve their needs. On the other hand, faculty may be unwilling to submit items to the repository based on perceived attributes (Rogers, 2003). Submission menus can be complex and difficult to understand and the organizational system difficult to follow. Submitting articles is an additional task to be added to a workflow after publication. Without an institutional mandate, institutional reward or a simple structure for submission, depositing materials in the repository is not a high priority for faculty members. In addition, faculty may submit materials to a subject repository, placing research articles with a scholarly research community rather than an institutional one. At many sites, GKR administrators are loading items for faculty and easing the process. Some administrators are capturing content on websites or in other open access repositories for inclusion, by-passing faculty.

Explicitness may affect adoption (Rogers, 2003). The goals and rationale of the repository and open access publishing may not be clear to faculty and, thus, not a priority. While the advantage for faculty is higher citation rates, these benefits may not be observable at the outset (Harnad and Brody, 2004). The motivating factors for developing a repository are not very explicit, and few sites have developed a narrative to explain what the repository is and why faculty should consider open access publishing (Campbell-Meier, 2008).

Conclusions

Bridging Gaps Between Librarians and Faculty

On college and university campuses, open access initiatives are often developed from a library perspective. Traditionally, libraries have been seen as a storehouse of information, not as a publisher. While librarians have clearly identified the benefits for using and adopting open access practices, many faculty members are not necessarily aware of the open access opportunities publishing available (Campbell-Meier, 2008). Starkweather and Wallin (1999) examined faculty adoption and use of computer technologies in libraries. They found that late majority faculty “preferred to learn about new technologies only when they actually needed them” (Starkweather & Wallin, 1999, p.660). If this preference is true for institutional repositories, some faculty may never participate in a collection because the current scholarly publishing outlets serve their needs.

Educational opportunities may be developed from the library, a scholarly communications office or through a center for teaching and learning on a university campus. These educational opportunities should cover topics such as author rights and the identification of high quality open access materials. Frequently faculty members are unaware of their rights within publisher agreements and are not sure whether they can archive your work online or share it with colleagues and students. The open access publishing landscape is complicated. Journals may be considered green, gold or require authors to pay additional fees to allow posting of accepted articles in repositories. Quality online journals are available open access and many traditional scholarly publishers offer open access journals in parallel with their traditional subscription-based journals. Identifying resources like the Directory of Open Access Journals, a list of thousands of open access journals, or SHERPA ROMEO, a tool that allows users to search for publisher copyright and self-archiving policies.

There is faculty support for open access resources, like repositories within the USG system and faculty support the collection of scholarly works. With education and support from repository developers on a campus, as well as university administration, open access publishing can flourish within the USG system. However, without mandates it is unclear whether faculty members within the USG system will adopt this new publishing practice. Instead, of focusing on faculty submissions, library systems may need to expand programs that identify open access research published by university faculty in other venues.

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