Developing an Institutional Repository at a Medium-Sized University: Getting Started and Going Forward

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Abstract:
Valdosta State University (VSU) has worked for two years to implement an institutional repository (IR), Vtext, to centralize, present, and preserve the intellectual output of our scholars and students in ways not currently supported by traditional library and publication models. To investigate VSU faculty members' scholarly communication behavior and attitudes toward institutional repositories, a survey questionnaire was distributed which showed a rich vein of unpublished scholarly materials that needs to be preserved and disseminated via the IR and revealed faculty members' willingness to participate in the initiative.

Article:
INTRODUCTION
The development of Institutional Repositories (IRs) began about a decade ago with the release of an open source repository software called Eprints from the University of Southampton in UK. It was soon followed by a more general-purpose open source IR software, DSpace, developed by the Massachusetts of Institute of Technology and Hewlett Packard in late 2002. These two platforms are the most commonly used software packages to implement IRs today("Repository maps," 2011).

Lynch (2003) defines an IR as "a set of services that a university offers to the members of its community for the management and dissemination of digital materials created by the institution and its community members." Therefore, an institutional repository is a web-based collection of digital materials that represent intellectual capital of an institution or organization. This intellectual capital may range from scholarly contributions made by faculty and students including pre-prints, journal articles, conference presentations, data sets, theses and dissertations, or term papers to publications made by the institutions including newsletters, catalogs, or other documentation (Lynch, 2003). An IR is not just the software and server; its content and the policies that govern and promote an IR are major determinants for its success. Crow (2002) identifies four essential characteristics of an IR: it must be (1) institutionally defined, (2) scholarly, (3) cumulative and perpetual, and (4) open and interoperable.

Institutionally defined:
An institutional repository is first defined by the institution's commitment to take stewardship of its digital scholarship and intellectual assets (Crow, 2002; Lynch 2003). Although IRs are often defined institutionally, they can also be disciplinary (e.g., arXiv.org, RePEc.org). IRs also act as a

marketing tool in improving an institution's visibility by exposing its intellectual assets to a broader audience while improving long term access to materials such as gray literature (Drake, 2004).

Scholarly:

Although early IR creators saw the IR as a way to capture pre-print scholarship as a response to the burgeoning cost of commercially published scholarly materials, today content of IRs includes not only pre-prints but also a wide array of materials with a special emphasis on gray literature. Materials such as conference presentations, course materials, or technical reports often not published in traditional venues are considered gray literature. Large and small institutions differ in the kinds of digital materials they hold in their IRs: about forty-two percent of large and very large institutions held pre-prints in their repositories while about seven percent of smaller institutions held such materials (Housewright & Schonfeld, 2008). Ironically, in a return to original IR goals, the scholarly communication landscape is being transformed by IRs. Today, an increasing number of publishers of scholarly works offer more IR-friendly copyright policies (SHERPA, 2011).

Cumulative and Perpetual:

Since the goal of the IR is to capture the intellectual assets of the institution over time, policies related to submission, collection management, and copyright are critical in establishing an IR. The institution has to commit the resources needed for perpetual maintenance of these assets (Crow, 2002).

Open and Interoperable:

Without open access, the IR would fail in its main goal of institutional visibility through demonstrated academic quality. Thus making the content available through easily accessed search engines is critical. Also, IRs should support commonly accepted open standards such as the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH) and Search and Retrieve URL (SRU) to enhance interoperability.

PROJECT OVERVIEW

Valdosta State University (VSU), part of the University System of Georgia, is a regional university in South Georgia with programs from the undergraduate the doctorate level. VSU has a faculty of 545 and about one-fourth of faculty has part-time status. Twelve thousand students are enrolled in undergraduate and graduate programs in the university ("About VSU," 2010). VSU, as a teaching-oriented institution, is classified as “medium four-year” under the Size category and “Master's L: Master's Colleges and Universities (larger programs)” under the basic Carnegie classification.

Several problems emerged to lead VSU towards the solution of an Institutional Repository: informal conversations about electronic records with the library staff and the Master of Library and Information Science (MLIS) faculty; a pressing lack of standards-based, reliable strategies to preserve and disseminate the VSU community’s intellectual output, including theses and dissertations; and challenges exposed by VSU’s migration to a new web publishing platform, such as loss of data and scholarly materials.

After articulating the need for an IR at VSU, a pilot project was initiated in 2007 as a collaborative effort by the Odum Library and the MLIS Program. DSpace was selected as the IR software for the project. This was a logical choice, as DSpace is the most commonly used IR platform across University System of Georgia institutions, including Georgia Tech and University of Georgia. Budgetary concerns also ratified the decision to use an open source platform as the project initially received no funding for hardware and software. The last element that led to the adoption of DSpace was the high quality of support that has developed over the years from the DSpace community.

The VSU repository (Vtext, http://vtext.valdosta.edu) project has taken certain steps to implement an IR that can serve as a model to other institutions with similar characteristics, especially smaller and mid-size institutions operating on a strict budget. The process began by identifying willing parties within the library and evaluating how their skills could be best applied to the project. Next, the current web content at VSU was surveyed to identify candidate materials that could be used in the repository. Because VSU is not a large research institution, teaching materials were also identified as a potential source of content.

Odum Library provided a test server to experiment with DSpace software and technical support for the software. The next step was to develop policies and procedures for the repository. Policy development can potentially be one of the more time-consuming steps in setting up a repository. The Vtext team reviewed policies of other repositories and adapted them with permission where appropriate: VSU adopted the GALILEO Knowledge Repository (GKR) metadata guidelines[1] and policies from the University of Texas at Austin[2].

Vtext is also participating in the GKR[3], which is a federally-funded initiative to promote and enhance IR activities across University System of Georgia institutions by developing a replicable collaborative IR model. The GKR project provides IR hosting, meta-searching, rights assistance, digitization, content submission, and preservation services for participating institutions. GKR's meta-searching service will be its showcase piece as it will serve as a single entry point to the content harvested from its member institutions' repositories. Inclusion of Vtext's metadata in GKR, therefore, will not only increase its institutional visibility but also enhance distribution of its intellectual capital globally. Through resource sharing, willing faculty, and a solid platform, VSU's Vtext is expected to continue to grow.

The project team's plans for the future focus on a minimal cost approach to maintain VSU's IR. Plans are in place to use volunteers and interns to upload faculty and student content; so far over two hundred items have been added by graduate students and staff, including thesis projects, a year of the university's first student publication, *The Pinebranch*, and student term papers. The Graduate School is working with the Vtext team to submit electronic copies of all future theses and dissertations to the repository. A faculty outreach program in 2009-2010 academic year

[1] Resources: The Galileo Knowledge Repository. (n.d.). Retrieved June 15, 2011 from http://www.library.gatech.edu/gkr/resources
[2] Policies: University of Texas Libraries – Digital Repository. (n.d.) Retrieved June 15, 2011 from http://repositories.lib.utexas.edu/policies
[3] About GKR: The Galileo Knowledge Repository. (n.d.). Retrieved June 15, 2011 from http://www.library.gatech.edu/gkr/about

included faculty mailings and presentations to our local online community to raise awareness about the repository and inform faculty and students about hosting and making their scholarly works available to the public through Vtext. This was followed up by a survey questionnaire on faculty attitudes both to evaluate our PR efforts and to assess the needs of our scholars.

METHODOLOGY

The goal of this research was to investigate VSU faculty members' scholarly communication behavior and attitudes toward IRs. Although similar studies have been conducted at other universities, each institution has its own characteristics such as institutional culture, faculty size, Carnegie classification, or a focus on teaching or research, which may influence and inform its faculty's, researchers', and students' scholarly communication behavior and perception of IRs. The survey questionnaire was distributed online via direct email using SurveyMonkey.com, an online survey service, to VSU faculty members, including part-time faculty, in the Spring 2010 semester (See Appendix 1). To increase the response rate, direct mailings to faculty's email, rather than distribution via campus listservs, were used for survey dissemination. The survey was made available to faculty members for three weeks and within this period 244 responses were received. Twenty seven of these responses were not usable; therefore an adjusted total of 217 responses were used in the analysis, which yielded an overall response rate of forty percent. A few key results are reported here which point towards future contributions to Vtext.

RESULTS

One of the more interesting points of the survey was who responded. The largest block of responders was full professors (see Table 1). Adjunct professors at VSU are referred to as "part-time faculty" and those who teach full-time, but are not on tenure track, are classified as "instructors."

Table 1. Faculty Rank (n=217)

Faculty Rank	Percentage
Professor	29%
Assistant Professor	21%
Associate Professor	18%
Instructor	17%
Part-time	14%

About fifty-six percent of the respondents, including part-time faculty members, indicated that they possess scholarly materials that may be valuable for use by other scholars, which, for whatever reason, have not been published. When these responses were broken down by faculty rank, about fifty percent or more of the faculty members from every rank have scholarly materials that can be included in the IR. Having access to a large number of intellectual assets is important for creating a quality IR. A great majority of senior faculty members reported having scholarly materials of this nature; about seventy-two percent of the respondents in the associate professor rank and about sixty-one percent of those in the professor rank had such works. It is expected for senior faculty to accumulate more works over time; however, such works are also at risk as the faculty retire.

As the project is mainly aimed at preserving scholarly materials at risk, it was important to understand the extent of personal website use for disseminating unpublished scholarship. About twenty-seven percent of the respondents indicated that they disseminate such works via their websites. On the other hand, forty-eight percent of respondents reported not having a website. (Chart1, below) Most importantly, about forty-one percent of those who reported having scholarly works did not have a website. Vtext can play a critical role for both groups of faculty members. Those who manage their personal web sites to disseminate their scholarly works can use Vtext to disseminate and preserve such materials in a standards-based platform and free themselves from dealing with copyright restrictions in publications. Additionally, the faculty member would not need to maintain and update his or her web site on a regular basis; instead a Really Simple Syndication (RSS) feed from the repository can be integrated in to faculty web pages thereby automating this process. Other faculty members can easily leverage such benefits and have their works more accessible worldwide.

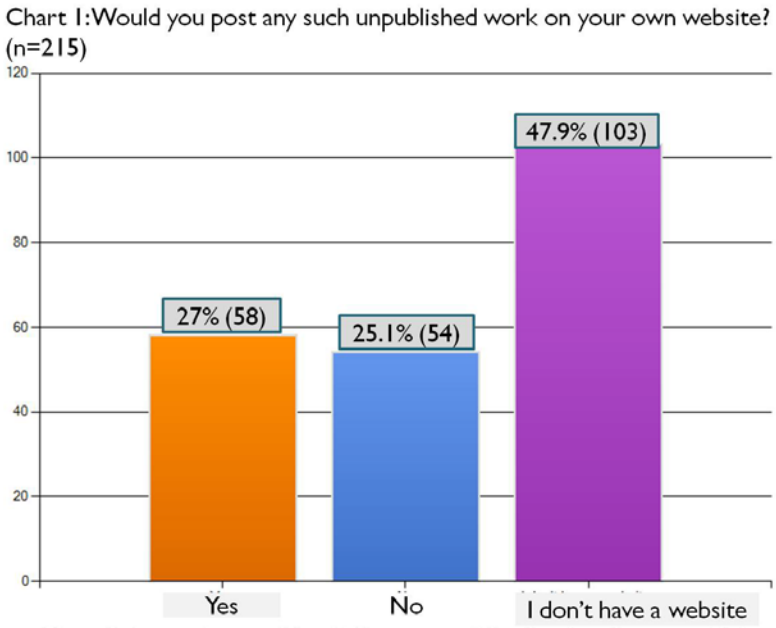

Chart 1 shows the combined 73 percent of faculty that do not publish materials to their own websites, either because they do not have one, or have not chosen to do so.

Thirty-two percent of respondents were familiar with the concept of IRs, and nearly half of those learned about IRs from an informational brochure about the initiative distributed to raise awareness around the campus in the previous semester. Sixty-percent of those who were not familiar with IRs indicated their willingness to participate. In addition, nearly eighty percent of those who reported having scholarly materials indicated that they are interested in having such works placed on Vtext.

Responses indicated that faculty members at VSU are also interested in using the repository to preserve and disseminate gray literature which was consistent with Housewright and Schonfeld's (2008) findings as IRs at smaller institutions tend to have more gray literature in their collections. Over sixty percent of the respondents were interested in submitting conference-related (papers or

presentations) publications to the IR. About forty-one percent were also interested in including course materials in the repository as shown in Table 2.

Table 2. Content Type in Repository* (n=159)

Content Type	Percentage
Conference Presentation	69% (n=110)
Conference Paper	62% (n=98)
Course Material	42% (n=66)
Student Paper	25% (n=39)
Post-print	23% (n=36)
Data Set	21% (n=33)
Student Publication	20% (n=32)
Technical Report	18% (n=29)
Pre-print	9% (n=15)

*multiple responses allowed

CONCLUSION

The faculty's response to an IR program on a limited budget at VSU has been very positive and promising. With little required funding, the initiative was able to create a foundation for an IR community. The Vtext organizers plan to continue to expand, with the ultimate goal of establishing a sustainable IR for the university.

The Vtext project was a “bottom up” approach to building an IR. It was created as a collaborative effort with the general belief that “if we build it they will come.” With the initial infrastructure in place and a clear understanding of our faculty’s attitudes and willingness to participate, Vtext is positioned for its future.

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Appendix 1: Survey Instrument: