» "Reading is one of my favorite pastimes. When I was a young girl, I went to an old library in Coral Gables, Florida, to read my favorite books, Mary Poppins and The Wind in the Willows. They helped instill in me a sense of the wonder, the humor, and the spirit of life." -JANET RENO

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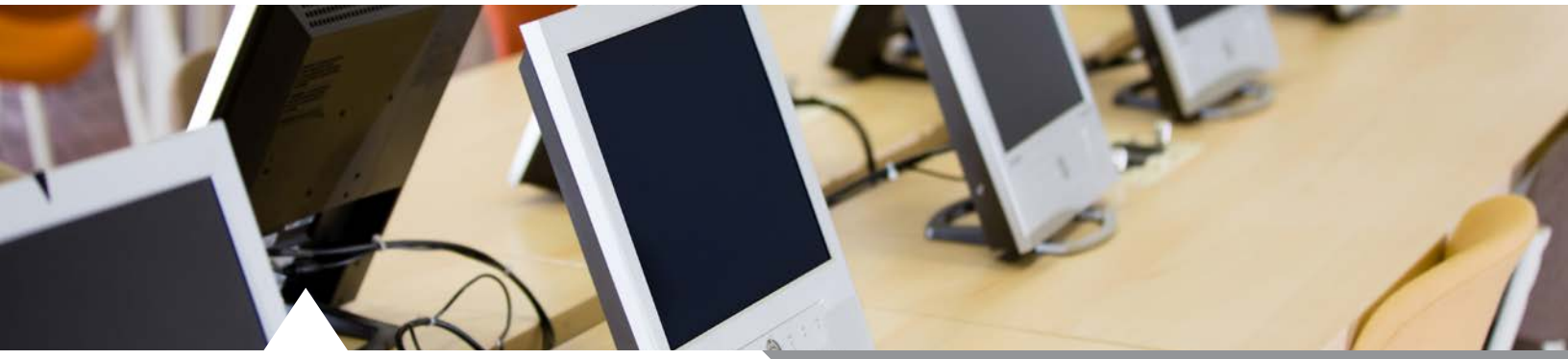

Issue 34 // November 15, 2016

Internationalizing the Campus – @ the Library

» How the library can play a critical role in internationalizing the campus

BY KATHY STEIN-SMITH

INTRODUCTION

In any discussion of internationalizing the campus, it is necessary to consider a variety of factors -- curriculum, activities and events, and the development of global citizenship mindset and values. The Library can play a significant role in all of these. The development of global citizenship mindset and values can also be fostered and encouraged by the Library through its collections, programs, and spaces.

Internationalizing the curriculum – whether for a particular course, a major or minor program, or an interdisciplinary initiative[1] – offers wonderful opportunities for faculty – librarian collaborations, with faculty as scholarly academic experts, and librarians as the information and organization experts respectively.

As center of the campus, the Library can certainly play a role in developing internationally-themed programs, supporting them, and serving as a venue for events and for more informal cross-cultural interactions; however, it is also important to demonstrate why internationalizing the campus matters, and how it will benefit our students.

Foreign language skills and intercultural knowledge and experience will benefit our students in their careers and professional lives, as individuals navigating a globalized world, and as global citizens working toward solutions of complex issues facing the world such as the current discussions of climate change and of the UN sustainable development goals.

The institution also benefits in terms of student retention, faculty and student engagement, and the continued enrichment of the academic experience.

THE BENEFITS OF INTERNATIONALIZING THE CAMPUS FOR OUR STUDENTS

A global skill set gives students a competitive advantage in a globalized workplace,

Dos Mundos information session and reception in the Reference Reading Room. Dean Kenneth Vehrkens and Ms. Lisetty Nigrinis. Photo by Jessie Ribustello.

and many U.S. students are currently at a competitive disadvantage as potential global talent. Bridging the gap between what students receive from university education, and the realities of the marketplace, is one way an increased focus on internationalization, facilitated by a more strategic role for the academic library, can help.

International education and the need for U.S. students to develop a global talent skill set are more important than ever, and a strategic library can play a key role in welcoming international students to campus and empowering them to interact in an environment that fosters open communication and exchange of ideas, providing opportunities for interaction, preparing U.S. students for study abroad, and fostering the development of global mindset and skills among the 90% of U.S. students who do not study abroad.[2]

Global talent is a term very much in the forefront of the public conversation. According to a recent survey, "11% of US mid- and large- size companies actively seek recruits for jobs requiring FL (foreign language) skills" and "35% give advantage to multilingual candidates."[3] In 2013, 6.1 million Americans were employed by majority-owned affiliates of foreign companies,[4] and interestingly, compensation tended to be generally higher than the U.S. average. According to a recent CNN article, most Americans and British believe that bilingual or multilingual people are more attractive, around 25% believe that lack of foreign language skills has held them back professionally, and "one in 8 admits to exaggerating their language skills on a resume."[5]

Yet only 8.1% of college and university students are enrolled in a course in a language other than English,[6] and only 18.5% of K-12 public school students study a foreign language,[7] and according to the Generation Study Abroad initiative, the challenge is that – while international education is essential, fewer than 10% of U.S. students study abroad.[8]

According to the Open Doors report, in 2014/15, almost one million (974,926) international students were studying in the US, and in 2013/14, over 300,000 (304,467) U.S. students studied abroad. The top destinations for U.S. students are the United Kingdom, Italy, Spain, France, and China, and the leading places of origin for international students coming to the U.S. are China, India, South Korea, Saudi Arabia, and Canada.[9]

These destinations and points of origin may, or may not, indicate instructional of programming directions, as local conditions, such as the existence of one or more international campuses or a partnership with a non-U.S. institution, may result in a different distribution on a particular campus.

THE ROLE OF THE LIBRARY IN INTERNATIONALIZING THE CAMPUS

In terms of internationalizing the curriculum, it is important to consider the role of the Library in terms of including books, articles, media, and online resources from other countries in its collection. Additionally, beyond simply housing these resources, librarians can engage students, work with faculty, and maximize the potential of this information. The Library can also support internationally-themed events and activities such as guest speakers, panel discussions, etc., to support internationalized curriculum.

Libraries can also contribute to the development of foreign language and intercultural skills among students through our collections, programming, and the internationalization of the library space. These are initiatives that can be implemented today, as incremental changes, without enormous expenditures or changes to current plans.

In terms of Livermore's theory of cultural intelligence (CQ),[10] libraries can encourage and support the development of the cultural intelligence, actively contributing to the development of CQ Drive and CQ Knowledge and supporting the development of CQ Strategy and CQ Action through library collections and programming.

One of the real challenges in developing foreign language skills and cultural knowledge is the lack of opportunity for real-world experiential learning, and this is where the Library can support learning

through its collections and technologies, and importantly, through its role as a "third" space, a supportive environment where stakeholders from all campus constituencies can come together, interact, and learn from each other.

Working in collaboration with other university departments and developing partnerships with other stakeholders, the Library is a logical hub for international activity on campus.

In addition to providing access to print, online, and media resources from around the world, the Library is a natural setting for planned talks, programs, and events on other cultures and on global issues, as well as informal interactions among by faculty, staff, students, and alumni.

The Library is also a logical campus center for language learning, through its collection of language learning materials, access to technology, and opportunities for planned and spontaneous conversation and interactions in the languages spoken and studied on campus.

In addition, many librarians and library staff typically speak a variety of languages, and their linguistic skills and cultural knowledge contribute to the development of an atmosphere where diversity and intercultural learning are fostered and encouraged. This combination of both instructional resources and personal expertise reinforces the importance of the Library as a hub of campus internationalization and interaction.

The Library can host programs and events, and can serve as the venue for campus events highlighting one or several cultures by student groups.

International Education Week (IEW) is an example of broader initiative in which the Library can play an integral role, with internationally-themed displays and library events and programs featuring talks, discussion groups, symposia, as well as concerts, music recitals, and art exhibits. The Library can also support campus displays with pop-ups and "tiny libraries" during IEW and throughout the year. Similar to the concept of pop-up stores, which are increasingly popular with millennials and Gen-Z, taking the Library to the campus in these ways also helps to keep the Library and related initiatives actively engaged with the campus community.

International Student Information Fair. Head Reference Librarian Paul Dunphy and Library Office Manager Jessie Ribustello with student library assistants. Photo by Jessie Ribustello.

The Library can also serve as a language center, offering access to proprietary online language learning databases, and offering computers, laptops, tablets, and headphones for student use. Language tables can be hosted by the Library and expanded to other campus locations as appropriate. The Library could also partner with Language Houses/residence halls on campus to provide local browsing collections in the target language and about the region of the world where that language is widely spoken.

The Library can serve as a venue for guest speakers, including potentially those from the UN, in person or via ITV, and supporting or concurrent events can include relevant language tables, Library Research Clinics to support the topic(s) under discussion, and poetry and literature readings, musical programs, and art and photo exhibits to expand the theme of culture and language across the disciplines.

The Library can sponsor or collaborate on faculty panels on adjustment for new international students, participate in information fairs for new international students, serve as a venue for UN and other internationally-themed events as well asstudy abroad open house events.

The library environment offers access to programs and events, print and online resources, and study and work spaces where students from around the world can collaborate on course-related and/or creative projects.

The Library can collaborate with the campus career development center in hosting programs and displaying materials on maximizing the impact of your study abroad experience on your job search.

Specific events and programs in support of internationalization include UN Day (October 24th), the International Francophone Holiday (March 20th), and Hispanic Heritage Month (Sept 15th – Oct 15th), all of which could provide the inspiration for a library or library partnership event.

The Library can also provide information on, and serve as a venue for, collaborations between the campus and local K-12 educa-

» **The Library can also serve as a language center, offering access to proprietary online language learning databases, and offering computers, laptops, tablets, and headphones for student use.**

Head reference librarian Paul Dunphy hosting an Italian Language Table at the Library. Photo by Jessie Ribustello.

tors supporting global learning, including but not limited to, opportunities for international students, students who have studied abroad, students who are studying or majoring in foreign languages or global/international studies, and local students with a background in another language/heritage language speakers or another culture to share that knowledge and experience with local schoolchildren who have not had these experiences or opportunities.

EXAMPLES OF LOCAL LIBRARY SUPPORT FOR INTERNATIONALIZING THE CAMPUS

There are many ways in which the Library can play a role in internationalizing the campus, and these vary depending on the campus, its mission and curriculum, and on the Library itself. On our campus, there are currently (985 international students, and with a variety of study spaces, reading rooms, and even a makerspace, art gallery, and piano practice and recital spaces, the Library responds to a wide range of student needs and has supported internationalization through a variety of activities.

Within a broader context of collection development, programming, and collaborative partnerships, the Library has for many years prioritized support of internationalization in support of the university mission of education for global citizenship.

In addition to its mission of global education, the university has two campuses beyond US borders, and its campus in the United Kingdom has long played a central role in internationalizing the institution and in providing study abroad opportunities for our students and those from other institutions. It was, however, a visit to Wroxton College, the campus in the UK, as part of a university-sponsored staff retreat by the Library's director of public services that led to an increased emphasis on increasing awareness of the opportunity for a semester or short-term study abroad among our students. To that end, the Library has increased displays of Wroxton-related materials and hosts an interest meeting/afternoon tea every semester at the Library.

The Library supports International Education Week, serving as a host for librarian-led activities including talks by librarians about their international experiences, international game night, library language tables, regularly scheduled programs like "musical afternoons" with a special international theme for that week, and a proposed international book discussion group, as well as serving as a possible venue for events sponsored by other departments that week.

The Library has featured faculty speakers who have spoken about a variety of research topics, including ones that are international in nature such as all-inclusive resorts and global gaming, and has partnered with other departments and organizations on campus, serving as venue for internationally-themed events, including panels of international faculty members sharing their experiences with newly-arrived international students, a student panel on the Arab Spring, receptions for new students and parents in the Dos Mundos program, a Latino Heritage program in collaboration with the Latino Promise program and our campus radio station, and a faculty panel on issues faced by Latino students. Latino Studies is another area where library collections and programming could support an internationalized curriculum.

As part of its ongoing staff development program, the Library has invited faculty and staff guest speakers to share their expertise on international themes such as the needs of international and Latino students, at its staff development day programs which are open to the campus faculty and staff.

The Library hosts a regular series of Library Language Tables, an opportunity for casual conversation in a target language, hosted by librarians and by volunteers from faculty, staff, and graduate students. Languages have included French, Italian, Span-

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ish, Korean, Chinese, and of course, English.

Librarians and staff have also participated in campus events, including the information fair for new international students.

CONCLUSIONS AND FUTURE DIRECTIONS

Internationalizing the campus is a partnership, and the Library can be an integral part of this process, and even take the lead in this essential process through its mission of bringing members of all campus stakeholder groups together with the information they need and the campus community together in a study, research, and community space.

Our students, and our institutions, can only benefit from the development of a more international environment, and the mission of the Library is in alignment with the support of internationalization on campus. Facilitating these collaborations, in a supportive and encouraging environment, is something of benefit to the institution and to all its stakeholder groups. Through its internationalization of collections and activities, the Library can support recruitment of increasingly internationally-minded students and retention of students through increased engagement.

However, in order to foster and encourage internationalization across the campus, the Library needs to be proactive in developing partnerships with university departments, student organizations, and potentially, relevant external partners.

It is possible to imagine countless additional possibilities for the Library to engage with the local campus community through its own internationally-themed events or in a supporting role for such events sponsored by other university groups.

Perhaps most importantly, the Library offers an environment where faculty, staff, students, and alumni from around the world can come together and interact formally or informally with each other to develop intercultural knowledge and understanding. International and intercultural insights and experiences can be communicated and shared over a cup of coffee or during a casual game of chess just as effectively as through more structured channels. ■

Arabic Language Language Table in the Library Cafe hosted by Ms. Sanaa Hindeleh. Photo by Jessie Ribustello.

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FOOTNOTES:

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2. *Generation Study Abroad.* http://www.iie.org/Programs/Generation-Study-Abroad#.V-rOd4grIps
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The Future of Institutional Repositories at Small Academic Institutions: Analysis and Insights

» An exploration of the unique challenges faced by small universities

BY MARY WU

The rapid expansion of the digital landscape at the beginning of the 21st century has provided tremendous opportunities for academic libraries to strengthen their place as a critical role player in higher education by quickly adopting cutting-edge technological innovations to fulfill the needs of their constituents. The institutional repository (IR), one of the innovations adopted by academic libraries, large and small, debuted in the early 2000s, and has now entered the implementation and assessment phase.[1] Although many academic libraries have established an institutional repository with the primary mission of collecting, preserving and disseminating scholarship created by faculty and students, the current depositing estimates suggest that only between 15% and 30% of eligible scholars and researchers deposit their work in institutional repositories.[2] Studies have questioned whether the services provided by IRs truly meet faculty needs, identifying a number of barriers that affect the faculty participation rate, including but not limited to issues of copyright and plagiarism, citation impact and credibility, as well as time and effort in depositing.[3]

Over the years, system enhancements based on usability studies[4] have made IRs more adaptable to the research environment and helped to address some of these issues. Although IRs have become a more integrated library service at large academic institutions, repository managers have not been able to secure full faculty cooperation in content acquisition at small academic institutions where teaching is the main focus.[5] This is mainly due to the fact that although system design and service promotion have primarily focused on research needs, not enough attention has been given to faculty needs in teaching. In addition, small institutions are challenged by resource availability issues such as limited budget, personnel, and technology.[6] In spite of such obstacles, librarians at smaller institutions are striving to find ways to keep the institutional repositories a vibrant service to their constituents, as their benefits are obvious. The facts of the matter are that these institutions have invested significantly to build and support institutional repositories, the norm of scholarship

communication has gradually shifted to favor open access, and the rapid development of digital technology has fundamentally changed the paradigm of the library world. Moving forward is the choice to thrive in the new innovative landscape.

Beginning with a literature review and analysis of challenges facing institutional repositories at academic institutions in general and small universities in particular, this article then draws on a first-hand account of the development of an institutional repository at a smaller liberal arts university to explore opportunities and offer insights on how institutional repositories can support classroom teaching and student learning.

LITERATURE REVIEW AND DISCUSSION

Common Challenges Facing IR Content Recruitment

Studies have identified two major issues — poor adaptation to actual faculty needs and copyright concerns — as the major bottlenecks in building the case for IRs.

The goals of implementing an institutional repository at academic libraries have been discussed by a number of its pioneers in the early 21st century. In the early stage, the commonly acknowledged functions of an institutional repository at an academic institution were long-term preservation, organization and distribution of scholarship created by the institution and its community.[7] These traditional library functions were prevalent in strategies to spearhead content recruitment and service promotion after the initial launch, and they offered clear benefits to faculty such as broader dissemination and stewardship of scholarly output. However, these benefits are not sufficient to expand the institutional repository by attracting more faculty participation. After more than a decade of efforts to advocate the service following its launch, many academic institutions now find themselves struggling to make the institutional repository active and vibrant against a lack of interest from faculty and scholars.[8] While access to research output and increased publicity for the publication have been the most convincing talking points to solicit deposits, most academics already operate productively within the existing methods of scholarly communication, research dissemination, and validation.[9] In order to explore the misalignment between the benefits and services of an institutional repository with the actual needs and desires of faculty, the University of Rochester, River Campus Libraries conducted work-practice studies on how faculty members do their research and writing in 2003. This yearlong study revealed that the most desperate need of faculty in scholarly undertakings was an authoring system to assist with document versioning, collaborative authoring, and centralized document access from any computer at any location.[10]

Another study that took place from September 2008 to April 2009 at Dartmouth College examined how institutional repository services could meet the needs of humanities faculty in particular.[11] Although humanities scholars are a core part of academia, their special needs were rarely considered during the design phase of institutional repositories, which better accommodated research in the sciences. This oversight has resulted in a lower usage of institutional repositories by scholars in the humanities, for whom the need to influence fast-moving research via preprint exchanges or to answer the call for open access to publicly funded research is not as pressing. If the purpose of institutional repositories to preserve and disseminate knowledge is also to encompass the core fields of study represented by the humanities, they must be designed with the unique needs and concerns of these scholars in mind. These findings were not only well received by librarians and institutional repository managers, but also IR vendors and software developers, who have introduced many features over the years enhancing IR services and addressing these concerns. One such feature is the Faculty Page or Scholar Page, a built-in tool that allows faculty members to set up a dynamic personal web page where they can post draft papers in various stages. More than just a static webpage, it also serves as an announcement tool that faculty members can use to build their network by inviting colleagues, students, and others to subscribe to their page by RSS feed or email. The Scholar Page thus functions as an efficient scholarly networking and communication tool.[12]

Copyright concerns are considered the most difficult to resolve. Faculty are often hesitant to ask permission from publishers to deposit a work in the institutional repository, as citation advantage and academic recognition have proven to be insufficient incentives to make one's publications publicly accessible. In an academic environment, faculty members' primary concerns are tenure, promotion and academic integrity.[13] Therefore, once an article is published, moving on to the next project is the common mentality. As a workaround to the risk of copyright infringement, libraries have encouraged faculty to deposit preprints to the institutional repository in place of the published version. However, the preprints are manuscripts that have not yet under-

gone peer-review and very likely differ from the final published version. Based on this author's observation and experience, faculty in the humanities and social sciences are typically less willing than their counterparts in the sciences to make preprints openly available to the public. The reason for this, as Peter Suber[14] notes, lies in a number of structural differences between the humanities and the sciences. In the sciences, there is a greater need to influence fast-moving research and for timely notification of related developments in the field. To quickly circulate the most current results within a scientific community, distributing preprints via disciplinary repositories is a common practice.[15] This is not as pronounced for humanities faculty, and efforts to solicit preprints for repositories meet with less success.

Another strategy libraries have used is to encourage faculty authors to negotiate with publishers for the non-exclusive right to archive and deposit articles after publication. As journal policies could be confusing, difficult to follow, and unclear, faculty authors usually do not examine the copyright terms and sign it as is.[16] There is no doubt that copyright restrictions imposed by publishers will remain a key barrier for libraries to make research output publicly accessible via institutional repositories. However, the very existence of institutional repositories has and will continue to put pressure on journal publishers to allow as much free online access to their products as economically feasible.[17]

Unique Challenges for Small Academic Institutions

Nykanen defines a small academic institution as one that enrolls fewer than 10,000 undergraduate and postgraduate students.[18] In this author's experience, unique challenges which have yet to be extensively studied. Further analysis would offer insights on marketing strategies and system enhancement to advance IR usability in ways uniquely suitable to small academic institutions. Though Nykanen's study revealed that faculty output in repositories at small institutions is much smaller than that of large research universities, she did not elaborate on the reasons for the phenomenon. This author believes that in addition to challenges faced by all repositories discussed above, repositories at smaller institutions face further difficulties unique to an academic environment that emphasizes teaching, a focus that has not been well embraced by IR system design and service promotion.

This observation is supported by a focused study on current practices of IRs at master's and baccalaureate institutions.[19] The study affirmed that teaching takes precedence for most faculty members at these institutions as the central function of these institutions is to promote the academic success of undergraduates. Accordingly, student evaluations, curricula design, and classroom observation by academic deans carry more weight than research output in the tenure and promotion process. In Miller and Seldin's 2010 survey of over four hundred liberal arts colleges, 99.3% of respondents considered classroom teaching a major factor in evaluating faculty performance, compared to 51.8% for research.[20] Furthermore, science faculty — typically the biggest contributors to repositories and the most accepting of the Open Access concept — are fewer in number at these institutions, where even science majors generally stick to a liberal arts curriculum, conducting research most often as upperclassmen.

Confronted with these disadvantages in institutions have accordingly switched their focus to recruiting student work. Nykanen's study reported that student work comprised 63% of materials she examined in small repositories, which included theses, undergraduate honors and award papers, essays, etc.[21] Targeting student work has enabled small institutions to adhere to the essential objective of IRs: to collect, preserve, and disseminate the intellectual output of an institution in digital form. Otherwise, due to the lack of faculty work, digitized documents and archival materials would become the dominant content driving repository growth and stability.[22]

Small institutions also face challenges in staffing and funding. Unlike large research universities where staffing, systems, and facilities can be planned and resourced to anticipate emerging needs and opportunities, small institutions are usually less prepared when institutional repositories are brought on board, instead relying ad hoc on what happens to be available among existing resources and staff.[23] The lack of planning, funding, and technological expertise has made it particularly difficult for small institutions to provide and maintain digital services at the desired level and scope. Hard choices must often be made among competing priorities.

INSTITUTIONAL REPOSITORY AT ROGER WILLIAMS UNIVERSITY

Background

Located in Bristol, Rhode Island, Roger Williams University is an institution with approximately 3,700 undergraduate and 600 graduate students that focuses on liberal arts education but also includes six professional schools. The University Library, containing an Architecture Library branch, is the main service point to the entire

» **Promoting the IR's journal publishing platform was another strategy we employed to expand scholarly content.**

university community. The University Library has been a member of the Higher Education Library Information Network (HELIN), a library consortium of eleven academic libraries and twelve special libraries primarily located in the state of Rhode Island, for over twenty years. The creation of a HELIN institutional repository was proposed by the HELIN Central Office and made possible by a two year grant from the Davis Educational Foundation that HELIN received in 2005. This initiative allowed each individual library in the consortium to establish its own repository if it chose to participate. At the time, ProQuest's Digital Commons, which was later bought back by Berkeley Electronic Press (Bepress), was chosen as the platform for storing, searching and accessing the digital materials collected by HELIN institutions. Each library manages its own repository, and the vendor then provides an umbrella HELIN site, allowing users to search various collections as one entity.

At the beginning of 2006, Roger Williams University Library, along with other participating HELIN libraries, designed the initial repository site with the vendor, trained its staff to use the platform, and, most importantly, created policies regarding collection priorities, types of material accepted, and submission procedures before launching its institutional repository **DOCS@RWU**. This author, assisted by two cataloging staff, has been responsible for maintaining and managing the repository, including marketing and outreach, content submission, metadata creation, and vendor communication for technical issues and site development.

Over eight years of collection development, the repository has grown to over 3,000 items (as of April 2015), including four active and two discontinued journals, four small image galleries, approximately 200 student theses, 300 faculty papers, and miscellaneous materials from the Archives and administrative offices.

Current Practice

To meet the established goal for preserving and disseminating RWU faculty scholarly output, we sent a periodic "Call for submissions" via the All-Faculty emailing system to solicit faculty publications. This practice helped build the scholarly content of the repository in its early stages and continued for a number of years until responses to the calls began to wind down. Tracking down faculty publications is the first step in the process of IR content recruitment. While many libraries search selective journal databases to identify new publications by their faculty, this approach was infeasible for us as we could not identify a recurring publishing pattern of journals to target. Nevertheless, we realized that faculty members are willing and even eager to publicize their scholarly accomplishments, although some of them are reluctant to have the full-text of their publications openly available on the website because of copyright and various other concerns.

An online Faculty Scholarship Register was therefore created to shine the spotlight on their work. Faculty were also encouraged to use the Register for a convenient up-to-date compilation of citations for their CVs or personal profiles. These practices have dramatically improved the recruitment of faculty publications. Fifty-six faculty members, a quarter of the entire faculty population, responded to the initial call with over 400 citation entries. By mid-August 2014, more than one hundred articles drawn from the Register had been added to the repository. Admittedly, the volume of submission will plateau as time goes on, but we are hoping that with occasional reminders, the registration and submission process will become habitual for faculty. After all, it provides them a venue to publicize their scholarly achievements at a small investment of time and commitment.

Promoting the IR's journal publishing platform was another strategy we employed to expand scholarly content. The majority of journals published on IR sites are open access by nature, and therefore do not require copyright clearance to post the content. When RWU's president called for a new initiative for campus diversity and civil discourse a number of years ago, several faculty members hoped to launch an online journal where students, faculty, and the administration could express a range of viewpoints on a variety of topics. During the planning stage, they considered using open source software to host the journal for greater flexibility and control, but had to abandon the idea due to a lack of the necessary computer coding and technical support capacities. Faculty members edit and contribute content, but may not be well-suited to deal with the technical components of maintaining an online journal. We presented the repository as a service that frees them from these tasks and assists them in designing a journal homepage, implementing a submission and review process, as well as installing an RSS feed. The institutional repository hosted the *Journal of Reason & Respect* for four years until it ceased publication. Since then, the repository has hosted three more journals sponsored by our faculty in addition to the Law Review published by the RWU Law School. These online journals supply the repository continuously with a broad range of content and serve as excellent examples of the utility of the service.

Adhering to policies and guidelines for standardizing submission processes, defining technical requirements, and preventing copyright infringement all presented key challenges in the early stages of the repository. Although accepted by the Faculty Senate and widely broadcasted via email and other media channels across campus, in the end these policies and guidelines were merely placed on paper with little effect. For instance, faculty submitters rarely followed instructions to download and sign an Author Submission Agreement Form and attach it to their work, perhaps deterred by the hassle. In an effort to save faculty time and streamline this process, the Library has accepted emails from faculty requesting submission as a substitute for the Agreement Form. Faculty and staff at smaller universities tend to be more familiar with each other, allowing for submission of works with informal and less comprehensive procedures: a friendly chat, email, or phone call can suffice. However, regardless of the size of the university, in order to avoid copyright infringement, a casual approach would be inappropriate when obtaining permissions from publishers, and libraries should always follow established guidelines.

Unlike faculty submissions, student submissions must adhere closely to policies and submission procedures. In order to allow the Library to post student works on the web-

site of DOCS@RWU, it is mandatory that each student author sign the Thesis Deposit and Access Agreement Form. Still, we occasionally have to work out policy issues with faculty when students only wish to submit print copies of their theses to the Library, or only wish to make the abstracts of their theses available online. This scenario would require exceptions to the Library's requirement that all student theses be submitted electronically in full text. We accommodate these students with the permission of their thesis advisors.

Many academic libraries have banded together by forming state or regional library consortia to achieve economic efficiency. This type of partnership is especially valuable to small IRs challenged by limited funding and staffing. When the two year grant from the Davis Education Foundation ended in 2008, the HELIN consortium was able to negotiate a reduced annual subscription fee for all participating libraries, as the vendor (Bepress) recognized an opportunity to expand its market share by encouraging group memberships. DOCS@RWU was sustainable only because the fees were within the Library's financial means. In addition to cost savings, HELIN provides a venue to share knowledge, expertise, and best practices. It also helps to coordinate a collective voice to draw the vendor's attention for support.

At the very beginning, a HELIN Institutional Repository Committee consisting of representatives from participating libraries was formed to exchange information and enhance collaboration. During the initial implementation period, the Committee worked together to recommend the best organizational structure for each repository, design the template for descriptive metadata input, and consult each other for best practices in marketing the service. Every member of the Committee faced similar issues and challenges, and no one knew how to solve them all. It was the collective experience of the Committee that led to success. Also, everyone needed training in the early stages to learn how to operate an unfamiliar system. As the first to receive this training, the HELIN Central Office's Knowledge Management Librarian went to each institution in the consortium to serve as a trained trainer. She later became the go-to person to help solve technical issues involving use of the system. Before the members could stand on their own feet, a reliable person they could turn to for expert knowledge and advice was crucial.

OVERLOOKING INSTITUTIONAL TEACHING NEEDS: LESSONS LEARNED

The decision to implement the digital repository service was driven by the Davis grant and was not exclusively based on needs assessment and analysis. The essential mission of the repository as determined at its outset — to collect, preserve, and provide access to the intellectual output of faculty and students — was not well received by faculty as relevant to teaching and student learning. This mismatch between the intended benefits of the repository service and faculty expectations for it resulted in a low faculty participation rate and slow scholarly content growth as out of approximately 3,000 items in DOCS@RWU, only 300 are faculty papers. It is clear that we must shift focus from collecting faculty scholarship to providing services in greater demand among faculty.

THE FUTURE OF DOCS@RWU

Roger Williams University is an institution that focuses on classroom teaching and undergraduate learning. The institutional repository DOCS@RWU can thrive only if it supports the University's mission and contributes to its success. It must attend to the "demand side" as prescribed by the ARL Digital Repository Issues Task Force: it needs to be as much about users as about content.[24] Over the past few years, technology has revolutionized education, and in response, college professors have dramatically adjusted their teaching methods. As the use of laptops, tablets, and the Internet become increasingly common in the classroom, professors will have abundant resources in digital format at their disposal. Because the institutional repository collects a range of research and instructional resources in one place and makes them accessible to students in and out of the classroom, we believe that the potential utility of DOCS@RWU in class will greatly increase its value and usage. In fact, a professor at the RWU School of Education has been asking her students to choose a resource to review from the institutional repository as a course assignment.

Also, as a focal point in the teaching and learning process, the traditional textbooks are challenged by their skyrocketing price. Teaching faculty has shown interest in creating and sharing teaching resources in lieu of expensive textbooks.[25] More and more IR managers have noticed this emerging trend and started hosting textbooks on their IR sites. (See, for example, Grand Valley State University OER site). In addition to text-based documents, we will further expand the use of DOCS@RWU in classroom instruction by promoting its potential for storing and presenting multimedia. We envision that professors at departments such as Dance and Performance, Graphic Design, and Music will also integrate DOCS@RWU into their teaching once they recognize its value in illustrating concepts with audio and visual examples only a click away. These IR applications are on the horizon. The Composition series in the Digital Commons@Illinois Wesleyan University serves as an excellent example. Furthermore, imbedding institutional repositories into classroom management systems, such as Bridges as proposed by Wise, *et al.*,[26] will provide seamless access to digital assets in course content, and therefore make repositories an integral digital resource in classroom teaching.

The institutional repository could also function as a real world, practical workspace for what is learned in classrooms. For in-

stance, the journal publishing software embedded in the institutional repository supports full-fledged professional publishing features. A RWU Creative Writing professor suggested a course-based, student-driven journal in response to our outreach for the journal publishing platform. He wanted to offer his students the opportunity to create their own amateur publications, allowing them to experience the real world journal publishing process in its entirety. His journal Critical Conversations is now hosted on the DOCS@RWU platform and is ready for experiment. In the same way, Graphic Design students could showcase their unique skills in their own online journals or by designing covers for other journals. Students in the sciences would also benefit by acquainting themselves with the peer-review process, an important element in scientific research and publishing.

We are anxious to see how the faculty and students respond to these IR applications, and whether or not the institutional repository will grow into a valuable tool for teaching and learning. However, by further exploring and promoting the prospect among faculty, students, and IR platform designers, we are confident that the potential applications of the institutional repository in teaching and engaging students in experiential learning will multiply.

CONCLUSION

The success of institutional repositories at academic institutions in general and small universities in particular relies on the expansion of service to a broad spectrum of the academic arena beyond their conventional roles of preservation and dissemination of faculty and student scholarship. Despite the unique challenges they face, repositories at small academic institutions can grow as long as they prove themselves an asset in undergraduate education. Finally, as the institutional repository platform continues to evolve in response to rapidly developing technology and opportunities for greater efficiency in a more collaborative academic environment, its value will increase and be recognized. ■

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Bridging the Civilian/Veteran Divide through Film

» An initiative at the Los Angeles County Museum of Art and the Los Angeles Public Library

BY SARAH JESSE

Photo by Shawn Spitler, provided by Los Angeles County Museum of Art.

What is it *really* like to serve in the military today? Chances are, most people couldn't say. This is hardly surprising, given that only one percent of the population is currently serving. For many civilians, the military and veteran community is largely invisible. Consequently, it can be prone to stereotyped and sensationalist portrayals. Without other perspectives balancing the dominant narrative, the military and veteran experience can appear excessively negative and one-dimensional.

The Los Angeles County Museum of Art (LACMA), in partnership with the Los Angeles Public Library, seeks to bridge this divide through ***Veterans Make Movies***. Launched with a grant from the Institute of Museum and Library Services (IMLS), the initiative teaches veterans how to tell their stories in film, leveraging the capacity of the medium to communicate in ways beyond cliché and overgeneralization.

Just as there are countless motivations behind why people join the military, there is not one archetype of who joins or only one kind of "coming-home" story. While some service members report that returning to civilian life is a struggle, others re-integrate relatively unscathed. As with most transformative experiences in life, many veterans are unsure of how to characterize their time in the military and their transition out of service.

Irresolution, complexity, ambiguity—these are "sweet spots" for film. LACMA educator Hank Hughes, who teaches the program, understands firsthand the power of the filmmaking process to spur its creator to examine unresolved feelings. The Oscar-nominated filmmaker and former paratrooper explains, "After entering a fight-or-flight mode a few times, your perspective changes as much as your physiology. It's hard to describe, and this breakdown in language calls for creative expression."

Satinder Kaur, another LACMA educator for the program and Army veteran, also recognizes the value of the creative process in making sense of profound and extraordinary experiences. "The veteran experience is unique in that we have been forced to confront our mortality because we've been in places where we had little to no security. Experiences like that set you on a path to wrestle with the meaning of things, and that wrestling manifests itself in creative expression."

Hughes, Kaur, and other LACMA educators teach *Veterans Make Movies* participants the technical aspects of filmmaking:

Photo by Shawn Spitler, provided by Los Angeles County Museum of Art.

Photo by Shawn Spitler, provided by Los Angeles County Museum of Art.

how to write, shoot, and edit. But most importantly, they impart how to hone one's point of view and exploit the capacity of film to communicate, even if the message isn't always clear-cut.

One participant uses film to explore the guilt he feels for having never experienced combat by asking, "What makes a veteran?" Another veteran wrestles with the uniform as a symbol of what is both lost and gained when individual identities morph into a collective body. The diverse content of the films reflects the heterogeneity of the veteran community and collectively create a richer, more nuanced view of the military and veteran experience. In the words of one participant, Veterans Make Movies "satiates a burning desire to tell our lived experiences from our perspective." This is the power of film for both the maker and viewer, and the essence of the Veterans Make Movies initiative.

Veterans Make Movies was made possible in part by the Institute of Museum and Library Services, Sony Pictures Entertainment, and The Albertsons Companies Foundation and The Vons Foundation. ■

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Article courtesy of the Institute of Museum and Library Services.

Photo by Shawn Spitler, provided by Los Angeles County Museum of Art.

Photo by Shawn Spitler, provided by Los Angeles County Museum of Art.

» **One participant uses film to explore the guilt he feels for having never experienced combat by asking, "What makes a veteran?"**

The Development of Digital Literacy and Inclusion Skills of Public Librarians

» An examination of the extent to which public librarians are successfully prepared to engage the community in digital literacy and inclusion

BY KONSTANTINA MARTZOUKOU AND JOANNEKE ELLIOTT

Public libraries play an important role in creating inclusive, digitally-literate communities via the provision of online health, employment and education information as well as digital literacy training programs.[1,2,3,4] Digital literacy (DL) has been described as "a constellation of life skills that are necessary for full participation in our media-saturated, information-rich society,"[5] including "those capabilities that mean an individual is fit for living, learning and working in a digital society": the ability to locate, organize, understand, evaluate, analyze and present digital information, but also to appraise the impact of new technologies and manage digital identities.[6] Therefore, DL "looks beyond the development of functional IT skills to describe a richer set of digital behaviors, practices and identities" involving critical thinking, reflection and lifelong learning, communication, collaboration, and social engagement.[7]

A necessary condition for enabling the development of DL and for empowering modern citizens to exploit new possibilities offered by technology is digital inclusion (DI). DI has been mainly linked to Internet connectivity, and in the past five years within the United States significant progress has been made to expand Internet broadband access to the community via two major federal initiatives: *the National Broadband Plan and the Broadband Technology Opportunities Program*.[8] However, DL and DI are interconnected issues, operating in a complementary fashion as "without access, people cannot develop digital literacy; without digital literacy, they cannot gain maximum benefit from online resources."[9] As the use of Internet activities (e.g. email, searching, online banking and shopping, social networking) is increasing and becoming more varied, the digital literacy skills gap is further widening between those who are online and those who are not.

DIGITAL LITERACY COMPETENCIES OF PUBLIC LIBRARIANS

In order to support DI and the development of DL for the communities they service, public librarians must stay up-to-date with fast-changing external technological environments as well as constantly evolving digital landscapes of their own working contexts. These requirements create greater demands on the depth and breadth of technical knowledge and skills required by public librarians.[10] The American Library Association Office for Information Technology Policy (2013) has recommended the development of DL competencies of staff as a priority for local libraries and as part of their wider mission. Currently, there is lack of understanding of what professional development and workplace learning is required of public librarians in order to engage communities in DL, and

research literature in this area is scarce.

Standard professional development of librarians is the Masters' degree in Library & Information Science (MLIS); it is estimated that two-thirds of all public libraries have a librarian with an MLIS degree from an American Library Association-accredited institution.[11] After graduation, options for librarians to advance their knowledge and skills lie with their employer; continuing education can take place via professional associations, in-house training, or external online training providers. However, the diversity of public librarian roles in the increasingly complex technological environment calls for the provision of continuing education on a more systematic level. Staff development should be included in the mission statements and agendas for every public library, and library schools must ensure graduates arrive on the job with the required skillset.

Previous research indicates that there is a gap between the skills taught in many MLIS programs and the information technology skills expected by employers.[12,13,14] Fortney (2009),[15] for example, found that more "MLS programs should have a technology literacy component as part of their requirements and incorporate information technologies." Similarly, Singh & Mehra (2012)[16] concluded that there was dissatisfaction among library students caused by the gap between the courses offered and the skills they need in their jobs; limited research exists of information technology representations in MLIS curricula.

Public librarians should be equipped with not only information technology (IT) skills, but also transferable DL skills. As Farkas (2006)[17] suggested, emphasis should be placed on the need to teach students 'big picture' topics, such as "how to really be able to keep up with technology, make good decisions about its implementation, use it and sell it to others." The American Library Association Council (2009)[18] has identified 'Technological Knowledge and Skills' as one of ALA's Core Competencies of Librarianship, competencies which all MLIS graduates should possess. These competencies include not only the understanding and application of "information, communication, assistive, and related technologies," but also other transferable knowledge, techniques and skills: understanding of "professional ethics and prevailing service norms," "methods of assessing and evaluating the specifications, efficacy, and cost efficiency of technology-based products and services" as well as the principles and methods for implementing technology-based projects. In addition, public librarians should be prepared to develop in other areas, such teaching and instruction, leadership, collaborating, and building partnerships.[19] For example, managing projects effectively requires "a basic understanding of the public policy process, management and leadership, budget and finance, and program evaluation."[20] Promoting ideas/library services[21] means working effectively with local communities and the ability to lead change is necessary for advocating the value of continuing education and life-long learning. Some of these skills are particularly important as more public libraries participate in local and national initiatives and discussions on Internet policies, digital inclusion, broadband access and open data, acting as the link between underserved communities and the potential of the Internet.[22]

Table 1—Interviewers Details

Case study details	Date of Site Visits	Interviews Conducted
Case Study 1	December 18 and 20, 2013	Library Director (Interviewee 5) 1 Librarian (Interviewee 9)
Case Study 2	December 16, 2013 – January 14, 2013	Library Webmaster (Interviewee 1) 3 Librarians (Interviewees 2, 11 and 14)
Case Study 3	December 17, 2013 – January 13, 2013	Assistant Director (Interviewee 7) Library Systems Manager (Interviewee 4) 4 Librarians (Interviewees 3, 6, 8 and 13)
Case Study 4	January 7 and 9, 2014	Librarian (Interviewee 10) Digital Librarian (Interviewee 12)

RESEARCH AIMS AND OBJECTIVE

The present study was conducted with the purpose of exploring the value public librarians assign to the development of IT and other transferable DL skills for fostering and supporting DI and DL in their communities. The research was conducted in four selected public libraries in North Carolina. The objectives of the study were: a) to understand the perspectives of public librarians about their roles in creating digital literate and inclusive communities; b) to examine the DL programs offered by selected public libraries, the IT and transferable skills required of librarians to run these programs, and the policies in place at those libraries for continuing professional development; and c) to examine a sample of the top MLIS programs in the United States in order to determine whether they adequately prepare librarians for DL IT and transferable skills.

METHODOLOGY

A qualitative multiple case study approach was selected to undertake this research, answering 'how' and 'why' questions within a real-life context, along with data collection from multiple sources of evidence that, according to Yin (2003),[23] enable the triangulation of data. This approach included semi-structured interviews with 14 librarians and examinations of digital literacy professional development policies via documentation available within the participating libraries. All interviews were conducted on location at the libraries selected for this study between December 18, 2013 and January 14, 2014; each lasted an average of one hour. A total of nine public librarians and five library management staff were interviewed (**see Table 1**). The interviews were recorded with a digital voice recorder, transcribed using the InqScribe software application, and coded and analyzed using NVivo 10 qualitative data analysis tool. Template analysis was used to code the data and draw out themes, based on the development of a flexible coding template where themes were presented in a mind-map, following the methodology suggested by King (2012)[24] for starting with broader themes and successively creating narrower, more specific ones. The themes included the digital literacy needs of the public, most important IT skills, most important transferable skills, continuing education, obstacles to a digitally inclusive community, and gaps between library programs and the working environment.

In addition to the case studies of the four selected public libraries described above, the authors examined the status

Table 2—IT Skills

- E-books
- Operating systems (Microsoft windows, Mac OS) and software applications (Word, Excel, PowerPoint)
- Web design
- Social media platforms and emerging technologies, Blogs and Wikis
- Basic PC trouble shooting
- Online research skills (i.e. information retrieval)
- Database design, management and concepts

Table 3—Transferable Skills

- Library/technology teaching instruction
- Communication
- Management
- Evaluate & assess programs and library services
- Public policy, community outreach & inclusion, engaging stakeholders
- Budget & finance
- Marketing

of a sample of the best MLIS programs.[25] This analysis was conducted in order to determine the extent to which recent MLIS graduates are prepared to effectively facilitate access to technology in their programming and help the public develop DL skills. The analysis included only general MLIS programs and excluded any specialized programs in information management, technology or architecture.

Through an extensive literature review and the interviews with the librarians, a list of seven IT skills (**see Table 2**) and a list of seven additional transferable skills were generated (**see Table 3**).

These skills were used as a basis for conducting an analysis of the titles and descriptions of specific course offerings within the selected MLIS that were relevant to the two broad areas of competencies (listed on the university websites). The courses were initially coded as 'IT' based, as long as they included at least one of the seven identified IT skills in the titles and descriptions. For example, a course titled Web Technologies Techniques was included in the analysis in relation to preparing students for web design; this was confirmed in the course description. No distinction was made between core and elective courses or the number of times the course was offered, and each course could be labeled for several skills.

RESULTS AND DISCUSSION

For the purposes of this study, general pseudonyms (e.g. Public Library 1) were used for the four participating libraries. The following discussion presents a synopsis of existing library DL programs and staff training policies in relation to digital literacy and inclusion. This is followed by an analysis of the MLIS programs.

CASE STUDY RESULTS

Public Library 1 had a partnership with a library school and provided a series of classes and workshops on using computers, the Internet, Microsoft Office, file organization, online job searching and résumé writing, online health information, E-books, and social networking. These were taught and designed by library students, while the library managed registration and promotion of the classes. There were also Open Lab sessions where patrons could come in with individual questions and get one-on-one assistance. The most current Library Information Technology Plan was from 2003 to 2007 which described the training of librarians as lacking and the number of staff as inadequate. There was emphasis on providing staff with appropriate technical skills to satisfactorily perform their jobs and to serve the public, yet no specific policies in regards to digital literacy and inclusion were identified.

Public Library 2 offered a variety of classes for the public (e.g. computer classes covering email, Web, Microsoft Word and Internet basics) and some of the classes were taught by students of the library school in the area. The library's DL and DI policies (covering 2007-2010) included providing its residents with information technology resources through ample access to computers and technology training, and the library kept up-to-date with emerging technologies and also had partnerships with high-tech organizations in the community. Staff training was therefore a high priority. Competencies in information and technology-related communications were emphasized for all staff positions and all staff members were expected to be competent with PC and Web-based applications.

Public Library 3 offered classes on Microsoft Office which were taught by students from the library school in the area as well as other classes that covered information resources on career, government, and health information. The library sought to carefully evaluate emerging technologies in order to meet the community's needs and it had a partnership with the County IT department to guarantee maximum public access to hardware and software. The library also worked toward creating a technology team to assess new technologies and devices for integration into the library. The strategic plan of the library from 2013-2016 identified two priorities centered on community connections and technology tools and training. The library sought to expand collaboration with local organizations and other county departments, and also raise awareness of library services in the community. Ongoing training opportunities for library staff were of high importance.

After contacting several administrators and searching the library's website, it was impossible to find the strategic plan of Public Library 4. There was no mention of any type of policies in regards to DL training of staff. The library offered a variety of classes ranging from PowerPoint and eBooks to help with job searching websites, online applications, and preparing resumes and cover letters. Computers were available and could be accessed to use the Internet, Microsoft Office, and electronic research resources.

INTERVIEWS WITH LIBRARIANS

The librarians who took part in the research considered teaching and instruction a very important aspect of their profession and they emphasized helping the public to become self-sufficient in terms of technology skills that are "key and important to their lives" (Interviewee 6). A wide range of DL training was offered but four categories were mentioned consistently: e-book training (i.e. accessing and downloading Overdrive eBooks), basic computer and office software skills (e.g. how to start the computer, use the mouse, use Microsoft Word and set up email), assistance with online forms (such as job applications, health care and government forms), and accessing and using electronic database resources. Much of this training was aimed at older people as "they're suddenly confronted" with "an advance of social expectations and work expectations…there might be a stigma to not being wired" (Interviewee 2). However, interviewees agreed that a lot of people with different demographics still need "general computers skills," especially help with filling in online job and government applications. They described this as "an immediate need" affecting people's well-being (Interviewees 3, 14). Participants

also mentioned the use of online social media: "Social media is huge, that is a need. People have a need to be social, how do they do that, how do they set up a profile, how to load pictures" (Interviewee 13).

The interviewees identified a number of obstacles in the way of a more digital inclusive community including library priorities, outreach problems, lack of resources (e.g. technological, financial) but also disagreement "regarding technology literacy as a role/goal of libraries" (Interviewee 12) and lack of systematic analysis of users' needs or a "deep plan...to go after specific groups that may be digitally excluded now" (Interviewee 5). The importance of well-coordinated communication efforts was highlighted as an essential component in the teaching of digital literacy and overall emphasis was placed on devising clear and well-developed marketing and communication strategies (Interviewee 7), the development of a unified strategic approach to connecting with different groups in the community, and investing "in that level of communication" (Interviewee 4). One of the participants felt that, although a good start had been made to draw national attention to the issues of digital inclusion, the presence of "the have and have not's...is going farther and farther apart" (Interviewee 3). For example, the government making a decision to go paperless may wrongly assume that the problem of digital connectivity has already been resolved: "part of it is just a mind-set, where the people making decisions assume that everyone in the community is operating at an equal level of digital access" (Interviewee 8).

The library managers interviewed had the expectation that especially new recruits had developed at least a basic level of IT skills that enabled them to adapt to different technologies and platforms rather than just focusing on knowing a specific type of software (Interviewee 3). However, the librarians expressed that MLIS programs were not successful in providing them with the digital literacy skills required for their job. The current MLIS programs were not teaching enough technology skills, and those being taught were often out-of-date. The technological skills they acquired (such as web programming, design and development, and general technical support) were mostly self-taught or had been learned on the job (Interviewees 1 & 6). One participant even questioned the need for librarians to have an MLIS and wondered if there is an equivalent experience or skill set that would provide the same outcome: "I think that a long term conversation needs to be had about the return of the investment of a graduate level program for this type of work" (Interviewee 5). The librarians highlighted a range of different IT skills, from basic technical support and troubleshooting to searching/online research skills. They also required knowledge of mainstream operating systems and office software, social media platforms (including the interpretation of social media statistics for outreach), current technology news, and eBooks (Interviewee 12). Other skills deemed important included basic web and database design and concepts as well as advanced online researching.

The librarians interviewed considered the acquisition of transferable skills equally important. These skills included the management of digital literacy programs (e.g. budget and finance aspects), the communication with external stakeholders for the purposes of outreach and collaboration, and an overall understanding of community needs and public policy issues. Another transferable skill the librarians highlighted was the ability to communicate with the public. They defined this as 'people skills' and the ability to make individuals feel at ease (for example during digital literacy sessions). The interviewees also highlighted the need to understand the community and know how to reach to particular segments of the community (e.g. the unemployed, older people) as a critical transferable skill. In addition the interviewees identified MLIS programs as the venues in which instruction skills and methods should be taught. Finally, knowing how to design and assess programs for the community was considered, by some, essential. One of the interviewees explained that MLIS programs lack sufficient practical experience and enough emphasis on users, "Really understanding who the patrons are who come in the door. It is one thing to theorize who they are and it is all very idealistic but there is a gap with really seeing a homeless person come in and ask some questions" (Interviewee 13).

Another interviewee placed importance on evaluating the effectiveness and impact of a digital literacy program. This would involve a number of transferable skills which could be taught at library school: "...working with data, setting performance measures, knowing how to create measurable outcomes and using those to translate into effective storytelling...we don't always have the language to evaluate what we have done to say whether or not it is worth continuing investment" (Interviewee 4).

All participants agreed that continuing education is very important and that it should be a priority with library management. Nevertheless they expressed that in their libraries there was not enough formal training for all employees. Some participants managed to keep up with current developments on their own by following blogs, reading professional journals or attending free webinars. Others felt that priority was mostly given to employees who lacked basic digital literacy skills but insufficient attention was given to the development of librarians who are already perceived as technologically savvy: "...having been in the position for 15 years, I don't do much and you lose it, like a language" (Interviewee 9). Another interviewee felt that there was not sufficient formal training available in their library and when there was, it was highly dependent on the different supervisors and what they specifically required of their employees (Interviewee 11). Another participant felt that continuing education for librarians is not evolving fast enough. They thought most of their training should depend on specific job requirements and library priorities, but the training they received had not been about library skills, but rather about employment matters such as dealing with co-workers and sexual harassment (Interviewee 14). Despite that in one of the public

Table 4—IT Competencies Taught in MLIS Programs

University	Number of IT courses	Overall Frequency of IT skills	Number of skills listed
University of Illinois	14	18	5
University of North Carolina	12	14	6
University of Michigan	11	14	5
Drexel University	10	13	5
Florida State University	7	8	5
University of Texas	7	8	4
Kent State University	6	10	5
Syracuse University	6	9	5
Rutgers University	5	5	4
University of Wisconsin Milwaukee	5	5	3
Indiana University	4	4	3
University of Alabama	4	7	4
University of Pittsburgh	4	6	4
University of South Carolina	4	8	5
University of Tennessee	4	6	3
University of Wisconsin Madison	4	7	4
Simmons College	3	5	5
University of California	3	4	3
University of Maryland	3	3	2
University of Washington	2	2	1

Table 5—Frequency of Specific IT Skills

IT skills	Number of incidences	Number of schools
E-books	0	0
Operating systems (Microsoft windows, Mac OS) and software applications (Word, Excel, PowerPoint)	36	18
Web design	33	16
Social media platforms and emerging technologies, Blogs and Wikis	19	10
Basic PC trouble shooting	4	3
Online research skills and resource evaluation	27	15
Database design, management & concepts	37	18

libraries there were plans for developing and finalizing "core competencies for all staff" and "drill[ing] down a little bit more on what the idea of technological competency or digital literacy means" (Interviewee 5).

The perceptions of librarians around the development of DL IT and transferable skills provided a rich ground for the analysis of the MLIS programs. It was important to also examine more systematically the degree to which these programs prepared newly qualified librarians to enter the digitally complex environment of the public library. Therefore MLIS programs were analyzed in order to assemble an overall picture of the current DL education within these areas.

ANALYSIS OF MLIS PROGRAMS

By combining the findings of the structured librarian interviews with the results of an extensive literature review, the authors generated a list of IT skills (**see Table 2**) and transferable skills (**see Table 3**). A total of 118 courses offered across the 20 MLIS programs were based on at least one of the seven identified IT skills. **Table 4** presents the number of IT courses offered in the MLIS programs of each university, the frequency of all the competencies identified within the courses labeled as IT, and the total number of IT skills taught out of the seven identified competencies within each university. The courses which were labelled as 'IT courses' were assessed against the seven listed IT skills which resulted to 156 incidences of these skills found across all the courses (one course could focus on several skills). The number of IT courses is arranged from highest to lowest.

This analysis showed that the number IT skills varied substantially across the schools. The University of Illinois had the highest number of IT courses taught (14), followed by the University of North Carolina (12) and the University of Michigan (11). At the University of Illinois, IT skills appeared 18 times in course descriptions and five out of seven of the identified skills were addressed in the courses (for example e-books is not one of the competencies taught).

The highest number of IT skills taught was found at the University of North Carolina (6) while the lowest number was found at the University of Washington (1). Some schools only offered two or three out of the total number of the seven identified skills.

Further analysis demonstrated the emphasis given to particular IT competencies in the programs, revealing clear gaps in specific areas. **Table 5** demonstrates that operating systems and software applications, web design, database design and online research skills and resource evaluation were the areas mostly taught in schools. Surprisingly, however, basic PC trouble shooting and e-books were the two areas that were taught the least. In addition, not as many schools offered evaluation and social media platforms and emerging technologies.

A total of 139 courses were coded as non-IT courses in the MLIS programs offered by the different universities containing the transferable skills identified in this research study. **Table 6** demonstrates that 213 incidences of skills were found across all the courses (as previously one course could focus on several competencies); it also shows the overall frequency of transferable skills identified in the MLIS programs of each university and how many out of the seven competencies were taught. The University of Illinois had the highest number of non-IT courses (26), followed by the University of Maryland (9) and the University of Pittsburgh (11). At the University of Illinois there

were 37 occurrences of transferable skills and all of the seven identified skills were present. This was also the case with the University of Wisconsin at Milwaukee and the University of Pittsburgh. The lowest number of transferable skills (2) was taught at the University of South Carolina. In addition, some schools only offered courses that focused on two or three skills only.

A further analysis of these specific competencies showed that management skills and skills covering public policy, community outreach, inclusion, and engaging stakeholders are covered in the schools. On the other hand, communication skills were only taught in 6 out of the 20 schools. In addition, less emphasis was given to technology instruction and marketing (**see Table 7**).

DISCUSSION AND CONCLUSIONS

The findings from the interviews provided an insight into a set of DL skills that were considered important by librarians. The development of IT skills encompasses different communication media and tools such as e-Books, online databases and social media platforms. The provision of e-Books in particular has attracted a rising interest in the last few years with the majority of public libraries in the United States offering free access e-Books to library patrons. This has been one of the most remarkable changes in patrons' borrowing habits and the increasing popularity of e-Books means that library staff now spend more time on technology support and instruction (e.g. helping with devices, downloading e-Books). Patrons expect public librarians to be knowledgeable on all mobile devices, and eBook readers. This creates many challenges in terms of keeping up with an ever changing technology and it raises the need for developing more hands-on and systematic training programs for library staff.[26]

Basic IT skills, including knowledge of operating systems (Microsoft windows, Mac OS) and software applications (Word, Excel, PowerPoint) are also essential for assisting patrons with using public access computers; however this is a challenging area as IT "can include anything from keyboards and mice to troubleshooting a host of computer problems ... vary in age and composition, come from a range of vendors, run different operating systems, and often have different application software versions."[27]

The most important finding of this study, however, is that the ability to teach DL requires skills beyond knowledge of the technology, embracing additional transferable skills that should not be considered as secondary. For example, designing a website requires understanding of privacy policies and intellectual freedom. Teaching the functionality of operating systems and applications requires creating a comfortable atmosphere for learners who may be intimidated by the technology and embarrassed by their lack of knowledge.[28] Technology instruction implies knowledge of the latest technological trends but in order to convey this knowledge an understanding of pedagogical issues and teaching methodologies is essential.

Similarly, the development of technical online research skills (i.e. information retrieval) is important for effectively sourcing different types of healthcare, government and employment information, yet without

Table 6—Transferable Skills Taught in MLIS Programs

University	Number of non-IT courses	Overall frequency of transferable skills	Number of skills listed
University of Illinois	26	37	7
University of Maryland	9	13	6
University of Pitts-burgh	9	14	7
University of Texas	9	16	6
University of Wash-ington	9	15	6
Florida State University	8	9	5
Rutgers University	8	8	6
University of Alabama	7	10	5
University of North Carolina	6	9	5
Indiana University	5	8	4
Syracuse University	5	8	5
University of Michigan	5	6	4
University of Tennessee	5	10	6
University of Wisconsin Milwaukee	5	10	7
Drexel University	4	8	6
Kent State University	4	10	5
Simmons College	4	5	5
University of California	4	5	3
University of Wisconsin Madison	4	8	5
University of South Carolina	3	4	2

Table 7—Transferable Skills

Transferable skills	Number of incidences	Number of schools
Library/technology instruction	19	14
Communication	9	6
Management	46	20
Evaluate & assess programs and library services	33	16
Public policy, community outreach and inclusion, engaging stakeholders	59	19
Budget and finance	27	16
Marketing	20	14

critical evaluation skills, technical knowledge will not suffice. A technical understanding of social media functionality and awareness of the latest technologies and trends are paramount but, in order to maintain high visibility in information services, communication and marketing are essential transferable skills for outreach, e.g. engaging with patrons and other stakeholders as well as building partnerships with local organizations. In addition, an understanding of public policy at local, regional or national level is important for developing awareness of digital literacy community needs, for utilizing existing support resources, for discovering potential partners, and for sourcing and securing available funding for digital literacy programs. Finally, in order to evaluate the impact of digital literacy programs and developing comprehensive and useful digital literacy services for the community, public libraries require a systematic collection of user data. This requires data analysis skills but also communication skills for translating these data into useful information for the purposes of external funding.

MLIS programs play a big role in providing public librarians with the skills they need to become knowledgeable in how to assist the public with their digital literacy needs. Through our analysis we found that the strongest areas of IT competencies in these programs include operating systems, software applications, web design, and database design. Our research study demonstrated that extensive progress has been made towards preparing librarians in regards to overall IT competencies since the findings of earlier research (such as that of Fortney, 2009[29]), calling for MLIS programs to incorporate a stronger emphasis on technology literacy and information technologies. However, more work is required in specific areas such as e-Books and general PC troubleshooting as these are not given sufficient attention in current programs. It therefore appears that the most basic and practical competencies are missing from the MLIS curriculum.

In 2013, the American Library Association Office for Information Technology Policy (2013)[30] recommended that, in order to support library engagement in digital literacy efforts, "Programs should require classes in instructional design and educational pedagogy so that new librarians are best prepared to work with learners in formal education settings, as well as the public sphere." However, our research has shown that technology instruction skills are lacking among the transferable skills. More work is required in the development of interpersonal skills and particularly in helping MLIS students to develop stronger communication.

Public libraries and MLIS program coordinators need to work together to reevaluate current MLIS programs in terms of DL and transferable skills, in order to make these programs more comprehensive and responsive to current needs. Professional organizations that accredit the programs should continually evaluate the curriculum of the MLIS programs and steer them in a direction that will allow for public librarians to be better prepared to serve the public's digital literacy needs. This sentiment was also found in the earlier literature.[31,32] However, it is understood that not all skills can be acquired through an MLIS program, especially with evolving technologies, and therefore public libraries and public librarians should make continuing education a top priority. The library profession needs to make sure that new librarians are prepared for leading digital literacy programs and that those already employed should receive training in this role that will support their professional development. Thus, "as required by ALA standards for Accreditation, MLIS education programs should actively foster a culture of continuous learning and curiosity."[33]

Finally, it is important to continue evaluating MLIS programs and examine whether they actually provide these skills to new graduates. The training of new librarians can be challenging and should be re-evaluated and assessed frequently.

RECOMMENDATIONS AND FUTURE RESEARCH

The findings of this study suggest several recommendations. In order for public libraries to continue to take the lead in developing digitally inclusive and literate communities they have to be able to show concrete policies and plans for the development of their staff addressing the DL IT and transferable skills explored in this study. Even though the awareness and importance of continuing education is present, systematic training appears to be lacking. Therefore it is recommended that all public libraries create a strategic plan with set policies in regards to staff digital literacy and inclusion training.

MLIS programs should offer hands-on, practical technology classes and training on subjects that will provide the future public librarian with transferable skills that are essential for fostering partnerships with the community, such as, communication, outreach, and technology instruction. MLIS students could also complete an internship/placement before graduating so that they will be better prepared to face some of the issues that are characteristic of public libraries and digital literacy and inclusion.

Several areas relating to the development of IT and transferable competencies of public librarians deserve further research investigation. For example, it would be valuable to examine, in more detail the impact of particular demographics (such as age, gender and graduation date). Furthermore, in several public libraries not all library staff who deal with the public and help them develop digital literacy are qualified/trained librarians. It would therefore be interesting to compare the competencies of different library staff working at different levels. In addition, it would be valuable to talk to MLIS program coordinators and directors to explore these skills in core versus elective requirements of the programs, examine the kinds of coursework available and how it address these skills, as well as investigate the work related experience requirements for entry to the programs (if any) and the pre-employment work experiences that are

» It is important to continue evaluating MLIS programs and examine whether they actually provide these skills to new graduates.

generally being offered by MLIS programs (e.g. internships and internship placement assistance). These could shed further light into how the identified skills in this research could be integrated effectively into the MLIS curriculum. ■

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 Originally published in Communications in Information Literacy vol. 10, issue 1, 2016.

FOOTNOTES:

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