Social Justice Through Access to Information at the University of Illinois at Chicago University

Library

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Abstract

This paper outlines the efforts of the University Library of the University of Illinois at Chicago to provide free open access to information so that everyone has equal access to it. The library does this through advocacy for open access, providing resources to make information openly accessible, and providing training in information literacy to access and use open information.

Introduction

The University of Illinois at Chicago (UIC) is an urban, public research university in the heart of Chicago. It is deeply committed to serving the underserved and addressing disparities that permeate our communities from education to healthcare to employment. As a research institution, a critical part of the university's mission is "to create knowledge that transforms our views of the world, and through sharing and application, transforms the world." The knowledge that is created at our institution through research, scholarship, and community engagement is foundational to public policy, to professional practice, to invention, and to discovery. Sharing that knowledge is key to our mission and to our commitment to addressing disparities. What greater disparity can one have than not being able to access information that could help solve a problem, inform a decision, or inspire a new solution?

Related to the university's mission is the UIC University Library's (Library) own mission to "empower the UIC community to discover, use, and create knowledge." This is further illustrated through our vision, where we strive to offer "a world of equal access to information and resources where everyone is inspired to achieve their goals." This is further demonstrated through our values, which include user-centeredness, inclusivity, creativity, collaboration, communication, intellectual freedom, equity, and social justice (UIC Strategic Plan, 2019). Our commitment to equity and social justice means a commitment to equal access to information. As a result, the UIC University Library has long been an advocate for open access to information. *Open access* refers to free, unrestricted access to online research content such as journal articles and books. Our motivation is the democratization of knowledge, so that everyone, not just those who can afford it, has equal access to information. In addition to our advocacy for universal free access to information for purposes including research, education, and healthcare, we also have a

long history of community outreach, educating healthcare professionals and the public about how to access and use free information resources.

Some of our concern with access to information can get mired in conversations about the cost to provide access to information. The UIC University Library spends millions of dollars each year to ensure our students and faculty have access to the information needed for their research and learning. With decreasing budgets and increasing costs, decisions must be made with respect to which resources, including journals and books, to purchase or drop, despite our desire to provide ready access to meet all information needs. Libraries have become very sensitive to these costs, in part because they are unsustainable and because academic libraries, such as the UIC University Library, are committed to supporting the research and academic success of their faculty and students. However, more fundamental than unsustainable costs is advocating for the democratization of information. Since UIC is a minority-serving institution whose mission is to serve underrepresented populations, creating access to resources is even more important. Thus, affordable and accessible access to information is core to our mission and is reflected in our strategic planning and overall efforts.

Information Access Background

The issues of access, particularly related to journal articles, may be viewed as even more unjust in a broader context. First, consider that some of the research that faculty conduct is often funded through federal grants, paid for by our taxpayer dollars. This research leads to a publication that the author submits to a journal for free, often signing away their copyright to the publisher. The publisher now controls access to the information for which they have paid nothing. Additionally, consider that these researchers are also often volunteering their time to

provide peer reviews of the manuscripts of others. In turn, libraries pay high subscription fees so their faculty can have access to their own research and that of others in their field.

The above scenario results in a system where members of the public and those at institutions that cannot afford subscriptions do not have access to the information. Unless they enter the workforce where similar access to research is provided, once a student leaves an institution like UIC, their access to information is limited. This lack of access is also true for many healthcare professionals. Unless they are affiliated with a large institution like UIC, many healthcare professionals do not have access to the health information they need to care for their patients. Consider, for example, a physician working in rural health care, a social worker working in the city of Chicago, or an entrepreneur working in their garage. Limited access to information inhibits further information seeking, discovery, and the advancement of research and education, and potentially restricts further discovery and invention.

The Library's strategic plan and efforts of the librarians are often focused on activities and services that promote open-access publishing, advocate for alternative ways to make information accessible, and provide education for information-literacy skills that focus on access to free resources to assist healthcare professionals and others who would not otherwise have access to valuable evidence-based information. The remainder of this paper outlines some of the activities the UIC University Library does to promote and provide free and open access to information.

Open-Access Publishing and Access

The Library has initiated and supported programs to facilitate open-access publishing, including offering an open-access journal-publishing platform, providing funds to cover article

processing charges (APC) for open-access journals, hosting an institutional repository to archive open-access versions of published journal articles, supporting open-access policies at the institutional and federal government levels, and developing a program to support the use and development of open-education resources (OERs).

Open-Access Journal Publishing

Though librarians and faculty embraced open access in principle as an alternative to traditional subscription-based scholarly journals, it became clear in the early 2000s that without other publishing options, practice would not change. At a minimum, infrastructure that would support the management and publishing of articles as cost effectively as possible was needed for editors to even consider moving a journal from a commercial provider.

The UIC University Library had a history of hosting online journals. The *AIDS Book Review Journal* was published online by the Library, beginning in the early 1990s. In 1999, the Library added the journal *First Monday*, an online-only, open-access, peer-reviewed journal focused on internet research, launched in 1996. These titles were produced in html format and made available through the Library's website. However, there was no support for the actual submission, review, editing, and publishing processes.

Over the next several years, as the Library's commitment to open access grew and the need for more robust infrastructure became evident, the Library began exploring how it could better help faculty editors produce quality journals at a low cost. In 2006, the Library adopted an open-source journal-publishing platform created by the Public Knowledge Project at Simon Frasier University. Named Open Journals System (OJS), the platform provides an automated manuscript-submission system and peer-review process as well as simplifies editing and issue production. *First Monday* was one of the first journals to migrate to Journals@UIC, as we named

our local installation, and has continued publishing with the UIC University Library ever since. *First Monday* is a monthly publication and one of the premier journals in internet research. Its significant content has always been available online for free.

The UIC University Library currently hosts seven titles on Journals@UIC, covering several disciplines. In addition to the system itself, the Library provides staff support for training, policy development, submitting journals to various indexing services for consideration, and conversion of manuscripts for submission to sites such as PubMed Central. We are always eager to work with an editor interested in moving to or starting an open-access journal. Journals@UIC reflects our commitment to providing practical options for making the results of research openly and freely available no matter the reader's ability to pay.

Open Access Publishing Fund: ROAAP

The UIC Research Open Access Article Publishing Fund (ROAAP) was established to help cover article-processing charges assessed by many open-access journals and an optional fee offered by some traditional commercial journals (subscription based) who will provide open access to an article immediately upon publication for an additional fee. Funded by the Library, the Office of the Provost, and the Office of the Vice Chancellor for Research, ROAAP supports faculty, researchers, staff, post-docs, and students who want to make their journal articles free to all readers immediately upon publication but are not supported by grants or contracts to cover fees. Many recipients have indicated that they would not be able to publish in an open-access journal without this funding. To date, more than 260 articles have been published through use of the ROAAP fund.

Institutional Repository: INDIGO

INDIGO is UIC's institutional repository, which collects, disseminates, and provides barrier-free access to the research and scholarship of UIC faculty, staff, and students. In addition to providing a platform to publish nontraditional scholarship such as white and grey papers, theses and dissertations, data sets, and reports, INDIGO also provides a platform for free access to UIC authored journal articles published in traditional subscription-based journals. Most publishers that license subscription-based journals will allow a free version of the article to be made available to anyone in the world through platforms such as repositories. The full citation is provided with the upload of the freely accessible version so that the official version of record is properly cited. Often only the final peer-reviewed version can be made accessible in a resource such as INDIGO. We see evidence of people all over the world accessing INDIGO, including people from China, Australia, the United Kingdom, and India. Several research studies have demonstrated that openly accessible articles are cited more than subscription-based articles, including articles made accessible through institutional repositories (IRs). Our own statistics show that in a one-week period, we could have 31,585 views and 8,204 downloads from INDIGO.

NIH Open-Access Policy and Other Federal Open-Science Policies

The NIH Public Access Policy (PAP) ensures that the public has access to the published results of NIH-funded research. Researchers are required to submit journal articles that arise from NIH funds to the digital archive PubMed Central. The NIH developed the policy in order to advance science and improve human health. This is not the only area where the federal government has supported open access or been called upon to provide open access to federally funded research. In a 2009 open letter to the US Congress, signed by 41 Nobel Prize winners, it was noted that "[public access] will make it easier for scientists worldwide to better and more

swiftly address the complex scientific challenges that we face today and expand shared knowledge across disciplines to accelerate breakthrough and spur innovation." In February 2013, the UIC University Library and many other academic libraries applauded the Office of Science and Technology Policy (OSTP) and White House directive that all federally funded agencies granting more than $100 million in research and development must develop plans to make the published articles of research supported by federal funding publicly available and require better management of the data resulting from the research.

Many academic libraries, including the UIC University Library, are strong supporters of policies that encourage federally funded research be made openly accessible because of the impact openly accessible information can have on discovery and its resulting impact on society. The results of the research examining the impact of openness have demonstrated positive outcomes. From research conducted by the Library's own faculty, we know that articles complying with the NIH policy were cited 26% more frequently than articles not complying with the policy (De Groote, Shultz, & Smalheiser, 2015). Other research has demonstrated how access to information speeds discovery (Williams, 2009; Lakhani, et al., 2007; Murray, et al. 2008).

University of Illinois (U of I) Public Access Policy

In 2013, the Illinois legislature passed Senate Bill 1900, the Open Access to Research Articles Act (ultimately, Illinois Public Act 098-0295). Inspired by national and funding agency initiatives to broaden access to research results, state senator Daniel Biss introduced Illinois SB1900 "to maximize the social and economic benefits of research to the public." The bill required each of the public universities in the state to develop a proposed policy and implementation plan to further the purposes of open access. The work of developing and recommending a policy went to the University of Illinois (U of I) Senates Conference (USC).

After being crafted by the USC, the policy was reviewed and ultimately approved by the individual U of I senates. The policy requires faculty to grant to the university "a nonexclusive, irrevocable, worldwide license to exercise any and all rights under copyright relating to each of his or her scholarly articles, in any medium, and to authorize others to do the same, for the purpose of making their articles widely and freely available in an open access repository." The policy allows for waivers and is overseen on each campus by their Faculty Senate and the Office of the Provost. The board of trustees approved the policy recommendation in May 2016. At UIC, the Library helps faculty to comply with the open-access mandate, providing the official policy website with information on the policy and a link to the waiver request form. The Library's Scholarly Communications office also solicits faculty manuscripts for deposit in our local repository. Our local repository now holds over 20,000 titles.

Open Textbook Initiative

The high cost of textbooks is one of the factors that affects student-learning outcomes and student success. Students avoid certain classes, drop a class, or do poorly when they cannot afford the text for a course. Students at UIC expressed their own concern over the costs of textbooks and asked the Faculty Senate to consider an Undergraduate Student Government resolution to encourage faculty to choose alternative options for course materials. The Faculty Senate endorsed the student resolution but offered no real incentive to faculty to adopt open education resources (OER) to decrease costs for the students. "Open educational resources (OER) are teaching, learning, and research resources that are free of cost and access barriers, and which also carry legal permission for open use" (SPARC Open Education, 2007).

In conjunction with the Provost's Office, the Library created the Open Textbook Faculty Incentive Program, as part of UIC's student success initiative. This program was designed to support undergraduate students by creating incentives for teaching faculty to use alternative, lower-cost educational materials rather than high-cost textbooks. Alternatives include the creation of new OER, the adoption of existing OER materials, or use of existing library materials instead of a textbook. The program was first promoted in the fall of 2017, notifying award recipients in spring 2018 of funding, with implementation of the OER materials occurring in fall 2018. Eleven faculty members received a portion of the $20,000 allocated for this initiative. Results from the first year of the program suggested that around 2,200 students saved approximately $369,292 over the course of the spring, summer, and fall 2018. Faculty reported that switching to OER did not negatively affect students' grades and in some cases, may have improved student outcomes. One professor commented that class activities that required students to use or refer to a textbook ran more smoothly because all students had immediate access through their electronic device. Another professor commented that using OER allowed the selection of material that was more reflective of UIC's diverse study body. All participating faculty were planning to continue to use OER in their courses.

Information Literacy for Health

Even prior to the Library's support of open-access publishing, UIC health sciences librarians were providing outreach to rural health professionals and the public. As a public university, part of our mission has been to serve our communities as well as our students. UIC's health sciences librarians have chosen to fulfill this mission primarily by increasing knowledge of the high-quality, free health information provided by the National Library of Medicine (NLM). The NLM

conducts outreach through its National Network of Libraries of Medicine (NNLM). The NNLM

typically includes only a couple of libraries from each state that work together, share ideas, and

make a commitment to reach out to those in need of quality health information.

UIC's commitment to this national network has been strong. UIC was the home to the

Greater Midwest Region Office of the NNLM for many years and has continued to be an active

part of the network ever since. The network and its partner libraries strive to bring reliable and

free health information to those most in need, whether that is a practicing healthcare professional

working in a rural area without a support network or a member of the general public struggling

to pay the bills while dealing with a devastating health issue. UIC works to bring health

information to those in need so that all members of society can improve their health through

knowledge.

Grateful Med Training

UIC librarians provided training to health professionals providing care in farm-based

communities in Illinois (Dorsch, 1993). Grateful Med, a 1990s predecessor to PubMed, was an

electronic search tool for MEDLINE, the NLM's bibliographic database containing more than 25

million references to journal articles in life sciences with a concentration on biomedicine

(National Library of Medicine, 2018). At the time, access would not have been free but provided

either through commercial services or CD-ROM shared access. The project trained health-

sciences professionals in information-retrieval skills and provided access to document-delivery

services so that health practitioners could make more informed patient-care decisions. Free

versions of MEDLINE were made available in 1996 through Internet Grateful MED (now

ceased) and the still active and widely popular PubMed. UIC librarians continue to provide

outreach to rural and other unaffiliated healthcare professionals to provide training in information retrieval, evidence-based searching skills, and methods for accessing free full text.

Nursing Experts: Translating the Evidence (NExT)

Nursing Experts: Translating the Evidence (NExT) is an interdisciplinary education project to train public health nursing professionals on evidence-based practice. NExT is built on a long history of working with public health nurses that began in 2001. It is understood that professionals working in public health often work with patients who are in the most need with the fewest personal resources. Goldsteen, et al. (2011) state that "the promise of public health rests on social justice—everyone is entitled to the conditions that can maintain health" (Goldsteen, et al., 2011 p. 42). Public health departments are organized and financed by a complex and variable web of local, state, and federal governments connected to a wide array of nonprofit organizations (Goldsteen, 2011). This structure frequently leaves departments lacking adequate and stable funding to pay for informational resources or educational opportunities. The NExT project was envisioned and developed by librarians and nurse educators, and aimed to provide knowledge about free, reliable health information available from multiple government and no-profit organizations as well as the skills required to be able to successfully search the resources. By securing continuing education units for nurses and making the course available in multiple Illinois locations and online, NExT helped public health nurses fulfill their licensure requirements as well.

The NExT project incorporated in-person continuing education workshops, an online portal (http://phnext.uic.edu), a mobile website (http://gonext.uic.edu), and social media. Additionally, the in-person workshops were translated into an online, asynchronous, interactive tutorial that is currently available and actively being used. The workshop content was driven by

goals identified by public health department directors in Illinois, including increasing the number of grants, increasing involvement in policy and program planning, and expanding the knowledge base of practicing public health nurses (Illinois Practice Academic Partnership, 2014). All CEUs and supporting content is provided free of charge and has been funded and supported by UIC, Western Illinois University, and the Greater Midwest Region Office of the National Network of Libraries of Medicine, National Library of Medicine, National Institutes of Health (under Contract No. HHSN-276-2011-00005C). By the end of 2018, the NExT project had granted 420 professionals in 12 different states with continuing education units through the in-person workshops, the webcast, or the online tutorial. The mobile website has had users in 25 countries outside of the United States.

Rockford Consumer Health Collection

Crawford Library of the Health Sciences in Rockford, Illinois, has always been an outreach library that is open to the public and allows anyone with an Illinois ID to check out materials from the collection. In addition, the library provides a consumer health collection containing materials written for the general public. Crawford Library promotes its resources and services by hosting exhibits at health events for the community. Previous events have included Operation Healthy U, a health fair for the community that is held on the grounds of the UIC Health Sciences Campus and Community Health, and wellness seminars hosted by the UIC College of Medicine at Rockford. Exhibits include a selection of books from the Consumer Health Collection; Crawford Library brochures listing services, hours, and contact information; as well as bookmarks, brochures, and notepads from the National Library of Medicine (NLM), which promote consumer health resources such as MedlinePlus and Genetics Home Reference.

Launched in 2018, Community Health in the Library (CHIL): Reinvigorating Outreach at the

UIC Crawford Library of the Health Sciences is a project aimed at improving access to high-

quality, reliable health information for the city of Rockford and Winnebago County. CHIL was

conceived because Winnebago County ranks 96th among 102 Illinois counties in the Health

Factors overall rank, indicating a true need for programs and services to improve health (County

Health Rankings, 2017). Additionally, librarians determined that Winnebago County residents

are unaware that there is a health-sciences library in the community that is open to the public.

CHIL aims to reinvigorate the aging consumer health collection, promote the library's presence

in the community, and introduce the rich resources offered through the NLM. CHIL activities

include teaching workshops on evaluating health information on the internet at community sites;

purchasing print and audio/visual materials written for a general audience; hosting "mini

exhibits" that feature the NLM's online exhibits; and generally promoting NLM resources and

the library, using brochures, flyers, and newspaper ads. CHIL is funded and supported by the

Greater Midwest Region Office of the National Network of Libraries of Medicine, National

Library of Medicine, National Institutes of Health.

Mobile Device Lending Program

The Rural Information Connection (RIC) project is a mobile device lending program

supporting access to clinical information during a longitudinal integrated clerkship in rural

medicine. According to Danis, the health of rural populations in the United States is worse than

that of urban populations by a variety of measures, including premature mortality (Danis, 2008,

p. 74). Additionally, there is less access to medical professionals in rural areas (Danis, 2008, p.

75), and the medical professionals that are available lack access to point-of-care information

needed to help their patients across a broad spectrum of clinical problems (Fuller, et al., 2001, p. 228). In order to mediate this imbalance of healthcare, many medical schools provide education that encourages interest in rural practice and cultivates positive experiences in a rural setting (Blackman, 2001).

The Rural Student Physician Program (RSPP) clerkship at the University of Illinois College of Medicine – Peoria places third-year medical students in a rural community for a seven-month rotation period under the supervision of a practicing physician. Each RSPP student is loaned a mobile device preloaded with relevant clinical information resources to use in the low-resource rural environment. Students have found the mobile device and resources helpful in supporting their education as well as in supporting clinical care and patient education (Johnson, 2019). The program was originally funded by the Greater Midwest Region Office of the National Network of Libraries of Medicine, National Library of Medicine, National Institutes of Health and has been continued by UIC. The program has enrolled sixteen students in the three years it has been integrated into the clerkship and is entering its fourth year of programming.

Summary

The UIC University Library values social justice and equity. The Library's commitment to these values is evidenced in our involvement in a variety of programs, in our support of free access to information, and in our provision of support for information discovery. It is often difficult to point directly to evidence of the impact of these activities because there is no direct comparison to what would have happened if we did not offer the service or assistance. While other academic libraries are also offering some of the same services as our library, not all offer the services to the same degree that we do or do so with the same focus and purpose. Our

presence in these areas often means we are called upon to share our knowledge with others in the community and leaders within our profession.

References

The Alliance for Taxpayer Access. http://www.taxpayeraccess.org/supporters/scientists/nobelists_2009.shtml

An open letter to the us congress signed by 41 nobel prize winners. (2009).

Blackman J.R. Predoctoral education for rural practice. In Geyman J.P., T.E. Norris, & L.G. Hart (Eds.) *Textbook of Rural Medicine*. McGraw-Hill Medical Publishing Division.

County Health Rankings & Roadmaps (2017) Winnebago (WB). Retrieved from https://www.countyhealthrankings.org/app

Danis, M. The ethics of allocating resources toward rural health and health care. In C.M. Klugman & P.M. Dalinis (Eds.) Ethical Issues in Rural Health Care. The Johns Hopkins University Press.

De Groote, S. L., Shultz, M. & Smalheiser, N. R. (2015). Examining the impact of the national institutes of health public access policy on the citation rates of journal articles. *PloS ONE, 10*(10), e0139951.

Dorsch, J. L. & Landwirth, T. K. (1993). Rural grateful med outreach: project results, impact, and future needs. *Bulletin of the Medical Library Association*, *81*(4), 377.

Fuller S.S., Masuda D., Gorman P., & Lindberg D.A.B. Medical informatics and information access. In Geyman J.P., T.E. Norris, & L.G. Hart (Eds.) *Textbook of Rural Medicine*. McGraw-Hill Medical Publishing Division.

Goldsteen R.L., Goldsteen K., & Graham D.G. (2011) *Introduction to Public Health*. New Springer Publishing Company.

Illinois Practice Academic Partnership. (2014) *Illinois public health nursing workforce: 2013–2014* [data file and code book]. Peoria Health Department.

Johnson, E. M., & Howard, C. (2019). A library mobile device deployment to enhance the medical student experience in a rural longitudinal integrated clerkship. *Journal of the Medical Library Association: JMLA*, *107*(1), 30.

Lakhani, K. R., Jeppesen, L. B., Lohse, P. A., & Panetta, J. A. (2007). The value of openness in scientific problem solving. Division of Research, Harvard Business School, pp. 7–50.

Murray, F., Aghion, P., Dewatripont, M., Kolev, J., & Stern, S. (2016). Of mice and academics: Examining the effect of openness on innovation. *American Economic Journal: Economic Policy*, *8*(1), 212–52.

National Library of Medicine. (2018). MEDLINE®: Description of the database. National

Library of Medicine.

SPARC Open Education. (2007). https://sparcopen.org/open-education.

UIC Strategic Plan. https://library.uic.edu/about/strategic-plan.

Williams, H. L. (2013). Intellectual property rights and innovation: Evidence from the human genome. *Journal of Political Economy*, *121*(1), 1–27.