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Extension-Library Partnerships: Looking Backwards 100 Years for Inspiration for the Next Century

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Abstract:

Libraries and cooperative extension have similar missions of providing information and research to the public in order to build strong communities. One might think the parallel path of both entities that serve the public would have collaborated more closely. This may not have happened in the first 100 years of cooperative extension, but extension-library partnerships could be the innovation both entities need to stay relevant for the next 100 years. This paper will share some examples from the University of Minnesota and other libraries around being partners to further the mission of Extension and agricultural information dissemination.

Keywords: extension, libraries, extension-libraries collaboration.

Introduction

Libraries and cooperative extension have similar missions of providing information and research to the public in order to build strong communities. The turn of the 20th century was the golden age for libraries. Carnegie built 2,509 libraries between 1883 and 1929 across rural America. At the same time another innovation was occurring in the agricultural sector through the creation of extension. The Smith-Lever Act of 1914 provided education to farmers and enhanced practical research. One might think the parallel path of both entities that serve the public would have collaborated more closely. This may not have happened in the first 100 years of cooperative extension, but extension-library partnerships could be the innovation both entities need to stay relevant for the next 100 years. A comparison of the National Agricultural Library and the University of Minnesota Extension's timelines can be found at: http://z.umn.edu/iflaextlib.

Libraries and extension are both public services, and they both must revisit their missions and services in the current economic climate with less public funding. Peters states (2014) the "dominant view of extension—the dissemination, application, and transfer of scientific information and technologies for economic ends—is too narrow." Haskell and Morse (2015) completed a study that illustrated indirect benefits for non-users of libraries in order to help demonstrate value to stakeholders. While I have not done a cost analysis of the Libraries support to the outreach mission of Extension, the following are some projects that describe direct value of library involvement in extension work.

Access and Preservation of Information

The first guiding principles of Extension is "continued reliance on a strong foundation in research and its application to seek to create a better America" suggested by Henning et. al. (2014). I am leading efforts to digitize thousands of University of Minnesota Extension documents to preserve this record of the past 100 years, so the next 100 years can build on this research and success. By digitizing documents, we vastly extend the reach of this knowledge geographically, removing barriers and boundaries to its discovery and use. While Eels (2007) outlines long term access issues for born-digital grey literature produced by Extension and Agricultural Experimental Stations. Web links in articles from a study found that 22% of hyperlinks in Elsevier journals were broken, as the site may have changed the URL of the paper or removed it altogether (M. Klein et. al., 2014). While archival copies of resources in repositories at libraries is one approach to preserving digital content, additional strategies are needed. "The Harvard Law School Library in Cambridge, Massachusetts, has developed a web-archiving service called Perma.cc (https://perma.cc): enter a hyperlink here and the site spits back a new hyperlink for a page that contains links to both the original web source and an archived version (Perkel, 2015)."

Numerous studies have shown that access to current academic information is a challenge still across Africa. Nosakhere and Abdelwahid's study (2014) found that 85% of their respondents reported high use of open access journals. The use of open access resources helps to level the playing field for information access. This is another compelling reason to encourage faculty and researchers to publish in open access journals, or negotiate their rights to be able to post their pre-prints in repositories.

Data Literacy

While extension faculty, researchers, and educators may have deep subject expertise, they might not be aware of all the areas of data literacy. Carlson et. al. (2011) determined the following as core competencies: discovery and acquisition of data, data management and organization, data conversion and interoperability, quality assurance, metadata, data curation and re-use, cultures of practice, data preservation, data analysis, data visualization, and ethics, including citation of data. Libraries can be key partners in exploring these areas of data literacy. At the University of Minnesota, we have several initiatives to address data literacy. First, we have data management plan workshops, tutorials, and working groups. Second, through the Data Repository for the University of Minnesota (DRUM) we offer data discovery and possible long term format conversion, where we often consult on quality assurance issues around data sets. DRUM and other data repositories allow for re-use and citation easily. Third, we have consulted on visualization tools and data representation for working groups.

In addition to digital repositories for papers, we also can make strides in curating data of researchers. This can aid in fulfilling the requirements of funding agencies, such as the U.S. Department of Agriculture, U.S. National Institute of Health, and U.S. National Science Foundation, to make data accessible, along with any final products. In a recent survey (2014) of University of Minnesota College of Agriculture and Natural Resource Sciences faculty and researchers, we found that 59% stated they backed-up their data using an external hard drive, 36% on a departmental server, 36% using a cloud-based service, and a variety of other services, including 3% that stated their materials are not frequently backed-up. While 83% acknowledged that they use e-mail most frequently for sharing data with potential collaborators, and over 60% have not shared their data publicly. By offering a repository,DRUM, completed data whether they are photographic documentation spreadsheets, lab notebooks, etc., provides long-term preservation and open access to other researchers across the world that may be doing research on similar or interdisciplinary topics, thus increasing the discovery and facilitating cross-organizational discussions and accelerate discovery.

Collaboration

While much of Extension and Agricultural Experiments Station data and grey literature are gathered in institutional repositories, how do we make it easily accessible in a topical, regional, and worldwide view? In a recent post by Dieter Telemans (2015) he outlines three ways to strengthen IPCC reports: smooth the approval process, add developing world literature, and improve the reports' user friendliness. While information professionals should be involved in all three areas, the second is where we can advance for policymakers and researchers. He states, "Empirical evidence from different parts of the world can substantiate experiences documented in particular regions. It can also reveal differences between developed and developing countries." How do we gather this data? One approach to building library-extension partnerships and to construct stronger communities is to leverage statewide or regional resources. One example is AgNIC, a group of institutions and representatives that collect and disperse free practical agricultural information. Information is grouped by crops and research centers. It also serves as a clearinghouse for notifications of conferences and other events related to agriculture, food, and natural resources. There are international initiatives around topical repositories, such as AgEcon Search, which is focused on research in the agricultural and applied economics. Looking at food systems at a regional level, projects such as the Northeast Food Knowledge Ecosystem are developing to make food system related information more accessible and discoverable for a targeted region. For example, at the University of Minnesota, we are working with Kenya to focus on post-harvest handling and technology for horticulture crops. I retrieved freely available online resources which we shared with the library at Kisii University. Nonprofits and funding organizations have often looked at using public libraries to empower community and economic development across the world. For example, on the Beyondaccess.net project list, over 25% of their libraries-related programs feature agriculture. In addition, librarians can be key partners in searching and tracking grant funding opportunities (Delserone et. al., 2009).

Libraries can be a key resource for agricultural information dissemination in developing countries, however there are numerous hurdles to overcome. Ademiluyi (1983) estimated the ratio of extension workers to farmers in the 1980's to be between 1:10,000 to 1:25,000 in Nigeria. Another complication for disseminating agricultural information is that traditionally the majority of education and services are focused on men, rather than women, despite women making up the majority of agricultural workers (Aina, 2006). In addition to a lack of

extension agents, “38% of African adults (some 153 millions) are illiterate, two-thirds of these are women” (UNESCO, 2014). According to Gallup (2014), “in 2013, 80% of sub-Saharan Africa urban households had at least one mobile phone, compared with 63% of rural households that have at least one mobile phone.” Aker (2011) outlines the costs of information delivery which clearly illustrated the amount of time and resources for two visits by an extension agent, versus a combination of one visit and text messaging, or phone call.

Aker (2011) suggests that there are numerous points along the agricultural production process cycle where information is needed, and where libraries could intervene (citing Mittal et. al., 2010). Aina outlines a library-extension service linkage model that featured two-way information between public libraries and farmers, farmers and extension service systems, and libraries and extension service systems. Information resource centers can be located within communities and not only aid in disseminating information, but also making it relevant, practical, and accessible to the needs of the local population (Aina, 2006). One example of adapting teaching to meet the needs of an illiterate population includes the Kackumbala Area Cooperative Enterprise in Uganda which used audio and photographic images of agricultural practices to share information and best practices with their peers (Petuchovaite and Lipeikaite, 2014). Another example from Lithuania features library staff as technology experts, showing farmers how to maximize the use of their smartphones related to work and agriculture, along with creating a library database focused on local economic agricultural news. In addition, public libraries can be conduits for relaying programming and information needs back to extension agents.

Programming Partnerships

Another library-extension partnership that is in it’s infancy is working with the Center for Community Vitality to consider best practices for file sharing and data management. Libraries revolve around systems of organization and classification to make knowledge accessible, so this seems like a natural fit. We are investigating tools to create a shared inventory of resources frequently cited in extension’s programs and literature. Also, we are looking at best practices and protocols for versioning curriculum changes. This is to ensure that the public receives the latest version of information.

Henning et. al.’s second and third guiding principles of Extension are “relevance and connection to the local community, as evidenced by the programming and education efforts of Extension professionals in every county, parish, and borough in the United States” and “Extension's commitment to innovative educational approaches, including the use of new and evolving digital technologies (2014).” At the University of Minnesota I have been partnering with the Minnesota Master Naturalist program to develop training on statewide databases. Since master naturalists work with the public and receive questions, they could be prime users and advocates for freely available statewide resources. Through workshops, we are teaching the volunteers how to search the databases for related magazines and journals in order to setup tables of content and journal alerts to keep current on the latest information related to the various topical areas master naturalists have to be knowledgeable about: forestry, geology, entomology, and more. In addition, we show them how to find peer-reviewed articles to cite in answering public questions. Google advanced searching tips, Google Scholar and educating the volunteers about filter bubbles have proven to be interesting and engaging topics for the master naturalists. “The ‘learn by doing’ principle of Extension is a timeless model for transformative education,” stated Henning (2014), which we try to emulate with hands-on approaches to searching.

Conclusion

How can libraries and extension elaborate and expand on their missions? Libraries and extension are poised to solve the grand challenges of our society from hunger to disease. Libraries can connect experts across disciplines to create interdisciplinary approaches and teams to research these tough questions, and extension can bring the research down to a public engagement level. Both entities have strong histories of programs and partnerships with local, state, and national organizations to aid in community needs and outreach.

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