

Sharing is Caring: Zotero for Agricultural Literacy Research

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Introduction

Reviewing literature is a tedious, insightful process required in most scholarly writing. Many different methods are suggested for organizing reference publications. From handwritten notes to spreadsheets to web-based tools, researchers continually refine their organizational methods to maintain lists of previous literature to support their research efforts (Joyner et al., 2013). The American Psychological Association (APA), the most frequently required publication style in our profession, emphasizes accuracy and consistency in in-text citations (American Psychological Association, 2020). Citation managers offer an effective way to digitally categorize publications for future reference (Sungur & Seyhan, 2013). Most citation managers allow users to create sub-folders, assign keyword tags, link related publications, and some even offer text annotation and highlighting. Many have word processing plug-ins making it easy to cite publications and manage a reference list more accurately and efficiently. University writing resource centers compare features of citation managers, helping students and faculty select an option that will work best for their research discipline, computer operating system, and publication needs (University of Chicago, 2023). Common citation managers include EndNote, Mendeley, Zotero, and Refworks.

Multistate Research Committees managed through State Agricultural Experiment Stations are supported by the Hatch Multistate Research Fund within the U.S. Department of Agriculture National Institute for Food and Agriculture. These efforts focus on advancing U.S. agriculture and rural life through research that concerns more than one state. Through these research committees, nearly 60 universities have access to more than \$60 million for use across more than 140 committees and topics (USDA, 2023). Established in 2014, the Multistate Agricultural Literacy Research Committee works to advance society's fundamental understanding of agriculture as it relates to daily life. More than 40 faculty representing 22 institutions plus their graduate students have engaged with the committee in its tenure. From 2001-2006 a multistate research coordination and information exchange group laid the foundation for the formation of this multistate committee. From 2006-2012, this effort expanded into a multistate research project then later into a multistate research committee which has been renewed twice (NIMSS, 2019). Through these coordinated iterations of multistate efforts, more than 130 publications and 24 presentations have been authored by committee members. To catalog and share the work of this committee, a public Zotero group library has been maintained.

How it Works and Cost

Zotero is a free, public, open-source citation manager with a desktop app for Windows, Mac, Linux, and iOS operating systems as well as plug-ins for MS Word, Google Docs, and LibreOffice. Through connectors in web browsers such as Chrome, Firefox, Edge, or Safari, users can save resources to folders within their digital Zotero library. Zotero records metadata associated with each digital resource to automatically catalog necessary information for generating citations. Users may manually edit this data to match current publication requirements or add any missing information. Using the word processing plug-ins, writers can recall their saved documents' citations to insert directly into their writing and automatically add each cited source to their reference list. If changes are made to the saved resource, the word processing plug-in can be manually refreshed to update the items. Zotero offers the option to create private

and public group libraries to share cataloged resources with colleagues. Within the public groups, options are offered for public viewing with closed management or public groups with open management. Closed management means only designated individuals can edit or add to the group's library, but anyone can view and cite resources. Open management allows for anyone to view, use, cite, edit, and add/delete resources in the library.

Leadership of the Agricultural Literacy Multistate Research Committee manage a public Zotero group library with closed management. This allows for curation of useful publications within the library that are visible to the public while allowing leadership to filter publications through the lens of the committee's objectives. Zotero was selected because the program works well, is flexible, collaborative, and all features are free to all users. Publications generated by individuals not participating in the multistate research committee are included in the catalog if they are relevant to agricultural literacy research. The public group library can be found by searching groups on Zotero's website and is linked on the Multistate Agricultural Literacy Research Committee's page on the National Center for Agricultural Literacy's website.

Results to Date

As of February 2024, 280 publications are housed within the agricultural literacy Zotero public group library. Eight individuals are managers of this content. The group contains 32 subfolders categorizing aspects of agricultural literacy research. Some folders directly relate to a specific project such as all references associated with the creation of the Logic Model for Agricultural Literacy, a cornerstone publication in this discipline (Spielmaker et al., 2014). While other folders organize a broader subsection of research such as assessment literature. Subfolders organize work of each iteration of the research committee, separating work into W1006, W2006 and W3006 folders. Some publications are duplicated within folders for ease of locating. For example, a publication might have been published under the W2006 committee and focuses on assessment of agricultural literacy therefore it is also located in the assessment literature folder. While Zotero does not track number of visitors to the public groups, through analytics of the Multistate Agricultural Literacy Research Committee webpage, 704 users have viewed the portion of the website with links to this group. This curated Zotero group library makes it easy for agricultural literacy researchers to conduct literature reviews for their research. It also provides a place to share committee members' publications for use by their peers.

Future Plans and Advice to Others

The current W3006 Multistate Research Committee authorization is valid through September 2024. An annual report will be compiled at that time, soliciting any research published by committee members in the past year. These publications will then be added to the Zotero library. A proposal to continue with a W4006 committee has been submitted. As future research is conducted and reported through these committees, publications will be added to the Zotero group library by multistate committee leadership. Other Multistate Research Committees, other research teams, or individual project groups could easily implement citation manager group libraries to share and catalog research pertinent to their field.

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