Supporting Citizen Science in Libraries

Michael Bobb, Iowa State University
Lorraine J. Pellack, Iowa State University
Eric Schares, Iowa State University

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What is Citizen Science?

Citizen Science has been defined many different ways. Two popular definitions are: “scientific research conducted, in whole or in part, by amateur (or nonprofessional) scientists” (Wikipedia) and “projects in which volunteers partner with scientists to answer real-world questions” (Citizen Science Central Website).

Literature Review Summary

Table S. We did a title search for “citizen science”, all source types. To show the breadth of subtopics we chose 3 articles for each database to be representative.

<table>
<thead>
<tr>
<th>Database</th>
<th>Article Title</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web of Science Core Collections</td>
<td>Scopus, 755 articles. The search returned a list of articles on the topic of citizen science.</td>
<td>755 articles</td>
</tr>
<tr>
<td>Earth, Atmospheric &amp; Aquatic Science Database</td>
<td>450 articles. The search returned a list of articles on the topic of citizen science.</td>
<td>450 articles</td>
</tr>
<tr>
<td>Wildlife &amp; Ecology Studies Worldwide</td>
<td>270 articles. The search returned a list of articles on the topic of citizen science.</td>
<td>270 articles</td>
</tr>
<tr>
<td>Compendex</td>
<td>250 articles. The search returned a list of articles on the topic of citizen science.</td>
<td>250 articles</td>
</tr>
<tr>
<td>Cite</td>
<td>35 articles. The search returned a list of articles on the topic of citizen science.</td>
<td>35 articles</td>
</tr>
<tr>
<td>PubMed</td>
<td>212 articles. The search returned a list of articles on the topic of citizen science.</td>
<td>212 articles</td>
</tr>
<tr>
<td>Compendex</td>
<td>256 articles. The search returned a list of articles on the topic of citizen science.</td>
<td>256 articles</td>
</tr>
<tr>
<td>Wildlife &amp; Ecology Studies Worldwide</td>
<td>871 articles. The search returned a list of articles on the topic of citizen science.</td>
<td>871 articles</td>
</tr>
</tbody>
</table>

What is a Land-Grant College?

The Morrill Act, which was signed into law in 1862, created the idea of the land-grant college. One of the core principles of the land-grant college is that it exist as a service to the people of the respective state in which it was created. Because of this inherent aspect of the land-grant college mission, we hypothesized that land-grant universities would be more likely to be in some way involved with citizen science than non-land-grant universities and colleges, because citizen science, as its name implies and related to the concept of service to the state, encourages participation by non-scientist citizens in scientific research, data collection, and/or observations.

Study Methods

• We examined R1 universities in the United States.
• This includes both private and public, land-grant and non-land-grant.
• We determined if each university library had a dedicated library guide on the topic of citizen science.
• Also, we searched (with whatever search function was available) within the library guides as well as the library website for any “mentions” of citizen science and recorded those as well.

How Can “We” Become More Involved?

Advocating and promoting CS programs and opportunities

• Provide a LibGuide Resource pointing to available resources/projects.
• Educate other librarians on campus to “What is Citizen Science?”
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• Promote and educate instructors to “What is Citizen Science?” Tie into class projects and library resources.
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• Promote Apps/Games for “fish” that are citizen science (unrelated to a class project).
• Promote CS projects already being done on campus.
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• Provide students opportunities for students to refine their career objectives via hands-on research in their potential fields of study.

Some Citizen Science Organizations

• Citizen Science Alliance - Originally based out of the U.K., the CSA is an international “collaboration of scientists, software developers and educators who collectively develop, manage and utilise internet-based citizen science projects in order to further science itself, and the public understanding of both science and of the scientific process.”
• Citizen Science Association - An international organization, originally developed out of the Cornell Lab of Ornithology. “The goals are to promote and support citizen science best practices in such areas as data management, scientific rigor, ethics, and project evaluation.”
• European Citizen Science Association - created in 2013, ECSA is a non-profit association set up to encourage the growth of the Citizen Science movement in Europe.
• Australian Citizen Science Association - created in 2014. While most of their projects are unique to the Australian area (including Malaysia), there are a wealth of project ideas that could be adapted/modified to other locations. For example, Scope-a-Poop (tackling antibiotic resistance in the wild). Their Project Funders page is an excellent example of design elements for useful searches, including the ability to filter by those that have teaching materials available.
• Citizen Science Central - http://www.birds.com/education/101/about-definition