
Building CORA, the Community of Online Research Assignments

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Abstract

This short paper chronicles the evolution of CORA (Community of Online Research Assignments), a pilot open access educational resource (OER) for faculty and librarians in higher education. CORA was developed through a Statewide California Electronic Library Consortium (SCELC) Project Initiatives Fund grant. The grant proposed to expand upon an internal information literacy assignment collection by using the “recipe” metaphor to envision the assignments as recipes that could be tweaked or easily adapted to fit into any information literacy curriculum. Input from two faculty focus groups was incorporated into the original prototype design.

The site was built using Drupal, an open source content management platform. Several small assessment studies were done to improve the CORA interface, including task-based usability testing, digital fly-on-the-wall observations, librarian interviews, and card sorting. The goal of the assessment was to improve CORA’s search functionality and ease of use and increase CORA’s relevance to instruction librarians. Key findings included a reluctance to log in or create a user account; a perception of the site as a marketplace rather than a community; a need to shorten the forms on the site and tweak unclear terminology; and a need for more practical “Teaching Resources,” such as research guides. Please visit www.projectcora.org to see this new virtual community of practice.

Introduction

In 2014, Susan Archambault (the author) and Lindsey McLean, both librarians at Loyola Marymount University (LMU) in the United States, received a \$5,000 Statewide California Electronic Library Consortium (SCELC) Project Initiatives Fund grant. The grant proposed to expand upon an internal information literacy assignment collection at LMU by using the “recipe” metaphor to envision the assignments as recipes that could be tweaked or easily adapted to fit into any information literacy curriculum. All assignments contributed to the collection would be released under an intellectual

property license that permits their free use and re-purposing by other educators, allowing the assignments to be enhanced by user feedback in order to build a rich corpus of best practices. This paper documents the development of CORA, an acronym for the Community of Online Research Assignments. CORA is now an online space for the worldwide sharing and discussion of information literacy assignments and teaching resources (www.projectcora.org/).

Developing a Prototype

Susan and Lindsey conducted two faculty focus groups to gather input on the characteristics of effective research assignments and the desired features in a searchable, open access repository. They developed a draft assignment template for the focus groups to give feedback on (see Figure 1). Several recurring themes emerged from the focus groups that could be incorporated into the original prototype of CORA. One theme was the importance of modeling, or showing examples of the desired characteristics of a successful assignment and providing relevant resources to complete the assignment. Another theme was the importance of scaffolding, or allowing for successive levels of progress towards the end goal of an assignment or learning outcome. Examples of scaffolding included breaking up assignments into smaller steps that would build on each other, giving feedback early on by approving a research topic, or giving feedback on a rough draft. Several new fields were added to the “assignment template” in CORA to give more opportunities for modeling and scaffolding, including a “course context” field, a field for “additional instructor resources” such as in-class activities or worksheets, and a “criteria for success” field. Since the importance of peer learning was another theme that emerged, a filter for “individual” versus “group” assignments was added. Finally, faculty in the focus groups reacted negatively to the idea of letting users rate the assignments. This idea was scrapped and replaced with a feature called “I adapted this.” We observed some generational

differences in faculty members' reaction to "open access"—older faculty members viewed assignments as their "intellectual property" and were more reluctant to share than younger faculty members.

Figure 1: Draft Assignment Template from the Faculty Focus Groups

[DRAFT ASSIGNMENT] ASSIGNMENT TITLE: LITERATURE REVIEW

Description: The primary purpose of a literature review is to provide a rationale for your proposed research question(s). A review of literature should present a synthesis of existing theory and research literature that argues for the usefulness of the research question. The process of constructing a literature review acquaints the researcher with the studies already done in a particular area and allows the researcher to build/extend existing knowledge. Grading is based on source quality and source relationship to the research topic, organization, ability to synthesize, quality of the research question, and adherence to the proper citation style.

LEARNING OUTCOMES:

- Construct a well-supported research-based question
- Find and use scholarly and discipline-specific professional information
- Select an appropriate documentation style and use it consistently to cite sources
- Evaluate scholarly articles and understand the research method used

DISCIPLINE: MULTIDISCIPLINARY

INFORMATION LITERACY CONCEPTS: needs, finds, evaluates, uses, ethics, scholarship as conversation

SUPPLEMENTAL INSTRUCTIONAL MATERIALS: The library's subject LibGuides (research guides) available at <http://libguides.lmu.edu> and the ARC's Writing LibGuide available at <http://libguides.lmu.edu/writing>

ASSESSMENT: See attached rubric

POTENTIAL PITFALLS: Students lean towards summarizing rather than synthesizing

RATING: * * * * (out of 5 based on 5 users) 

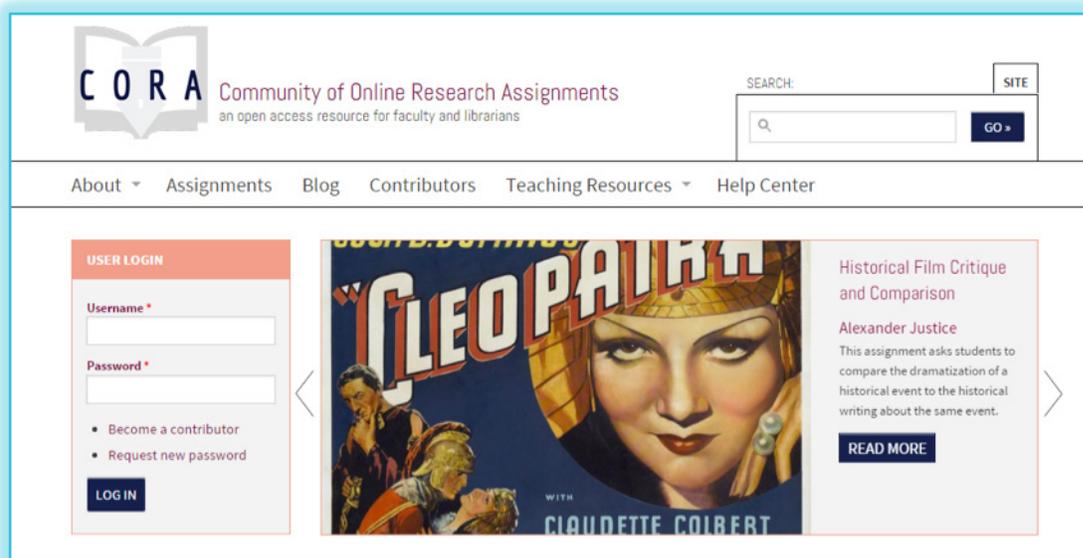
USER COMMENTS: I liked to assign this without making them test out their research question (Callie)

Once a draft prototype of the CORA website was finalized, The Cherry Hill Company (<https://chillco.com>) was contracted to build and host a live prototype of CORA. They used Drupal, an open source content management platform. CORA was further tweaked through biweekly online check-in meetings and an online ticketing system. Editorial standards for the CORA site were created in order to insure a standardized approach to writing style and workflow.

CORA was launched in January of 2016 (see Figure 2). The site contained assignments searchable by

discipline, information literacy concept, ability level, or keyword. Assignments could be filtered by individual versus group and ability level. Along with assignments, there was a collection of teaching resources searchable by discipline, resource type, and keyword. A blog was included for site updates, and a help center was included for FAQs. Anyone could browse or search CORA, but only by signing up for a user account could you add an assignment, comment on someone else's assignment, use the "I adapted this" feature, and suggest a teaching resource.

Figure 2: Original CORA Homepage in January 2016



Methodology

A “CORA Development Group” was formed with fourteen librarians from different institutions to provide additional feedback on CORA. Development group members and other librarian volunteers participated in several small assessment studies run by the author, including task-based usability testing, digital fly-on-the-wall observations, interviews, and card sorting. The research questions the assessment studies were designed to answer are as follows:

1. How well are users able to find the results they need when searching for materials on the CORA site? How can their success be improved?
2. What is the information-seeking behavior of instruction librarians as they design research assignments? Which online resources do they use?

3. How can the ease of use be improved for CORA contributors?

Task-Based Usability Testing

Three librarians and one faculty member were assigned tasks in random order from a list of 10 task scenarios (see Table 1). They were asked to “think aloud” as they were completing each task. The three in-person sessions were recorded using Camtasia (www.techsmith.com/camtasia.html), and both the screen and audio were captured. One of the sessions was a remote session; WebEx (www.webex.com) was used to share the screen and Camtasia was used to record the session. At a later date, three more librarians were assigned the same tasks in random order to test a new version of the CORA homepage.

Table 1: Task-Based Usability Scenarios

	Scenario	Successful Completion
Task 1	Sign up for an account on the CORA site (www.projectcora.org)	Fills out the new contributor form and saves it
Task 2	Starting on the CORA homepage, search for and find one assignment that interests you. What is the name of the assignment?	Locates an assignment in CORA that is of interest using a search strategy (e.g., browse, search, related link, etc.)

	Scenario	Successful Completion
Task 3	Add a public comment about one assignment in CORA that interests you.	Adds and saves text in the comment box or "I Adapted This" section
Task 4	You want to get in touch with the author of one assignment in CORA that interests you. Show us how you could reach him or her.	Finds contact information of contributor
Task 5	You decide to use one assignment from the CORA site in your own class. How can you give credit to the original author(s) of the assignment?	Locates the information from the Help Center page "Citing an Assignment in Cora," explaining how to cite a source in CORA in various style formats
Task 6	You have created the assignment in Appendix A that you want to share with others. Add your assignment to the CORA site.	Uploads the assignment file into CORA and/or fills out some of the descriptive or classification fields
Task 7	Starting on the CORA homepage, search for and find one teaching resource that interests you. What is the name of the resource?	Locates a teaching resource in CORA that is of interest using a search strategy (e.g., browse, search, related link)
Task 8	Suggest a teaching resource for the CORA site.	Fills out the "Suggestion Form" for teaching resources or e-mails the administrators a suggestion
Task 9	You want to help publicize CORA by talking about it on social media. Show us how you would do this.	Communicates with CORA's Facebook account or Twitter account, or mentions CORA on a social media channel
Task 10	CORA is thinking about changing its homepage layout to the sketch in Appendix B. Circle what you find useful and x through what you don't find useful. If you think something should be added to the page, add it with a sticky note. If there is something you don't understand, add a "?" next to it.	Discusses what they find useful versus not useful and anything that is missing or that they do not understand

Digital Fly-on-the-Wall Observations

Two librarians were given two prompts and recorded for 20 minutes using Camtasia (both the screen and audio were recorded). The first prompt stated, “You are searching online for resources to help you with some upcoming library instruction sessions. Show me what resources you use to help you plan for your library instruction and how you use them.” Participants were told to work on this prompt for the first ten minutes and switch to a second prompt for the last ten minutes. The second prompt stated, “Go to the CORA (Community of Online Research Assignments) website: www.projectcora.org and explore it as a potential resource to help you with your library instruction.”

Interviews

Two librarians were interviewed and asked the following questions:

1. Tell me about a time when you found something useful online that helped you prepare for library instruction. Why was it useful? What do you like least about it?
2. Are there other online tools that you use frequently to prepare for library instruction?
3. How do you discover these resources?
4. Have you ever used the CORA site before?
5. When did you last log into an account on any site (e.g., Facebook) and why did you sign into your account?
6. What other ways might this site (CORA) fit into your work?

Card Sort

Ten librarians and faculty members participated in an online closed card sort activity through Optimal

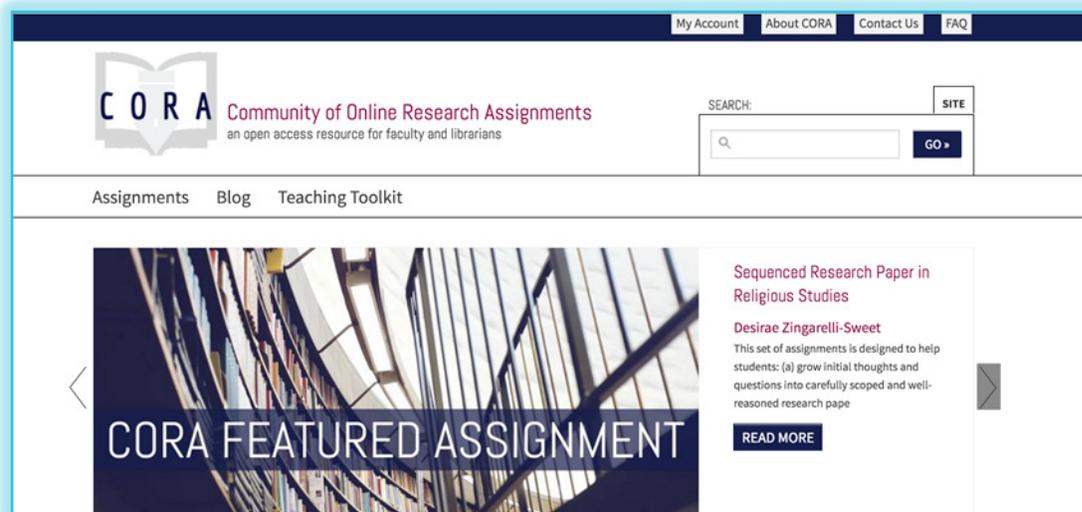
Workshop (www.optimalworkshop.com). The activity tested pre-defined “teaching resource” categories by asking participants to sort a list of 27 teaching resources into one of ten categories that made sense to them. Examples of the teaching resources included “PRIMO database,” “VALUE rubric,” and “teaching strategies column.” The ten pre-defined category options for each item were pedagogy/theory, research study, assessment, activity, citation tool, technology tip, opinion, digital learning object, subject guide, and don’t know.

Key Findings and Implications

Findings Related to Search Functionality

Subject tag search problems emerged due to the inconsistent tagging of some assignments. Multiple librarians from different institutions are allowed to create their own metadata “tags” for submitted assignments, but there needs to be more standardization. Problems of incompleteness with the main search box results emerged as well. Results need to include all subject tags and contributor names and label where each result comes from (e.g., Assignment, FAQ, Teaching Resource). Users had trouble figuring out how to cite an assignment in CORA, so a citation for each assignment needs to be automatically generated and appended to each assignment. The site was perceived as too cluttered, which was addressed by moving some links to the upper right corner to free up space (see Figure 3). Unclear terminology was discovered and fixed (“request new password” was changed to “reset password,” and “apply” was changed to “search” as the command to run a search from within the assignments, blog, or teaching toolkit sections). Several broken links were also fixed.

Figure 3: Revised Design of CORA Homepage



Findings Related to Information-Seeking Behavior of Instruction Librarians

Librarians prepared for library instruction by looking at library resources and applying search techniques for a specific research topic or subject area. They did not search for pedagogical learning theories or active learning ideas. When using CORA, they gravitated towards the *assignments* section rather than the *teaching resources* section. More practical resources were added to the *teaching resources* section of CORA, including citation tools and research guides. Assignments should be searchable by full text to pick up specific research topic searches. The “teaching resources by subject” results could be integrated into the “assignments by subject” results so users do not miss them. The “teaching resources” link was renamed “teaching toolkit” to be less generic, and the teaching resource types describing only formats of research output without describing the content were eliminated (e.g., “textbook,” “presentation”).

Findings Related to Ease of Use for Contributors

Both the “user account” form and the “assignment” form were too long. The forms will be shortened so that optional information is on the next page. Also, the long wait time for account approval was eliminated by implementing automatic approval of all users who sign up with a .edu e-mail account. Users generally viewed the CORA site as a marketplace for exchanging assignments rather than

a community. To combat this, the “I adapted this” box was moved from the bottom of an assignment to the top left side for greater visibility. Users were reluctant to sign into CORA and preferred to search and browse without an account. With this in mind, Twitter and Facebook login options will be added for easier sign-in. Also, the “I adapted this” box is now visible without logging in, and anonymous comments will soon be allowed. An internal messaging system can be created to better facilitate a community. It will allow users to contact the author of an assignment, and it will notify authors if their assignment was adapted.

Conclusion

This paper describes the evolution of CORA, an open educational resource (OER) for librarians and faculty in higher education. Several assessment studies resulted in improved search functionality and ease of use, as well as increased relevance for instruction librarians. The current collection of assignments and teaching resources will be enriched over time through additional user feedback, leading to a reliable and reproducible collection.

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