

CORAL

Final Report

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CORAL Final Report

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Executive Summary

- Major Findings about Users:
 - Many users are using an outdated version of CORAL.
 - Many users use only some modules.
 - Some users expressed frustration with how the modules integrate with one another and with outside systems.
- Recommendations:
 - Establish consistency across the system in language, visual design, layout, and wayfinding.
 - Minimize interruptions to user tasks, so that users do not need to navigate to new modules or windows in order to complete a single task.
 - Add descriptive elements to homepage to aid navigation.
 - Change functionality of search and sorting.

Overview of Research Methodology

We incorporated a number of research methods into our user experience analysis. We began with an initial exploration of the CORAL demo and a stakeholder interview to identify areas of focus. We then analyzed responses from a previous survey, conducted user interviews and cognitive walkthroughs, and conducted our own survey of users to answer additional questions. A summary of our process and findings for each of these steps follows.

Initial exploration

We began by exploring the CORAL demo to try to learn what CORAL was, how it worked, and how its modules fit together. We discovered that CORAL is complex and features interoperable modules. Figuring out how the individual pieces fit together was a necessary first step for beginning our research.

Stakeholder Interview

We went initial questions to Tommy and the Steering Committee in order to determine our goals and plan for the project. Some of our key takeaways from this initial point of contact were:

- Since all of the coding work on CORAL is done by volunteers, there are limited resources for improvements, and UX issues often take the backseat to functional issues.
- As a result, any UX recommendations that might be relatively easy to implement would be most valuable.
- Stakeholders identified certain potential pain points, such as form interaction and modal windows.

Card Sort (of former survey)

Our first step in user research involved analyzing the 58 results from CORAL's Road Map Survey. Our process was to create printed cards with individual key-in responses from the survey and then sorted them thematically based on similar ideas to gain a sense of which performance issues held the most weight with users.

Some of the key pain points that we identified included:

- Saving work and work flows
- Saving commonly used forms
- Integration with other ILS systems
- Finding and managing duplication

Additionally, we did a UX heuristic analysis of the survey, and discovered that it CORAL is:

- Useful
- Credible
- Controllable
- Valuable

But it is not

- Findable
- Clear
- Communicative
- Accessible
- Learnable
- Delightful

The card sort also illuminated the questions that we still had about the specific terminology used within CORAL, what these functions were, and how they worked with one another, so we arranged for a walkthrough with Tommy Keswick to better understand how resource librarians actually interact with the system.

User Research

Our most important goal was to talk to actual CORAL users. We reached out to them via the CORAL email list. We also sent our call for participation to the UCLA IS-NET (students, alumni, staff, faculty, etc) email list, in an attempt to reach other electronic resource librarians. One challenge for our research is that CORAL is used by a very specific and highly specialized user base (librarians who manage electronic resources). This means that our pool for user (or potential user) interviews is rather limited. It also means that it is not always obvious what users mean in their survey responses, or where problems lie, as managing electronic resources is a specific task that none of us have experience with.

User Interviews

Though we had limited responses to our request for participation, we were able to conduct four user interviews, three of which included some form of a cognitive walkthrough of a task in CORAL. Our user interviews were conducted virtually with librarians from institutions across the country.

Key findings:

- Many users were still using an outdated version of CORAL. Some expressed fear that updating their software would “break it” or that they would lose their existing records.
- One librarian was using the Organizations module for resources, but did not want to go to the trouble of switching to Resources because inputting records was so cumbersome.
- Multiple librarians expressed some frustration with usage statistics, both in terms of importing reports and searching existing statistics.
- One librarian expressed a desire to be able to more easily duplicate information for products that shared facets, and to more easily do a global update on resources with shared characteristics.
- Multiple librarians are still using other spreadsheets in tandem with CORAL; it is not meeting all of their needs.
- One interviewee had IT department run extra reports, including a report on duplicate license entries on a weekly basis, because CORAL did not have this functionality.

Narrowing Scope

After doing our user interviews, it became even more evident that CORAL is a huge platform with five different modules with many interoperabilities, and our understanding and time frame constrained us. After consulting with stakeholders, we decided to pursue a UX project surrounding the Resources Module.

User Survey

After completing all of our user and stakeholder interviews and narrowing down our scope, we analyzed our findings and as a group created survey questions that both varied from our interview questions and CORAL’s previous survey, to hone in on the issues within the Resources module that users were encountering. In order to ensure that we reached a wide range of users geographically, we distributed our survey via the CORAL listserv as well as through the CORAL newsletter, linking directly to our survey. Due to the nature of the survey and the platform we utilized we were quickly able to receive responses for analysis.

Process of creating the survey:

- Group collaboration
- After completing our stakeholder and user interviews, we synthesized our new questions for a survey
- We also ensured that this survey was distinctly different from the previous CORAL survey

- We wanted to reach geographically diverse users, so we emailed the link to survey to CORAL's listserv and had it linked on CORAL's newsletter
- The survey findings supported our previous findings from the interviews and previous survey:
 - People focused on wanting to fix modules that did not work at all for them, such as the Usage Statistics
 - CORAL users wanted modules to be fixed, such as usage Statistics
 - People were unsure of where they are within the modules when using CORAL
 - People wanted more search guidance and search possibilities
 - 65.2% of survey respondents use the Resources module

Please see the appendix for the full individual responses to our User Survey.


User Persona

- We shaped our user persona by referring to our four user interviews and generalized our interviewees, who were all resource librarians who use CORAL for work and as an alternative or supplement to spreadsheets

Please see the appendix for the User Persona in greater detail.

Helen Johnson

Xtensio




Organized

Busy

Eager to Learn

Brands & Influencers



Goals

- Add a new resource
- Find and edit a resource
- Overall, keep track of the library's electronic resource subscriptions, and do so efficiently and with ease!

Frustrations

CORAL is a complex system, capable of accomplishing various tasks. However, it can be complicated to use. Various parts of the system do not talk to each other or interoperate, which requires users to jump between forms/modules/etc in the middle of their tasks. This interrupts workflow.

The system lacks consistency in language and format, which makes it difficult to learn and use effectively.

Bio

Has been an electronic resources librarian for an institution in Los Angeles for the past 2 years. The library in which the user works at recently introduced CORAL, but before using CORAL the user had been using a series of spreadsheets to organize and manage the library's electronic resources.

"How did I end up with so many tabs?"

Age: 55

Work: Electronic Resources Librarian

Location: Los Angeles, California

User Experience Maps

We focused on two tasks within the Resources module and drew up as-built and ideal user experience maps for each:

1. Adding a resource in CORAL
 - a. As-built: as the system currently exists
 - b. In an ideal system
2. Finding & editing a resource on CORAL
 - a. As-built: as the system currently exists
 - b. In an ideal system

Please see the Appendix for each User Experience Map.

1a. While exploring the feature of adding a resource in CORAL's existing Resources module, we found that...

- Format/Acquisition/Resource types can prompt interruption if the type(s) a user is looking for needs to be created:
 - The user has to exit out of the 'Add New Resource' pop-up form,
 - Go into the 'Admin' end, which is a completely different interface (albeit relatively straightforward),
 - And go back to find the resource he/she was in the middle of adding...
 - ...in order to fill in the rest of the 'Add New Resource' pop-up form for the given resource and complete the single 'Add' task.
- The multiple steps that this interruption creates complicates the process of adding a new resource on CORAL, which can have larger implications on the entire system. For instance, one of our interviewees mentioned that she and her staff are often guilty of not completely filling in information in an 'Add' form– they leave some fields blank, skip all fields that require jumping out to a different part of the system, or simply forget to revisit and fill in an incomplete form and either submit it in an incomplete state or fail to submit it at all, etc. This ultimately affects their use of the entire system going forward. Not only does it create inconsistency in their records, which hinders their management responsibilities and tasks, but it also creates a backlog of records to clean up, which adds to their workload and workflow.

1b. In an ideal system, adding a resource in CORAL would be improved by consistency, organization and simplification.

Consistency between Add New Resource and Edit Resource Forms

ADD NEW RESOURCE

1 **RESOURCE TITLE***

Add a Title...

DESCRIPTION

Add a Description...

URLs

Add URL... 5

PRODUCT CATEGORIZATION

Resource Format*:

3 Select Resource Format Add new Format

Acquisition Type*:

Select Acquisition Type Add new Acquisition Type

Resource Type:

Select Resource Type Add new Resource Type

ISSN/ISBNs:

Add an ISSN/ISBN..

RESOURCE LINKS 4

Aliases:

Add an Alias... Alias Type

Parent Resources:

Select Parent Resource

Subject Relationships:

General Subject > Detailed Subject

Organizations:

Role : Organization

NOTE

Add a Note...

Cancel Add to Queue Submit

1 Consistent labels , 2 consistent user options , and 3 consistent interface elements will increase users' confidence that they are in the right place and editing the right aspect of a resource, in a way that is familiar to them. For example, in the current system, "product" and "resource" are used to label the same thing. We recommend to pick one label, and use it consistently. Similarly, the current system presents the user with different options when adding resource and when editing it. We recommend to offer the users consistent options in both forms. Lastly, the current system uses different UI elements to represent the same options in adding and editing forms. We recommend using a consistent UI element in both forms.

Organizing Form Options 4

We suggest organizing forms structurally, lexically, and visually by grouping similar user options together, creating labels for similar user options, and by removing unnecessary gaps between labels and options. Specifically, we recommend grouping the "resource format", "acquisition type", "resource type", and "ISSN/ISBN" options under the label "Resource Categorization". We also recommend organizing "Aliases", "Parent Resources", "Subject Relationships", and "Organizations" under a label that indicates that all of these options connect resources to other entities. Suggestions for this label include "resource links", "resource linkages", or "resource relations."

Simplification

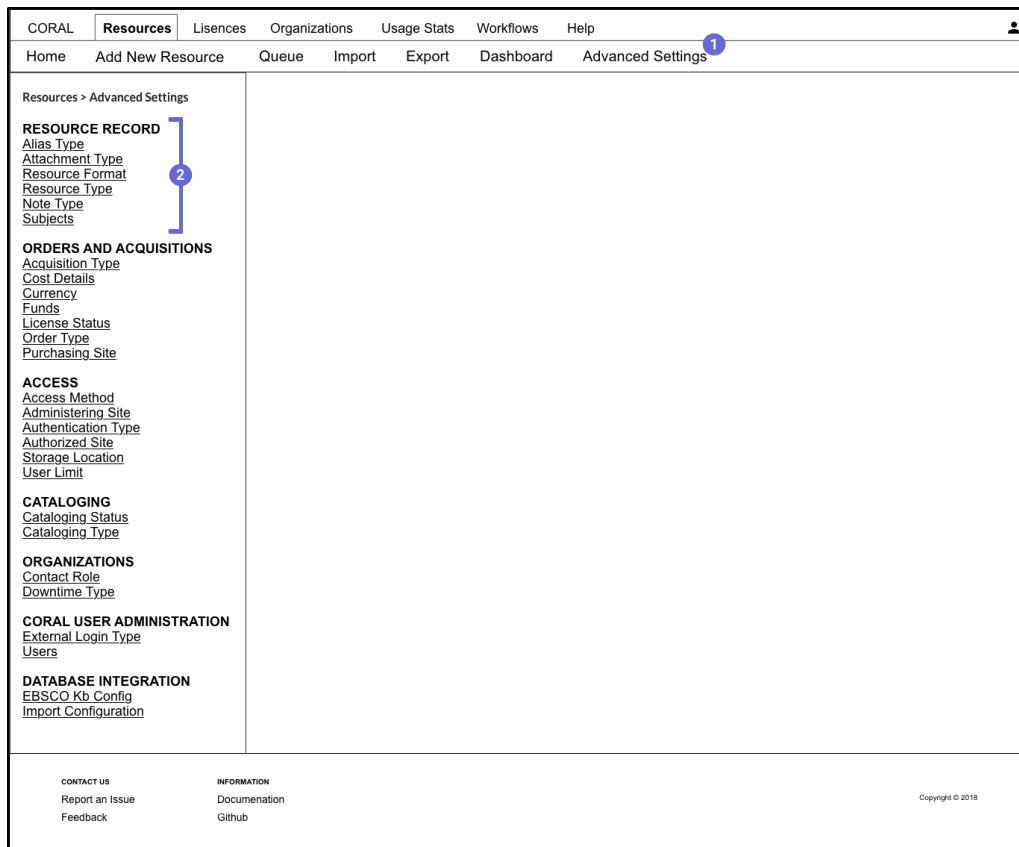
We recommend that the Add and Edit Resource Forms be simplified. One major simplification includes either removing or easing the interruption that occurs when a user must create a new resource format, acquisition type, or resource type. Adding an option to create a new type within the form, or providing clear direction on how to create a new type will alleviate this pain point. Another way to simplify the form experience is to create a reusable type of UI for similar types of interactions. In the current system there are multiple types of interactions for the action of adding an additional token of a type of input option, such as an additional URL, ISSN, Alias, or Organization. ⁵ The micro-interaction of “adding an additional x” can be simplified if CORAL implements a standard interface type for this action¹. By doing so, it will be easier for users to learn how to use the system. Lastly, we recommend simplifying the form experience with searchable dropdown menus.² Searchable dropdown menus will make it easier for advanced users to navigate the form because they will have to spend less time scanning the drop down list. Furthermore, searchable dropdowns will enable users to tab through the form without needing to use a mouse.

Consistency and Organization in Resources > Admin

¹ Clickable UI prototype for adding additional links: <https://xd.adobe.com/view/13a51ec9-3d32-41ae-40b9-97cd8b67ace4-6594/screen/f73ba8bf-6867-433a-bfb0-5174a49dd158/Artboard-1>

This same interaction pattern can be used for instances of adding additional input options.

² For an example of a searchable dropdown menu see: <https://semantic-ui.com/modules/dropdown.html#search-dropdown>



- 1 First, we recommend relabeling the section of the resource module currently termed “Admin” as “Advanced Settings”. Admin has the connotation of managing multiple user roles, however many of the settings in this section of the module are available to non-admin level user roles.
- 2 Second, we recommend categorizing the options in the the left sidebar according to the cluster of settings they are related to in resource record page in order to create a more consistent mental model of these different user tasks.

2a. While exploring the features of finding and editing a resource in CORAL’s existing Resources module, we found...

- Unintuitive searching and limited sorting affects the finding task
 - Aspects of the search bar(s) are not intuitive
 - Certain fields are not straightforward: i.e. why ‘name’ and not ‘title’ or ‘resource name,’ as those terms appear elsewhere in the system? The language needs to be made consistent across CORAL and on the search bar
 - Though the search/filter capabilities are vast and flexible, the way the options are presented is quite overwhelming. They can be organized in a better way, in a single search bar, for better configurability.
 - Expanded sorting options would be advantageous

- 71.4% of our survey respondents said they would like to have more control over how resources are sorted
 - Survey Respondents selected/keyed-in the following sortation options that do not currently exist as potentially useful sorting capabilities
 - Date Modified
 - Publisher or Parent Organization
 - Date of the materials that are being referenced
 - Item Type
 - Primary Keys: Resource, Subject Guides
- Inconsistent format/language/layout of the system and form 'Edit Resource' form itself complicates the editing task
 - There are two (different) ways to get to the same 'Edit Resource' form
 - Form fill accepts information in an inconsistent way
 - There is no 'Save' button like the 'Add Resource' form
 - 'Submit'/'Cancel' buttons are at the bottom of the form, and users need to scroll down to access them

2b. In an ideal system, finding and editing a resource would be made more controllable, organized, consistent and navigable.

Improving Finding with Controllability and Organization

Lastly, we recommend adding additional columns to the resource table, such as a “date modified” or “publisher” column, or to allow the user to personal columns to display. Our recommended table columns are:

- Date Modified
- Publisher or Parent Organization
- Date of the materials that are being referenced
- Item Type
- Primary Keys: Resource, Subject Guides

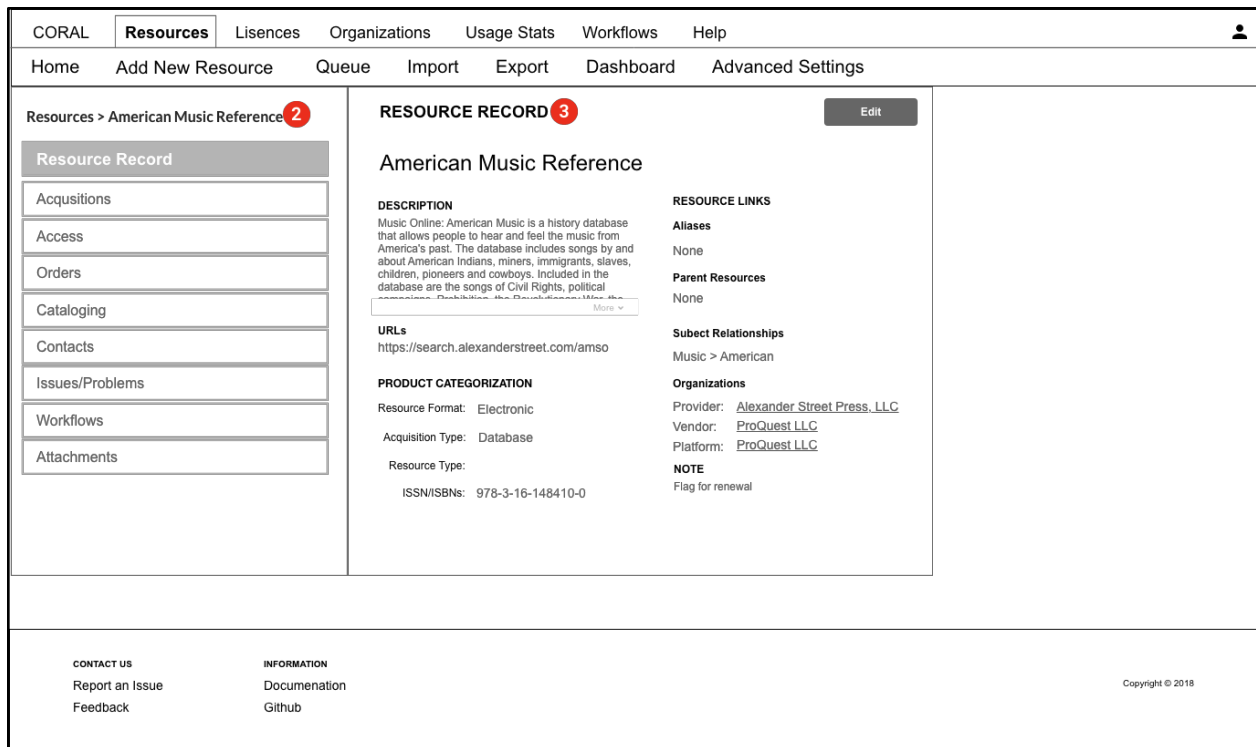
Improving Editing a Resource with Consistency and Navigability

The screenshot displays the CORAL Resources interface. The top navigation bar includes links for CORAL, Resources, Lisences, Organizations, Usage Stats, Workflows, and Help. Below this is a secondary navigation bar with Home, Add New Resource, Queue, Import, Export, Dashboard, and Advanced Settings. The main content area is titled 'Resources > American Music Reference' and features a sidebar with a 'Resources Record' section containing links to Acquisitions, Access, Orders, Cataloging, Contacts, Issues/Problems, Workflows, and Attachments. The central 'EDIT RESOURCE RECORD' form (highlighted with a red circle and number 1) contains the following sections:

- RESOURCE NAME:** A text field containing 'American Music Reference'.
- DESCRIPTION:** A text area containing a detailed description of the 'Music Online: American Music' database.
- URLs:** A text field containing 'https://search.alexanderstreet.com/amso'.
- PRODUCT CATEGORIZATION:**
 - Resource Format:** A dropdown menu set to 'Electronic'.
 - Acquisition Type:** A dropdown menu set to 'Database'.
 - Resource Type:** A dropdown menu set to 'Select Resource Type'.
 - ISSN/ISBNs:** A text field containing '978-3-16-148410-0'.
- RESOURCE LINKS:**
 - Aliases:** A text field with 'Add an Alias...' and a dropdown for 'Alias Type'.
 - Parent Resources:** A dropdown menu set to 'Select Parent Resource'.
 - Subject Relationships:** A dropdown menu set to 'Music' and a dropdown menu set to 'American'.
 - Organizations:** Three dropdown menus set to 'Provider: Alexander Street Press, LLC', 'Vendor: ProQuest LLC', and 'Platform: ProQuest LLC'.
- NOTE:** A text area with the placeholder 'Add a Note...'.

At the bottom of the form are 'Cancel', 'Add to Queue', and 'Submit' buttons. The footer of the interface includes 'CONTACT US' (Report an Issue, Feedback), 'INFORMATION' (Documentation, Github), and a 'Copyright © 2018' notice.

1 We recommend making the “Editing a resource” feature more consistent with the “adding a resource” feature, and with the display of the resource information in the product tab. In the current system, adding and editing a resource use very different forms, which is confusing. Both forms should provide consistent options.



Before the resource can be edited, the user must review the resource to determine if it needs to be edited in the first place. This stage of the process can be improved by making it more navigable. First, in the current system, the resource record page (also called “the product tab”) does not have a clear relationship the the rest of the resource model. There is very little indication of where in the site the user is. ² To remedy this we suggest adding breadcrumbs and clear titles to indicate what specific resource is being viewed, and what hierarchical relationship it has to the rest of the resources module. ³ We also recommend structuring the information on the resource record page to mirror the structure of the options in the “add resource” and “edit resource” pages.

Wireframes

Please visit our navigable wireframe hosted on xd.adobe.com:

<https://xd.adobe.com/view/13a51ec9-3d32-41ae-40b9-97cd8b67ace4-6594/>

Overall Recommendations CORAL

- Solve the interruption that occurs by having to go to another section to add or manipulate data and then return to task at hand
- Make the system (its visual language, layout, formatting and language) consistent

CORAL Final Report – Post-mortem

Start:

- **Scope:** Know the entire scope of software before signing up
 - CORAL is very different from a website; it is a software. With CORAL, users work within the system with more of an input/output relationship, while websites are just used for information consumption. There are multiple ways users can accomplish the same task on CORAL, which makes understanding the user experience much more nuanced and complex.
- **Practice:** More design practice and/or exposure to more UX ideas and understanding of how others have tackled designing UX within software.
- **Comparison:** Have client give examples of what software they want to be like
 - This would allow a better starting point for a comparative analysis, as well as provide valuable reference for recommendations and improvements.
- **Document:** Photograph our creative and collaborative process.

Stop:

- **Delayed walk-through:** Wait until week four or five to set up a review with Tommy to walk through the software
 - As we were working on another complex system, this should be done at the start of the project. We did not realize the system's many layers and intricacies upon taking the project on and learned about its complexities through user research.
- **Trying to fix everything:** It was difficult to stay in scope because many aspects of the system could have benefited from improved user experience design.

Continue:

- **Contingency plans:** Casting a wide net for our user research, as well as having backup plans for limited interviews and surveys, allowed us to better ensure that we would have data to work with for our project.
- **Cognitive Walkthrough:** Conducting cognitive walkthroughs during our user interviews was incredibly insightful and gave us a lot of examples of how CORAL is used in different ways by different people. This not only provided us with important user research, but it also helped us to realize that it would be necessary to narrow the scope of our project, which was a major turning point in our project.
- **Collaboration:** Group collaboration and weekly meetings were very important. We were able to meet outside of class several times a week.
- **Re-scoping:** When we realized it was necessary to narrow our scope, we immediately reached out to our point of contact to communicate about how to proceed. Consistently

communicating about our progress and being realistic about our time constraints helped us to be more productive.

CORAL Final Report – Appendix

- I. User Survey Responses
- II. User Persona
- III. User Experience Maps
 - 1. Adding a resource in CORAL
 - a. As-built: as the system currently exists
 - b. In an ideal system
 - 2. Finding & editing a resource on CORAL
 - a. As-built: as the system currently exists
 - b. In an ideal system
- IV. Tommy's Feedback