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E-JASL 1999-2009 (volumes 1-10)

E-JASL: The Electronic Journal of Academic  
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Winter 2005

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Withers, Rob; Casson, Rob; and Shrimplin, Aaron, "Narrowcasting to Faculty and Students: Creating an Efficient "Research by Subject" Page" (2005). *E-JASL 1999-2009 (volumes 1-10)*. 56.  
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ELECTRONIC JOURNAL OF ACADEMIC AND SPECIAL LIBRARIANSHIP

**v. 6 no. 3 (Winter 2005)**



**Narrowcasting to Faculty and Students:  
Creating an Efficient "Research by Subject" Page**

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**Abstract**

Libraries provide thousands of e-resources, but most users need only a handful. Miami University has created an interface which enables subject specialists to select from electronic resources provided by the Libraries, add links to related resources, and post announcements in each subject area. In addition, subject specialists can create multi-database searches for each subject area. Subject specialists can make immediate changes, web developers are relieved of reviewing and making changes submitted by others, and students and faculty see the resources they need. The University portal will eventually link to subject areas corresponding each students' classes and faculty member's teaching area.

**Introduction**

Library web sites provide resources to faculty and students in dozens of academic disciplines, but most users only needs information in a handful. Information providers such as television channels and web portals narrowcast information to meet specific needs of small, well defined groups and screen out items which do not match those

needs. In such an information environment it is important that libraries, too, narrowcast the many specialized resources they provide to those users who most need them.

During 2000 and 2002 redesigns of the Libraries' web site, developers created tools for managing access to several types of information. Each of these tools had a separate interface, public display, and organizational scheme. During the 2004 redesign, developers began to integrate the administrative tools and public display of information managed by these tools, with a goal of creating a "Research by Subjects" area. This resource is intended to more effectively guide end users to resources they need, and includes interface which enables subject specialists to create and edit web pages containing lists of indexes, electronic journals, electronic books, and other resources. In addition, they can also post messages relevant to their subject area. Links are grouped by subject areas which correspond to academic programs.

Developers used php scripting and MySQL query language to develop tools for selectors to manage this information and for end users to view it. Php is an open source language, which means that source code used to develop these products may be freely distributed and modified, thereby encouraging continuous refinements to existing scripts and benefiting non-commercial information providers such as libraries that traditional work cooperatively and share information.<sup>1</sup>

## **Challenges**

The Libraries at the authors' institution belong to a consortium which has aggressively pursued licenses with providers of information in electronic format. In addition, the Libraries have supplemented these licenses with additional subscriptions to meet the expectations and needs of faculty and students unique to their institution. By the time of the 2002 redesign, the Libraries at the authors' institution provided electronic access to over 10,000 journals, 80,000 lines of poetry and play dialogues, and 10,000 electronic books. The redesigned web site included administrative interfaces that enabled subject specialists to manage lists of web sites and electronic journals within their subject areas. These advances confirmed that subject specialists could work with administrative interfaces to manage content and indicated that they were willing to accept the standardization of layout entailed by users of a database driven system.

This redesign left several challenges. Most significantly, the dynamically-driven systems for managing indexes, e-journals, web sites attempted to match the subject organization of existing static pages. The organizational schema were, therefore, inconsistent. For example, Internet web sites were grouped under "Languages and Literature," Indexes were grouped under "Literature, Film and Folklore," electronic journals were grouped by subject areas that corresponded to library fund codes, and electronic texts were grouped by country, time period and genre (e.g., "American

Literature,” “British Literature,” “Medieval Literature,” and “Individual Authors”). Also, although the number of electronic books and book collections had skyrocketed, the “electronic books” portion of the web site consisted of a static page containing an alphabetical listing of titles. Faculty and students tended not to be aware of titles of interest to them in collections such as the Oxford Reference Collection and an ABC-Clio collection. Directing faculty and students to such resources demanded a new approach.

The wealth of e-journals placed a significant strain on this system, however. Cataloging for e-journals lagged behind subscriptions, particularly for aggregators such as EbscoHost or LexisNexis, which rapidly change subscriptions or include embargo periods for articles. Another challenge that emerged was management and use of lists of web sites. Many of these collections swelled to hundreds of web sites for a single discipline. This approach was successful at introducing people to the breadth and scope of resource available for many areas. As students and faculty became more computer savvy, use of these resources dwindled. The extensive size of some of these sites made efficient maintenance challenging as well. Only a handful of subject areas were updated even once per year. The yearly review of these links by webmasters indicated that more than 25% links in this area were inactive, with no readily identifiable substitutes. In addition, many subject specialists used these web sites only to link to external web sites, rather than in-house resources such as handouts, presentations, and bibliographies.

## **Solutions**

As the Libraries began to plan the biennial redesign of their web site in 2004, one of the stated goals was to develop a way to enable the Libraries’ subject specialists to effectively manage lists of electronic information central to the research needs of faculty and students in each academic program. An administrative interface with a password and login was needed to ensure timely updates and minimize workload on webmasters. Unlike previous interfaces for editing lists of electronic journals and web sites, the new interface applied a consistent and standard list of subject headings to all resources. The interface designed in response to this call enabled selectors to manage lists of indexes & databases, e-journals, e-books, web sites and documents, as well as to post targeted announcements. In addition, the interface enables selectors to manage a list of databases included in a multi-database search for their discipline.

- **Indexes & Databases** – The Libraries currently provide access to nearly 200 research databases. Because many of these subscriptions are managed by a statewide consortium, additions and terminations of subscriptions may not be driven by selectors. To ensure selectors are aware of all currently available products, titles are added to the list of available databases as soon as they are added to the catalog.. The administrative interface enables selectors to add and

delete databases from their list, and also to specify the order in which databases are ordered in the list.

- **Multi-database Search** - If subject specialists opt to create a federated search across multiple titles using an experimental product currently under development, this search is included in the list of research databases. The federated search includes approximately 100 databases which use the Dataware interface developed by the statewide library consortium for many products (including America History and Life, ERIC, MLA International Bibliography, and PsycInfo) and of heavily used EbscoHost database. Some other databases are also included, as are the Libraries' catalog, the statewide catalog, Worldcat, and Google. End users see a listing of databases for each subject area which includes a link to the trial version of the federated search (if the subject specialist has enabled one for that area), as well as a list of databases.
- **E-journals** – To provide a timely listing of e-journal titles from which articles are available, the administrative interface for electronic journals draws from title lists provided by the University's consortium for its subscriptions and supplements it with vendor supplied data for titles available through the University's subscription to e-journals and databases. Because of multiple and sometimes overlapping access to individual titles, there are 26,000 entries that provide access to approximately 15,000 titles. This system has been more successful than previous attempts to rely on catalog records, because cataloging currently lags behind subscriptions to online journals, and has only recently begun to include information on articles from e-journals available through databases.

The administrative interface for e-journals enables subject specialists to browse through an alphabetical list of all available titles or search by keyword. In the event that issues are available from more than one aggregator, subject specialists can opt to select more than one issue. If coverage between two or more aggregators, selectors may omit one version of the journal if they feel one aggregator provides simpler access to articles, or if one aggregator charges per search or per download from their search tool. To assist subject specialists in deciding which titles to keep or omit, the administrative interface may soon identify the provider for each title.

The public display for e-journals contains a list of titles within each subject area. In the event that issues of a journal are available from more than one aggregator, links to each collection of articles from an aggregator are grouped under the journal title. The large—and constantly changing—numbers and titles of e-journal precludes creating a comprehensive list for every discipline. The hope is that subject specialists can create a list of core titles analogous to periodical reading rooms used to house print issues. Doing so helps to create a browsable area for faculty and students to peruse recent issues and helps to remind faculty of the large and growing

collection of electronic journals. As access to titles in electronic journals through databases becomes increasingly prevalent, having a current listing of core resources reminds faculty and students that the library still provides a wealth of information.

- **E-books** – The Libraries provide access to more than 300 electronic reference titles, and many of these are now available only in electronic format. Usability testing on lists of electronic resources that are not arranged by subject suggested that end users were reluctant to explore titles and collections with which they were not already familiar. With the acquisition of several large collections of e-books (Oxford Reference, Safari and ABC-CLIO), the Libraries needed to find a way to match end users to reference works that meet their interests and needs.

Accordingly, the administrative interface enables subject specialists to include either subject-specific collections (such as Safari books for technology) or reference titles from Oxford University Press and ABC-Clio which are likely to meet the needs of large segments of faculty and students within a subject area. Titles available include items from the Libraries' old "electronic texts" page (which included fewer than two dozen links), titles from Oxford Reference Collection, Oxford Premium Collection, ABC-CLIO, and several other collections. In addition, subject specialists may also ask the webmasters to add other titles or collections.

- **Other web sites** – Lists of key internet web sites were a staple of older versions of the web sites. In the past, subject-specific lists of web sites have helped to alert and guide people to key resources. However, as both faculty and students have begun to appreciate the variety of available resources and search for them using Google, Yahoo, and other tools, the need for this type of web site has declined. Usage of these sites has been low, and only a handful of selectors have actively maintained these sites. The redesign re-focus the role of "link farms" maintained by subject specialists, with a dual focus on locally-created materials such as tutorials, research guides, and handouts and on collections of online research tools that did not fit under other headings of the Research by Subject interface.

As with previous versions of the administrative interface, the redesigned version of the interface managing this list initially allowed subject specialists to add, edit, and remove any web site of their choosing. To better accommodate requests to create subcategories, the administrative uses a WYSIWIG HTML editor imbedded into the administrative interface to enable subject specialist to manage the list of resources in this area.

In addition to being a central repository for instructional materials used in instruction sessions, the "Other Resources" area now provides access to selected materials such as subject-specific collections of digital films available from the

University's consortium, online maps, and other resources which can not be classified as e-book, e-journal, or database.

## **Future Challenges**

“Research by Subject” helps to direct end users towards research resources they need, but work is underway to develop “Research by Course,” a model which might more closely direct end users to relevant sources.<sup>2</sup> This model is important for several reasons:

- **Proliferation of Interdisciplinary Courses** – Courses have become increasingly interdisciplinary in nature, meaning that a list of resources corresponding to a single discipline may not direct people to needed resources. For example, students in a Bioterrorism course might need to draw on resources from Biology, Political Science, and History. Introductory courses that do not focus on a specific discipline also might benefit from this approach: the University's freshman English course focuses research assignments around themes drawn from the Summer Reading Program, which in recent years have included Antarctic exploration, the labor movement, educational funding, the Vietnam conflict, and inner city life. The listing of “English” resources in Research by Subject is not the ideal starting point for any of these topics
- **Limited Information Needs in Introductory Courses** – Research by Subject attempts to provide a comprehensive list of resources available within any given discipline. However, students in introductory courses often need only a few basic resources; the presence of additional, unneeded materials may overwhelm students who are still grappling with the notion that anything other than Google is necessary for research.
- **Ability to Provide More Customized Information for Individual Courses** – Research by Course offers additional features not present in Research by Subject, including lists of print journals and reference books, a link to print/electronic reserves for the class, and contact information/office hours for both subject specialist and instructor.

The current model for creating “Research by Course” involves collaborations between subject specialists and teaching faculty to create and manage this list of resources. In addition to helping to meet information needs of end users, it is anticipated that this effort will also enable subject specialists to better alert faculty to new electronic resources appropriate to the courses that they teach.

In addition, the authors' institution is currently investigating the development and use of a portal that will display content which is customized by the profile of individual users. Because much of the information provided by the Libraries is specific to one of

the many academic departments on campus, each students and faculty member is likely to need only a fraction of the information provided by the Libraries. The portal will provide a mechanism for this kind of narrowcasting, and unlike many campus services such as health, dining, and parking, the Libraries are able to provide information targeted to many small, well-defined groups. The Libraries hope that the portal will provide links to those parts of “Research by Subject” which correspond to the courses in which students are enrolled or the programs in which faculty teach. The Libraries are currently negotiating access to course enrollment data and department affiliation of faculty with the hopes of quickly launching this service.

## **Conclusion**

Development of the “Research by Subject” area benefits all involved with the Libraries’ web site. Subject specialists can make immediate changes to web sites within their purview. In addition, the administrative interface for adding electronic books and electronic journals helps to familiarize them with titles available in their subject area and quickly make these resources available to their faculty and students. Web developers also benefit from the development of this interface. They no longer need to input information provided by subject specialists or review html files for compliance with web publishing guidelines and xhtml standards. And most importantly, end users are immediately guided to a selection of resources in their area of interest.



# Figures

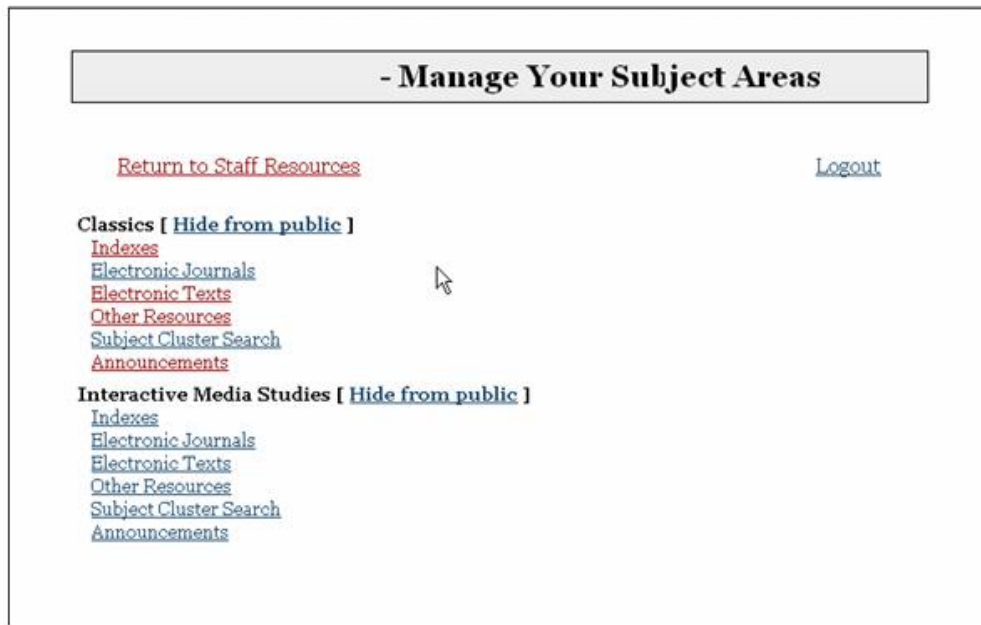


Figure 1. Main menu of the administrative interface showing two subject areas

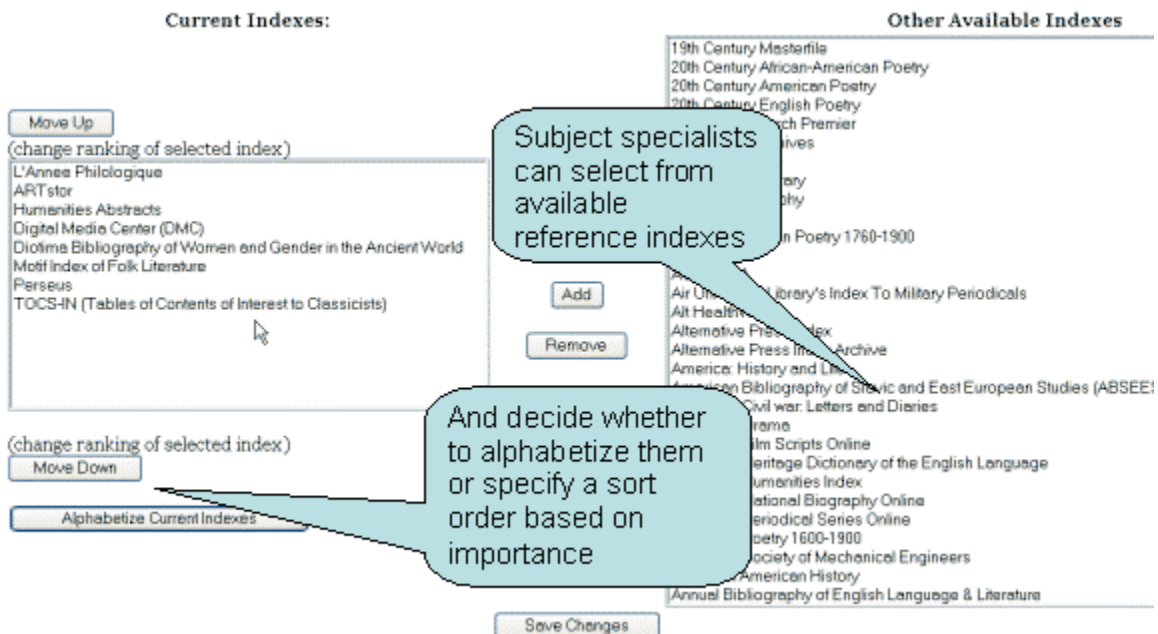


Figure 2. Managing Indexes and databases. Subject specialists can select from more than 200 databases and customize the order in which they appear.

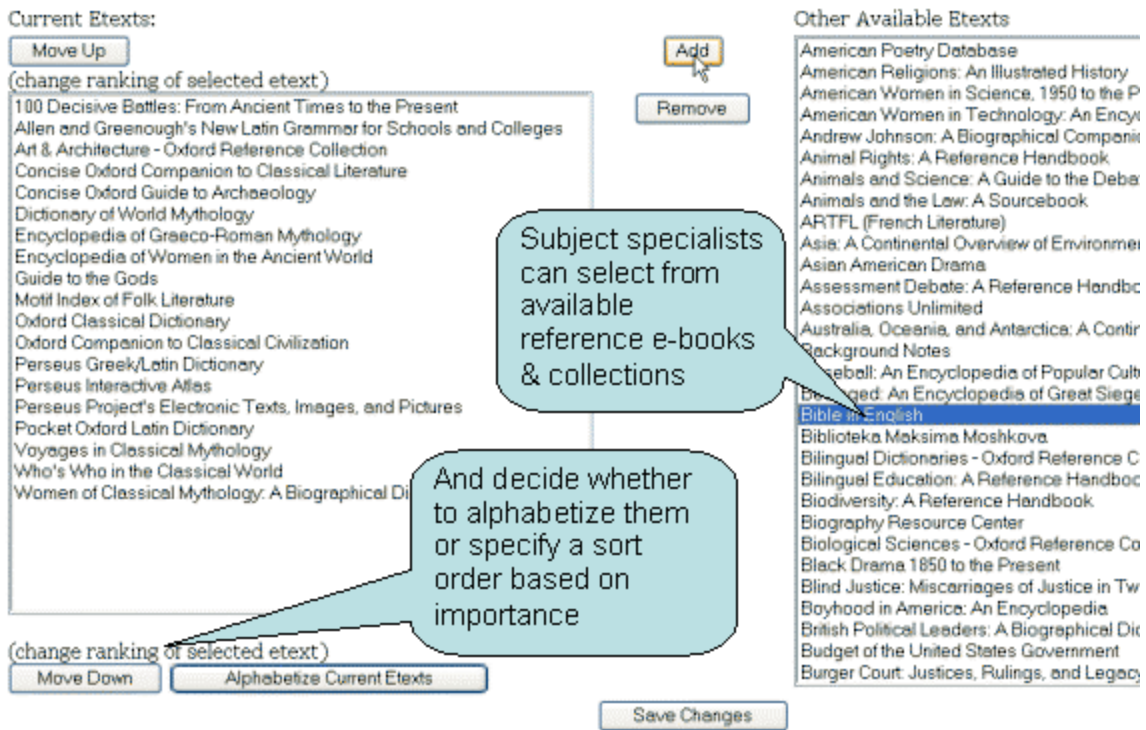


Figure 3. Administrative interface for electronic books and book collections.

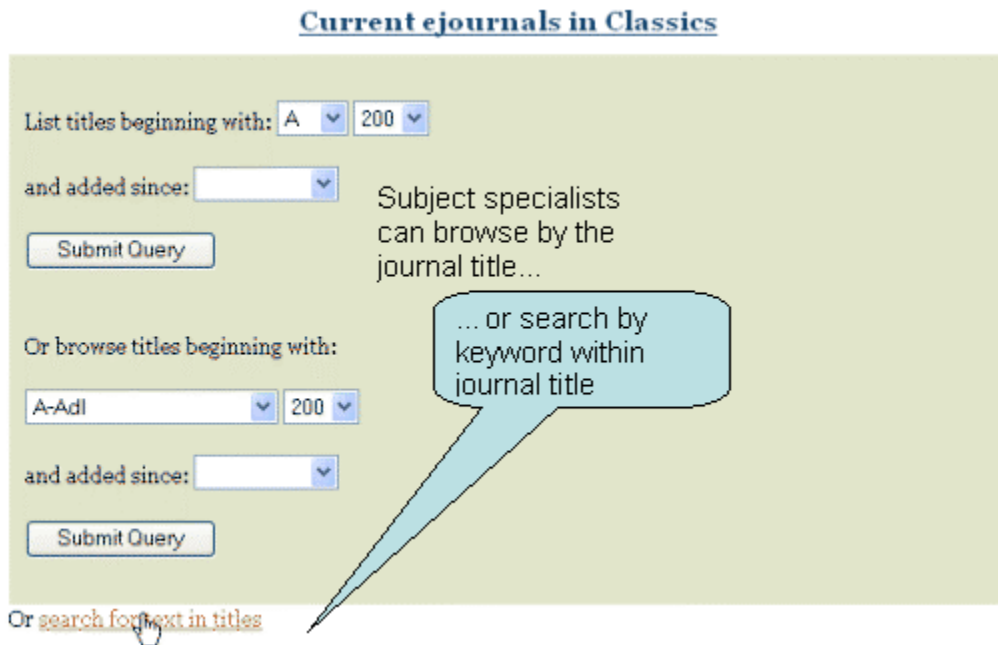




Figure 4. Managing electronic journals. Subject specialists can search for titles by keyword or browse by letter of the alphabet.

## Current ejournals in Classics

Search for titles with:   

and added since:  

Or [browse titles alphabetically](#)

Figure 5. Searching for electronic journal titles by keyword and/or date added

Found 24 titles that matched your query

Showing 1 - 24 of 24

[Bryn Mawr classical review](#)

Online issues: -

Check the Miami catalog for [other holdings](#)

[Cicero's Knowledge of the Peripatos - Rutgers University Studies in Classical Humanities](#)

Online issues: -

Check the Miami catalog for [other holdings](#)

[Classical and quantum gravity](#)

Online issues: -

Check the Miami catalog for [other holdings](#)

[Classical antiquity](#)

Online issues: -

Check the Miami catalog for [other holdings](#)

[Classical philology](#)

Online issues: -

Check the Miami catalog for [other holdings](#)

[Classical Philology](#)

Online issues: 1906-2002 -

Check the Miami catalog for [other holdings](#)

[Classical Quarterly](#)

Online issues: 1907-1998 -

Check the Miami catalog for [other holdings](#)

Figure 6. Selecting electronic journals from keyword search results. Previously-selected titles are already checked.

# Managing Multi-Database Searches



Figure 7. Interface for Multi-database searches.

# Managing Multi-Database Searches



Figure 8. Interface for creating multi-database searches

## Footnotes

1. Open source, definition <http://www.opensource.org/docs/definition.html>
2. Reeb, Brenda; and Gibbons Susan L. “Students, Librarians, and Subject Guides: Improving a Poor Rate of Return.” *portal: Libraries and the Academy* 4:1 (January 2004) 123-30.

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