

## **Maintenance and Development of the Library Web Portal at Bryant & Stratton College Cleveland Downtown Campus**

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**Abstract:** Academic library websites have become major service points for both students and faculty, but the professional literature has tended to report primarily on website design and usability testing rather than daily maintenance. In order to contribute to a conversation on the maintenance activity associated with academic library websites and the establishment of best practice guidelines, this paper will first review selected literature addressing library website maintenance and then review daily activities associated with the maintenance of the Bryant & Stratton College Cleveland Downtown campus library portal. The discussion will include established daily tasks and maintenance performed in response to communication with the library committee, faculty and administration, and students. Usability testing conducted as a maintenance tool will also be considered.

### **Introduction**

Academic library websites have evolved to become major service points for many institutions (Manuel, Dearnley, & Walton, 2009, p. 68), offering patrons such traditional library services as access to the library catalogs and research databases, electronic journal and eBook collections, online interlibrary loan service, virtual reference resources and online reference service, and federated searching capabilities. As academic libraries have developed ways to provide such services on the Web, the professional literature has reflected a concern with website design and evaluation/usability (Shropshire, 2003, p. 95) but for the most part has not engaged the issue of day-to-day website maintenance. Such consideration would be a valuable addition to the library and information science literature, as it would help to establish shared best practice guidelines for daily maintenance of academic library websites and related duties which are mostly absent from the literature at present.

This paper will provide some discussion of selected literature addressing the daily maintenance and development of academic library websites and then provide a review of daily maintenance activities performed for the Virtual Library portal at the Cleveland, Ohio (USA), campus of Bryant & Stratton College.

### **Review of Selected Literature**

Agosti, Crivellari, Di Nunzio, & Gabrielli (2010) state that a major challenge of designing library Web portals is to understand and then match the different and evolving needs and preferences of the user community (p. 225). Based on their study of the prototype design for The European Library (TEL) Web portal, they report that the influence of previous user habits is

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particularly strong when users are approaching an unknown system interface, and that it is important not to disappoint users during this first interaction as it could negatively impact future use of the system (p. 233). They note that the system interface should make clear all of the choices available to the user, including any options for customization (p. 233). They also suggest that, based on their research, documents and multimedia files should link directly to their descriptive catalog records (p. 233).

Manuel et al. (2009) note that a library's homepage is the most important page of the site, and can pose special design challenges as it must both point users to all content options and adhere to the institution's layout and navigational choices (p. 72). They also note that a homepage is most appealing to the eye when the visible screen space is divided into thirds, providing a three-column design (p. 72). The authors observe that local management of a library website may start with consideration of institutional policy and practice (p. 76), which may be created by a committee overseeing the entire institutional Web presence (p. 78). In their study of the UK 1994 Group of Libraries, they found that institutional Web policy played a part in library website design, as several universities provided a template for departments to use, and that use was either mandatory or encouraged (p. 78). They found that in some cases libraries could have an influence on institutional website policy, which might be significant when considering the library website's service function against the marketing function of other areas of the institution's website (p. 78). They also found that library websites may be managed formally through a committee, informally through staff discussions, or through a combination of both methods (p. 78). They found that website duties are mostly performed by staff who reported that their Web skills were either self-taught or acquired as part of formal library and information science education (p. 81). In addition, they discovered a number of activities were used to gather feedback from website users, including surveys, focus groups, task setting, and anecdotal evidence (p. 82). Information gathered was used to inform a variety of site improvements, including editing content, structural and navigational changes, and adjustment of language elements used on the site (p. 83).

Ryan (2003) suggests that smaller academic libraries include website design and maintenance as part of the strategic planning process, as this will allow administrators to identify the institutional benefits of the website, provide a mechanism for maintenance and updating, and allow administrators to determine the priority of the website within the library's organizational structure (para.12). The author also suggests the creation of a comprehensive website policy including the site's mission statement and purpose, administrative details, documentation of design elements, structure and organization, content, policies for external link selection, maintenance and update schedules, and a plan for evaluation and assessment (para. 22).

Salazar (2006) observes that the use of a content management system (comprised of a database, server pages, a Web server, and an editing tool) to edit library websites offer the ability to provide templates for page-to-page consistency, the ability to edit content from a single online location, the creation and maintenance of interactive learning objects, and an editing interface that eliminates the need for all page editors to be familiar with Web coding languages (p. 170). He observes that the use of page templates within a content management system can aid website editing by facilitating both the creation of many content pages from a single template and design

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editing as a single change may be applied to an entire site. (p. 171). Additionally, he observes that usability testing is useful for directing ongoing website maintenance activity (p. 173).

Shropshire (2003) notes that, when considered as a means of communication, academic library websites can be studied in relation to other types of websites as both process and commentary (p. 97). Within this context, specific questions can be raised about how site maintenance is performed, and a study addressing such questions would be useful to others maintaining and developing academic library websites (p. 97). In particular, the author notes that there is a special need to address this issue as it affects medium-sized academic library websites, as there are currently few models for website management in the professional literature (p. 97).

### **Structure of the Bryant & Stratton College Virtual Library and Cleveland Portal**

The Bryant & Stratton College Virtual Library is available to students, faculty, and staff from eighteen physical campus locations in four states (New York, Ohio, Wisconsin, and Virginia) and an online campus. The top level of the Virtual Library provides all users access to a site map, a virtual reference area and online reference service, the library catalog, a collection of research databases, a collection of librarian-selected program resources, electronic journal and eBook collections, a collection of career planning resources, online tutoring, faculty digital reserves to support ongoing faculty research, library FAQs, a Web 2.0 toolbox, a virtual librarian's office, an index of individual campus libraries, and a virtual computer lab where users can access cloud-based office applications and create their own cloud-based file storage areas.

The top level is maintained by the Bryant & Stratton College Virtual Library Committee, composed of librarians from several campuses and the manager of library services. Maintenance and development decisions are made by the committee and executed by assigned committee members using the DotNetNuke Content Management System to generate content and metadata. The Virtual Library uses a three-column page template such as discussed by Manuel et al. (2009, p. 72), which is required by the Bryant & Stratton College administration.

In addition to the top-level services, each campus librarian is responsible for designing and maintaining a campus library Web portal, which gives local campus users access to top-level services and allows local librarians to provide Web services customized to individual campus populations.

The Cleveland Downtown campus library portal provides users with campus library hours and contact information, a local instance of the online computer lab, digital reserves for all locally taught academic subject areas, the library catalog and regional consortia catalogs, selected reference sources (some local), campus announcements, rotating special electronic mini collections developed in cooperation with the Dean of Student Services, database tutorials and pathfinders, local and national news sources, a local instance of the virtual librarian's office, database tutorials, a faculty resource area and access to faculty class pages, government information and online government documents, and an online typing lab.

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### **Weekly Randomized Examination of Content Modules**

On a weekly basis, content modules on the Cleveland library portal are examined in randomized fashion to ensure all content is current. If links in a module are found to be out of date, a search is conducted to discover whether the content has moved. If the content can be located at a new location, the link is updated and new descriptive metadata is prepared (users are able to reveal descriptive metadata when browsing content modules on the Cleveland library portal, which, like a catalog entry with a table of contents or database abstract, may help to determine if a particular resource will be useful for a given research task).

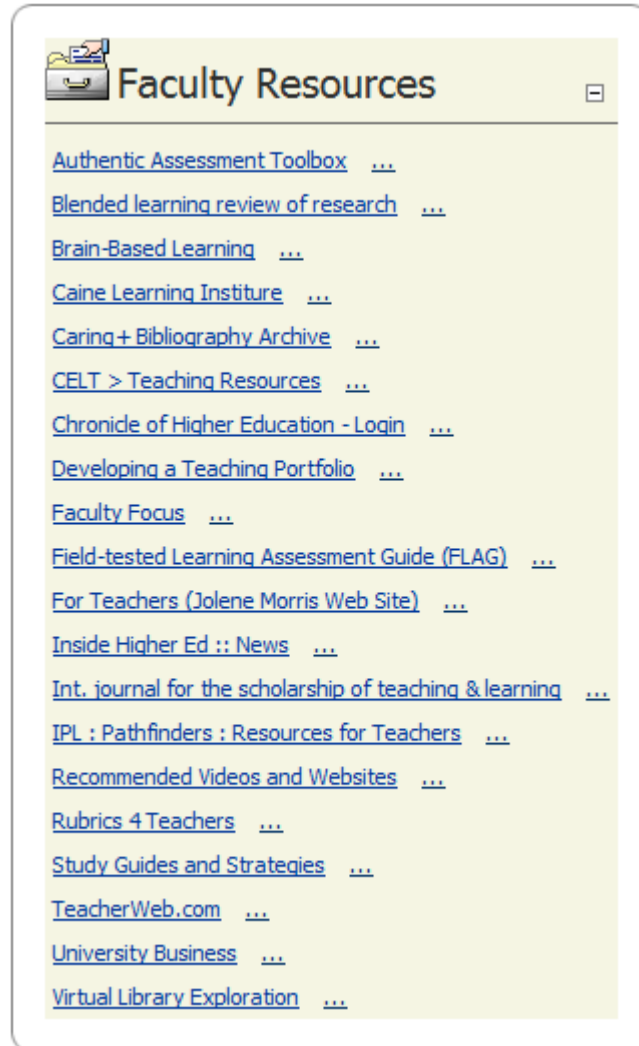
If it is determined that a resource has been completely removed, the existing link is deleted and a new search is conducted for similar content appropriate for addition to the portal's virtual collections.

This process parallels the process of shelf reading in the physical library, where selected shelves are examined on a daily basis in order to maintain organization and identify outdated titles to be withdrawn and replaced.

### **Maintenance/Development Performed in Response to the Library Committee**

The campus library committee, chaired by the campus librarian and composed of representatives from the Student Services office, full-time faculty, adjunct faculty, and the learning center, are charged with contributing to collection development in both print and electronic formats. The committee meets officially once each semester, and continually works together via email and unofficial meetings.

As part of the committee's collection development responsibilities, they often make recommendations for the development of the virtual collections on the library portal. Specific areas of the portal that have been developed at the suggestion of the library committee are the Faculty Resources module, which contains a collection of faculty tools specifically selected by the committee for their usefulness to the Cleveland Downtown campus faculty, and the Caring+ Bibliography Archive, which contains a collection of annotated bibliographies created by the campus librarian to support a campus-wide faculty research initiative on best practices in teaching and learning.



**Figure 1.** Faculty Resources

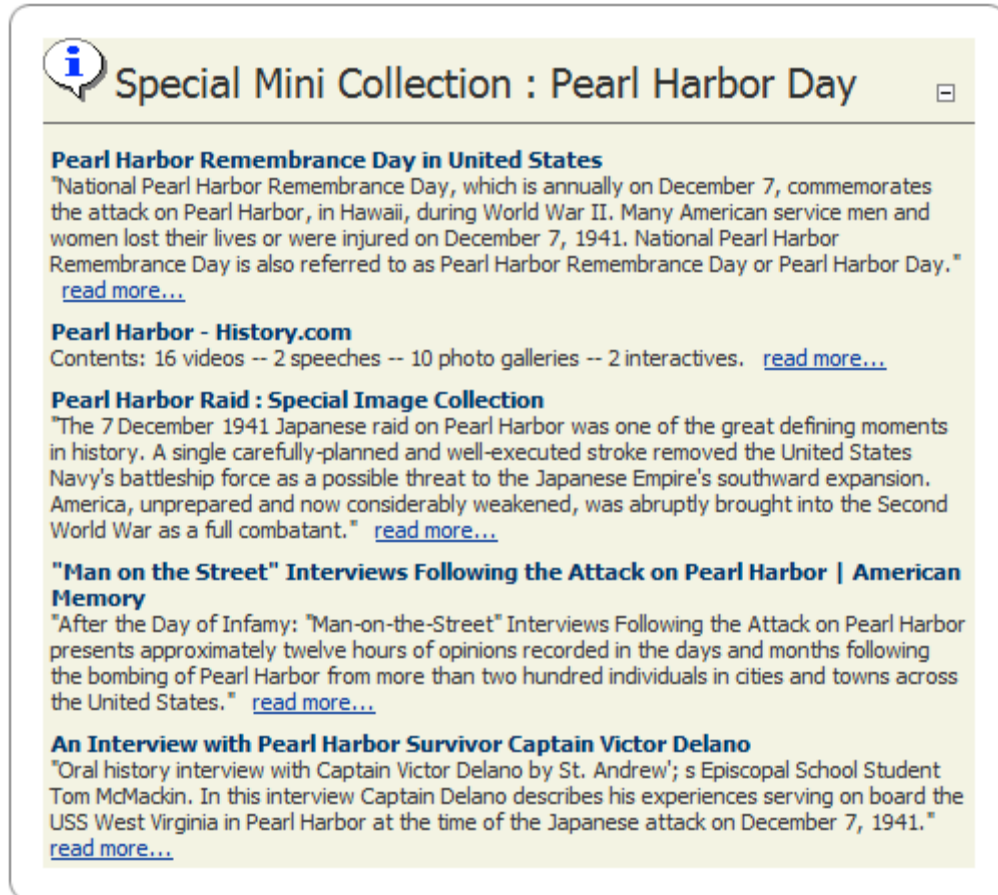
### **Maintenance/Development Performed in Response to Faculty and Administration**

Faculty requests for development of the library Web portal are quite often made at the point of need due to the dynamic nature of the teaching and learning experience. Requests are often made by individual faculty in person at the library desk, by email, or in a less formal environment such as a hallway or elevator discussion. Requested information to be added is usually task specific. Examples of information added to the Cleveland library portal as a result of a faculty request include electronic versions of specific journals added to academic subject modules (so that faculty can easily direct students to the journals to complete in-class research tasks), an online video of directions for preparing an APA cover page using a specific word processing package (added to the Reference module), and a link to online student surveys during the week of the portfolio development seminar.

Requests for development made by campus administration are usually at specific times during the semester and align with events programmed on the college's calendar. Examples of

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information added to the library portal as a result of requests from administration include a link to the monthly Career Services newsletter, a link to the mid-semester student satisfaction survey, and to end-of-semester student evaluations. In addition, the Dean of Student Services requests special electronic mini collections on the Cleveland library portal in conjunction with Federal holidays and observances during each semester.



**Special Mini Collection : Pearl Harbor Day**

**Pearl Harbor Remembrance Day in United States**  
"National Pearl Harbor Remembrance Day, which is annually on December 7, commemorates the attack on Pearl Harbor, in Hawaii, during World War II. Many American service men and women lost their lives or were injured on December 7, 1941. National Pearl Harbor Remembrance Day is also referred to as Pearl Harbor Remembrance Day or Pearl Harbor Day." [read more...](#)

**Pearl Harbor - History.com**  
Contents: 16 videos -- 2 speeches -- 10 photo galleries -- 2 interactives. [read more...](#)

**Pearl Harbor Raid : Special Image Collection**  
"The 7 December 1941 Japanese raid on Pearl Harbor was one of the great defining moments in history. A single carefully-planned and well-executed stroke removed the United States Navy's battleship force as a possible threat to the Japanese Empire's southward expansion. America, unprepared and now considerably weakened, was abruptly brought into the Second World War as a full combatant." [read more...](#)

**"Man on the Street" Interviews Following the Attack on Pearl Harbor | American Memory**  
"After the Day of Infamy: "Man-on-the-Street" Interviews Following the Attack on Pearl Harbor presents approximately twelve hours of opinions recorded in the days and months following the bombing of Pearl Harbor from more than two hundred individuals in cities and towns across the United States." [read more...](#)

**An Interview with Pearl Harbor Survivor Captain Victor Delano**  
"Oral history interview with Captain Victor Delano by St. Andrew's Episcopal School Student Tom McMackin. In this interview Captain Delano describes his experiences serving on board the USS West Virginia in Pearl Harbor at the time of the Japanese attack on December 7, 1941." [read more...](#)

**Figure 2.** Special Mini Collection

### **Maintenance/Development Performed in Response to Students**

On occasion, students will request information resources for which Web tools are most appropriate but that are not available from the library portal. When several requests are made for the same type of resource and it becomes clear that having an electronic collection of such resources available on the library portal is needed, a collection is assembled using the guidelines and standards of library collection development to ensure academic credibility.

Examples of resource collections that have been developed in response to student requests are the Grammar/Writing Resources collection and the Statistical Research collection.



**Figure 3.** Grammar/Writing Resources

### **Usability Testing as a Portal Maintenance Tool**

Understanding that browsing preferences change over time, usability testing is periodically conducted to gauge how the Cleveland campus community is responding to the design of the Web portal. Questions are kept within a manageable minimum (3-5 questions per survey) and targeted to specific segments of the user population (students, faculty, administration, etc.). A Web-based survey is created and then mass emailed to the test population. Survey questions most often ask users about ease of navigation, ease of information retrieval, and satisfaction with resources. At the end of the survey period, tabulated responses are collected and analyzed, and user feedback is considered when performing navigational and content maintenance to the library portal.

### **Conclusion**

This paper has examined the daily maintenance and development tasks of library Web portals, as reflected in a limited way in the professional library and information science literature, and in the day-to-day practice of library portal maintenance at the Cleveland, Ohio (USA), campus of Bryant & Stratton College. Such practice needs to be discussed at greater length in the literature and other professional communication channels to provide a basis for shared best practices in library Web portal maintenance. It is important that such a discussion take place, especially for smaller academic libraries, in order to provide a reproducible model that can be followed to maintain a quality academic library Web portal to serve educational communities.

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