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# Evaluating Engineering Reference eBooks

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which allowed librarians to claim ownership of the electronic resources they discovered and wanted added to the collection. Checklists were divided into three sections, an initiation section, one for technology and collection development, and one for the point person. While primarily meant for databases, these checklists were also used for full text resources and can be adapted to eBooks. The most useful application would be for packages or bundles, rather than an individual book. In that case the publisher or vendor should be evaluated for the criteria to see if adding books one by one over a period of time would be worthwhile.

The evaluation begins with the librarian, at the grassroots. These are the people working with students and faculty and who discover a need and often a new product, either through their own professional reading or through a faculty recommendation. The initiation phase evaluated current holdings and collections to evaluate the need for additional resources. At this phase a small group was also formed to evaluate a trial and evaluate the curricular needs for the resource. If it was decided that the resource was a good fit, then the next phase began. At this stage, the Collection Development Librarian and the Electronic Resources team examined funding and all the technical issues involved in obtaining the resource. If a positive outcome occurred, a recommendation was made for funding or the resource may be placed on a tiered list for consideration. The final phase took place after purchase and was titled the point person phase. This involved selecting a librarian to serve as point person to market the resource to faculty and students and to teach other librarians and staff about the resource. If the resource is subscription based, a review takes place prior to renewal time.

The final phase of implementation for eBooks is marketing. As **Robert H. McDonald** and **Chuck Thomas** have pointed out, "Research libraries have done little to embed themselves and their resources into the everyday tools, spaces, and activities important to today's learners."<sup>24</sup> Promoting eBooks requires more than a link on a Website and a record in the catalog. While these two components are vital for discovery and use, they are not the only way that our users will know about a resource or discover how to use it. Creating links in online teaching sites, posting information to wikis or blogs, sending out messages to faculty in subject areas when new resources are available are all easy and obvious ways to promote new resources. Tracking the usage and finding ways to observe students and faculty using the resources can also provide insight into how and why certain electronic books may be more useful than others.

Collection development policies and procedures for electronic books encompass more issues than buying print resources and the level of complexity will grow in the coming years. As electronic

books and resources continue to evolve, I think the issues will continue to evolve and become more focused. We need to continue to develop seamless interfaces to make resources useful and discoverable by our communities. This will require the efforts of many people across the organization and profession working together. Paying close attention to how our resources are being discovered will lead us to creating better access points, whether those are through portals for all resources, Websites that are focused on subject areas or through the catalog. The important thing is to keep the discussion open with one another, with vendors and publishers, and with our end user communities so we can serve the needs of those who ultimately use our resources. 🐻

#### Endnotes

1. "7 things you should know about... E-Books." *Educause Learning Initiative*. November 2006. [www.educause.edu/eli](http://www.educause.edu/eli)
2. **Ferguson, Anthony W.** "Digital Library Selection: Maximum Access, Not Buying the Best Titles: Libraries Should Become Full-Text Amazon.com's." *Journal of Library Administration* 31.2 (2000): 27-38.
3. **Jeffrey Daniels'**, Electronic Resource Manager, assistance was invaluable in creating the checklists and implementing the process.
4. **McDonald, Robert H. and Chuck Thomas.** "Disconnects Between Library Culture and Millennial Generational Values." *Educause Quarterly* 4 (November 2006): 4-6.

## Evaluating Engineering Reference eBooks

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A funny thing happened on the "Road to Damascus." I set out to write an article detailing the **University of Arizona's** experience with **ENGnetBASE**, an electronic database of engineering handbooks. However, by the end of the process, it had become clear that the real story is the importance of getting quality user feedback and using it to make sound renewal and cancellation decisions. Ultimately, based on information we gleaned from our users we chose to cancel **ENGnetBASE**.

Library users want access to electronic content anytime and anywhere. In our assessment of **ENGnetBASE** we learned that cultivating better-informed patrons results in more realistic expectations around the selection and request for electronic resources. Our journey of enlightenment clearly demonstrates that librarians must continuously engage users in a scholarly communication dialogue. When library users understand the implications of the various cost and pricing models, they, too, see the light.

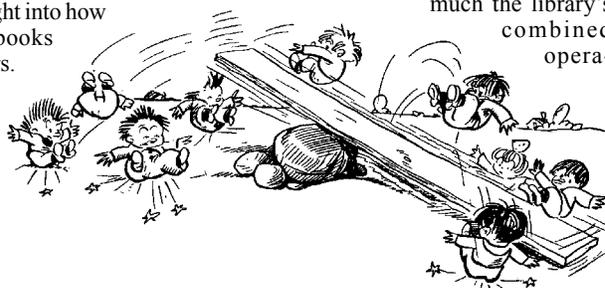
About a year after I arrived at the **University of Arizona**, I discovered that the majority of users from the departments for which I am the library liaison had little understanding of the actual costs of the resources they use. I began the practice of opening my library instruction sessions with a challenge: "Guess how much the library's combined opera-

tions and information resources budget is." Hesitantly, participants called out numbers while I repeated "higher, higher" until someone yelled out an astronomical amount. I would then reveal the true figure. No one (including the instructors) ever came close to the actual figure of \$18M. This sixty-second activity would then evolve into a meaningful scholarly communication conversation and ultimately, led to the inclusion of several specific information literacy learning objectives in several chemical engineering course syllabi.

The **Accreditation Board for Engineering and Technology** programs has a criterion that states, "Engineering programs must demonstrate that their graduates recognize the need for, and have an ability to engage in lifelong learning." The **College of Engineering's Accreditation Committee** at the **University of Arizona** has adopted the position that information literacy forms the basis for lifelong learning. The **Chemical & Environmental Engineering (ChEE) Department** has integrated information literacy skill-building into its curriculum as one pedagogical approach to teaching the acquisition of lifelong learning skills. Assignments in core courses ChEE 201 & 326, and elective courses ChEE 455 & 555, require students to develop information literacy skills as part of the course objectives. One objective specifically calls for the ability to effectively evaluate information resources. Therefore, students in the courses cited above were targeted to evaluate the functionality and general usefulness of **ENGnetBASE**.

The **Engineering Libraries Division (ELD)** of the **American Society for Engineering Education** established a **Best Practices for Electronic Resources Task Force** to compile a list of issues to consider when evaluating electronic products. Their top issues are: Ac-

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cess Authentication, Co-Branding of Products, Copyright Issues, Cover-to-Cover Digitization, Digital Quality, Interlibrary Loan/Electronic Reserves, Linking to Content, Perpetual Access, Purchase Models, Retractions and Corrections (Errata and Corrigenda) and Statistics. Although **ELD** did not formally endorse this list until May of 2005, the document was in circulation prior to being formally adopted. With its listing of best practices for each issue it also serves as a vehicle to begin scholarly dialogue discussions.

In 2004 I arranged to have the evaluation of **ENGnetBASE** formally incorporated into those engineering courses that have information literacy objectives. The purpose was to gather student input and feed that information into the decision-making process to determine if the library's subscription to the database should be renewed.

To evaluate the database, each class was divided into two groups. Each student received the same seven questions, all related to a class project/assignment. The questions were designed to identify specific facts, figures, graphs and charts. One group sat at a table with seven print reference handbooks in front of them, and the other group sat in front of computers linked to **ENGnetBASE**. Each group was given twenty minutes to use the resource(s) in front of them to individually answer the questions. The group that used the print handbooks completed their task before the time was up. The group using **ENGnetBASE** did not find their answers as quickly. The groups then traded places and the results were the same even when the first group knew the names of the books the answers were in. The majority of the students that used **ENGnetBASE** answered fewer than five questions in the same time it took students using the print handbooks to answer all seven. This experiment was duplicated with twelve librarians and the results were similar.

The biggest complaint about the database was its failure to mimic its print equivalent; users indicated it was much easier to find the information in a physical book. The second biggest complaint was the huge number of hits a search retrieved and the subsequent frustration in having to comb through the information to find answers. The reason was that the search box on the main page searched the entire Website. To search within specific books required an additional click to get to the advanced search feature. Spending a few minutes reading the instructions on the main page would have minimized this problem. However, my students like many have a **Google**-like mentality about everything. "If we have to be instructed on how to use a resource isn't that an inherent flaw in the design?" voiced one student, yet echoed by many. Students resented having to stop and read the online help feature to figure out the most effective way to search. Several students referred to the user interface as non-intuitive which speaks to the importance of user-centered designs.

Lastly, the inability to use the browser's

## against the grain people profile

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### Barbara A. Williams

**BORN & LIVED:** I was born and raised in Detroit Michigan until I was 11 when my family moved to the township of Ypsilanti, MI.

**EDUCATION:** I received my undergraduate degree from **Michigan State University**, and my masters from **Wayne State University**.

**FIRST JOB:** My first professional librarian position was as a Public Service Librarian in Flint, MI at **GMI Engineering and Management Institute**, which later was renamed **Kettering University**.

**PROFESSIONAL CAREER AND ACTIVITIES:** When I left **Kettering** I came to the **University of Arizona** as a Science-Engineering Librarian. I am active in the Engineering Libraries Division of the **American Society for Engineering Education**. In 2005 my colleague and I sponsored a drumming activity for women enrolled/teaching in science and engineering programs. The following year we organized a pre-conference drumming/leadership workshop for the **Living the Future** conference in 2006.

**FAVORITE BOOKS:** Anything written by **J. California Cooper** and **Bebe Moore Campbell**.

**PHILOSOPHY:** Life is short so be your authentic self.

#### HOW/WHERE DO I SEE OUR INDUSTRY IN FIVE YEARS:

I think our profession will play more of an official consultant role with faculty/researchers and students. Entry level librarian positions will require more advanced computer skills. We will continue to facilitate access to information but I believe we will become much more involved in identifying and or aggregating content and then participating in the development of platforms to access those materials. 🍌



back button to return to the previous page where the search was initiated was considered "a rookie mistake." Not being able to use the browser's back button meant one could not modify a previously executed search. This problem was immediately fixed in the succeeding iteration of the software. Generally speaking, most of the problems, to one degree or another, have been resolved in subsequent iterations of the database, as one would expect.

However, after our in-class information literacy-focused discussions regarding **ENGnetBASE** as related to some of the issues from **ELD's Best Practices for Electronic Resources**, the students were able to provide more relevant feedback. For example, a number of students did not understand the fairness of a subscription-pricing model whereby the library would not own access to any materials once the subscription ended. In their minds the types of activities they would use **ENGnetBASE** for would be primarily to gather facts, figures, graphs, etc. This is information that does not need updating on an annual basis. I learned that a number of students received handbooks

as high school graduation gifts; these were passed on to them as heirlooms. Handbooks were once considered the definitive resource in their field. Also, many of the department laboratories have old copies of various engineering handbooks on hand for anyone's use, or they can be found on a number of instructors' office shelves, which students can borrow.

Our conversation evolved into a debate on the types of resources that added academic value to the learning experience, and those that added convenience. This dialogue introduced me to a genre of information resources that was not on my radar, such as software products that blend technology and information content, such as the line of **AspenTech** products. **AspenTech** produces software that allows students to simulate theoretical concepts; some of their software provides access to content previously owned by other entities. These products are widely used in corporate settings, and one's ability to use these types of products gives one a competitive advantage against other candidates when competing for jobs. Not surprisingly, this discussion became

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