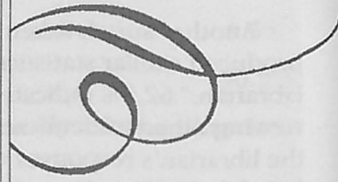


ASSESSING DENTAL LIBRARY SUPPORT FOR THREE NEW CAMPUS INITIATIVES USING OCLC'S WORLDCAT ANALYSIS SERVICE

by Janice E. Cox & Barbara A. Gushrowski



BACKGROUND:

The Indiana University School of Dentistry (IUSD) is the only dental school in Indiana. IUSD's degree and certificate programs include doctor of dental science (DDS), dental hygiene, and dental assisting. Graduate degrees in endodontics, orthodontics, pediatric dentistry, periodontics, and prosthodontics are offered. The school's problem-based learning (PBL) curriculum, an active learning instructional methodology, was introduced in 1997. PBL learning is characterized by hypothetical open-ended cases, students working in small groups, and faculty serving as tutors/facilitators. Under the guidance and support of the PBL tutor, students take responsibility for their individual group's organization, case analysis, group discussion, research initiatives, and findings reports. Communication and analytical, critical and research skills, which will be used throughout their academic and professional careers, are enhanced as students progress through the curriculum. The school's patron population includes approximately 220 full and part time faculty, 100 adjunct/volunteer instructors, and 655 dentistry, hygiene, assisting and graduate students.

The Indiana University School of Dentistry Library (IUSDL) was established in 1881 as a faculty library. By 1920 the library contained 900 volumes. The first librarian was hired in 1927. By June 30, 2006, the library's collection had grown 65 fold to approximately 58,600 volumes and the staff to 6 FTE. Monographic materials comprised approximately 45% (26,500 volumes) of the collection.

In April 2005 OCLC announced its OCLC Worldcat Collection Analysis Service (WCA). WCA was designed as a cost effective, real-time collection evaluation tool. Analysis options include age, subject, title overlap, title uniqueness, and peer library. To quote *Advanced Technology Libraries*, "Libraries can analyze their entire collection as a single entity, regardless of classification schemes used in their catalog, and libraries can compare their collection with that of other libraries regardless of their scheme used." ("OCLC Launches Worldcat Collection Analysis Service," 2005). In December 2005 an opportunity to participate in the Committee on

Institutional Cooperation (CIC) agreement through its member library Indiana University Bloomington was extended to the IU School of Dentistry Library. Given the WCA's promised functionality, the CIC subscription's cost savings, and a 125-year-old collection that had never been analyzed, this opportunity was too attractive to resist. Of the fifty-four CIC participating libraries, four had DDS degree programs to which the IUSDL's holdings could initially compare its monographic holdings as well as determine the collection's age.

IUSDL management's rationale for electing to participate in the CIC/OCLC WCA agreement included such managerial issues as enhanced administrative communication, grant application support, accreditation self-study data, individual library and cooperative collection development initiatives, and budget request justification.

THE PROJECT

In September 2006, the IUPUI Executive Vice Chancellor and Dean of the Faculties announced a new campus grant initiative, which was to lead to the establishment of Signature Centers. IUPUI's Signature Centers are research units that can build on ongoing initiatives, are often interdisciplinary, unique and distinctive, and take advantage of IUPUI's urban location for establishing community partnerships. Of the initial nineteen Signature Center funded proposals, three proposals included School of Dentistry faculty participation. The funded projects were: Binational/Cross Cultural Health Enhancement; Tobacco Cessation and Biobehavioral Center; and the IU Center for Assessing, Understanding, and Managing Pain.

Immediately following the grant awards, library faculty discussed the implications for the dental library. We asked ourselves, "To what extent is the dental school library collection currently able to support the new research initiatives of: 1] cross cultural health in Indiana and rural Mexico; 2] tobacco use and cessation; and 3] pain assessment, understanding and management?" It was recognized that OCLC WCA's ability to provide collection analysis data at a deeper subject

level would give library staff the opportunity to assess the dental library's collection in support of these initiatives.

SUBJECT ANALYSIS – CHALLENGES

The WCA provides 30 pre-set subject Divisions ranging from Agriculture to Sociology. Drilling down through each of the Divisions, the records in each are further divided into Categories, then Subjects, Language, Format, and finally Audience.

The Divisions, Categories, and Subjects represent Library of Congress (LC) call number divisions. However, approximately 75% of the IUSDL collection is catalogued using National Library of Medicine (NLM) call numbers. So this presented somewhat of a dilemma when trying to determine which of the records in which Division might contain the records pertinent to the analysis. Additionally, the research project topics cover multiple disciplines and involve numerous call number ranges, or, in some cases, only a small portion of one call number. The initial challenge, then, was to identify those call numbers, whether LC or NLM, that matched the subjects of the research initiatives.

This call number identification and subject matching was the most time-consuming aspect of the project and was accomplished using three separate tools.

First, the MeSH (medical subject headings) database in Pubmed (a service of the U.S. National Library of Medicine or NLM) was searched to find where the relevant search terms appeared in the tree structure and to gather a terms list for further searching. This was especially helpful with the topic of Pain, which occurs as a MeSH term across multiple disease categories and has numerous synonyms.

Next the NLM Classification website [<http://wwwcf.nlm.nih.gov/class/>] was searched using the terms found in MeSH in order to map these to NLM call numbers in the IUSDL's collection.

Finally the IUSDL online catalog was searched using the same MeSH terms and, from the results, a list of LC call numbers were identified that fall outside the biomedical and dental fields, such as pharmacology, toxicology, and psychology. This final search ensured that all relevant call numbers were identified and considered.

The resulting lists of call numbers were as follows:

Tobacco cessation

Smoke

Air pollution	WA 754
Tobacco	QV137
Public health aspects	WA 754

Toxicology	QV665
Smoking	
Dependence	WM 290
Effects	QV 137
Smoking Cessation	WM 290

Cross-cultural health (partial list)

Cross-Cultural Comparison/Mental development	WS 105
Cultural Diversity/As social factor in public health	WA 30
Ethnic Groups/Diseases	WB 720
Life Style/Health behavior	W 85

Pain – Assessing, Understanding, Managing (partial list)

Dystrophy	
Complex Regional Pain Syndromes	WL 544
Facial pain	WE 705
In Dentistry	WU 140
Pain, Intractable	WL 704
Pain, Measurement	WL 704
Pharmacology	QV 39
Dental Pharmacology	QV 50
Myofascial Pain	WE 500
Headache	WL 39
Pain	WL 700
Anesthesia	WO 300
Oral Anesthesia	WU 460
Facial pain in Dentistry	WU 140-141

DATA COLLECTION

Having this complete list of NLM and LC call numbers eased the task of collecting the appropriate records from the database. WCA provides a quick method of identifying the call number or call number range for the Categories or Subjects by enabling mouse-over on the term to retrieve a box listing the call numbers for that topic. At any point during the drill-down, it is possible to access the OCLC bibliographic records by a mouse-click on the numeral in any of the cells to the right of the Division column.

The resulting records were downloaded to a comma-delimited text file using the download function provided on the WCA interface. The text file was then copied and pasted into a blank Excel worksheet.

Once the records were loaded into Excel, they were sorted on call number field. Any records not carrying the appropriate call number were deleted. Remember, the WCA Division may contain a range of call numbers, not all of them relevant for this analysis. The procedure was repeated for each of the remaining call numbers on the list. Within an hour, all the records needed for the analysis were downloaded into three Excel worksheets, one for each Signature Center initiative topic.

DATA ANALYSIS

Some editing of the publication date field was required before the records could be sorted into proper date order. Some records contained indeterminate dates (198?), some had date ranges (1994-96), some had brackets around the year or a 'c' for copyright preceding the date. All of the publication dates had to be normalized to a four-digit year so that Excel could sort them. All the brackets, copyrights, and question marks were deleted, and only the first year of a date range was left in the date field.

The subtotal function in Excel was used to divide the records into ten year periods, with the exception of 2000-2007. The data could have as easily been divided into 5 year increments, or even single year, depending on the goals of the analysis. For IUSDL, the ten-year period seemed the best choice. These subtotal figures were then used to produce the bar charts for a visual representation of the IUSDL collection in the areas of interest.

The resulting graphs show that the IUSDL book collection appears adequate to support the three campus Signature Center Initiatives. Further analysis on a subject by subject basis could be carried out using the same data to ensure that the breadth and depth of coverage of a particular topic is adequate. This would be especially helpful in the Pain category, as the graph demonstrates that the library only owns 40 monographs published since 2000. (See Figure 1)

PRODUCT ANALYSIS

The WCA has provided the IUSDL librarians ample opportunities to examine, analyze, and adjust the collection based on the results of various analyses run over the past two years. In addition to the analysis described above, the WCA has been used to provide data on purchasing and de-selection of materials.

The WCA is a powerful and effective tool for librarians to analyze and evaluate their collections.

Anyone experienced with Excel will find the product easy to use. The database provides much rich data to be massaged and provides the ability to measure a library collection's strengths and weaknesses. Subject areas can be compared to find relative depth and breadth, and the age of the collection can be measured can be measured across all subject categories.

There are some challenges to using the WCA including some mentioned above, e.g. the publication date field can present some sorting problems. The database is updated quarterly, so the data is a snapshot of the collection at a given point in time and not a dynamic representation of a library's ever-changing collection. Additionally, some of the records do not map to any of the WCA Divisions, but remain in a category named "No Call Number Present." These records have to be downloaded and call numbers added to the record in the spreadsheet then resorted into the appropriate subject area.

As mentioned above, the IUSDL was able to obtain access to the database through a consortial agreement with the CIC libraries. This subscription option is less expensive, any library in the consortium may run a comparison with another library in the consortium with prior permission, and groups can be created for comparison. The stand-alone purchase option is more expensive but, depending on a library's need, it may be worth the extra money. More comparison options are available, such as selecting peer institutions from all OCLC users, not just other institutions in a consortium. And OCLC recently announced the ability for WCA to interact with a library's integrated library system to collate usage data along with all the other data about an item in the collection.

CONCLUSION

The WCA service is flexible, contains rich data analysis possibilities, and provides good customer service support. The product has improved in functionality and added many features in the two years since IUSDL first subscribed. By uncovering the strengths and weakness in subject areas, realizing the age of the collection and making appropriate withdrawal decisions, and building the collection in areas where the need was greatest, use of the WCA has dramatically improved the IUSDL collection.

REFERENCE

OCLC launches worldcat collection analysis service. (2005). *Advanced Technology Libraries*, 34(4), 1, 10-11.

ABOUT THE AUTHORS

Janice E. Cox (jcox2@iupui.edu) is Head Librarian at Indiana University School of Dentistry Library. She holds a Master of Library Science from the University of Kentucky and a Master in English from Indiana State University. Her research interest focuses on resource management and utilization. She also serves as a PBL (problem based learning) tutor and triple jump examiner.

Barbara A. Gushrowski (bgushrow@iupui.edu) is Access and Instructional Services Librarian at the Indiana University School of Dentistry Library. She serves as a PBL tutor, triple jump examiner, and assists on the case-writing team for first and second year dental students. Her research interests include collection development and analysis and the effect of library instruction on student research behavior.

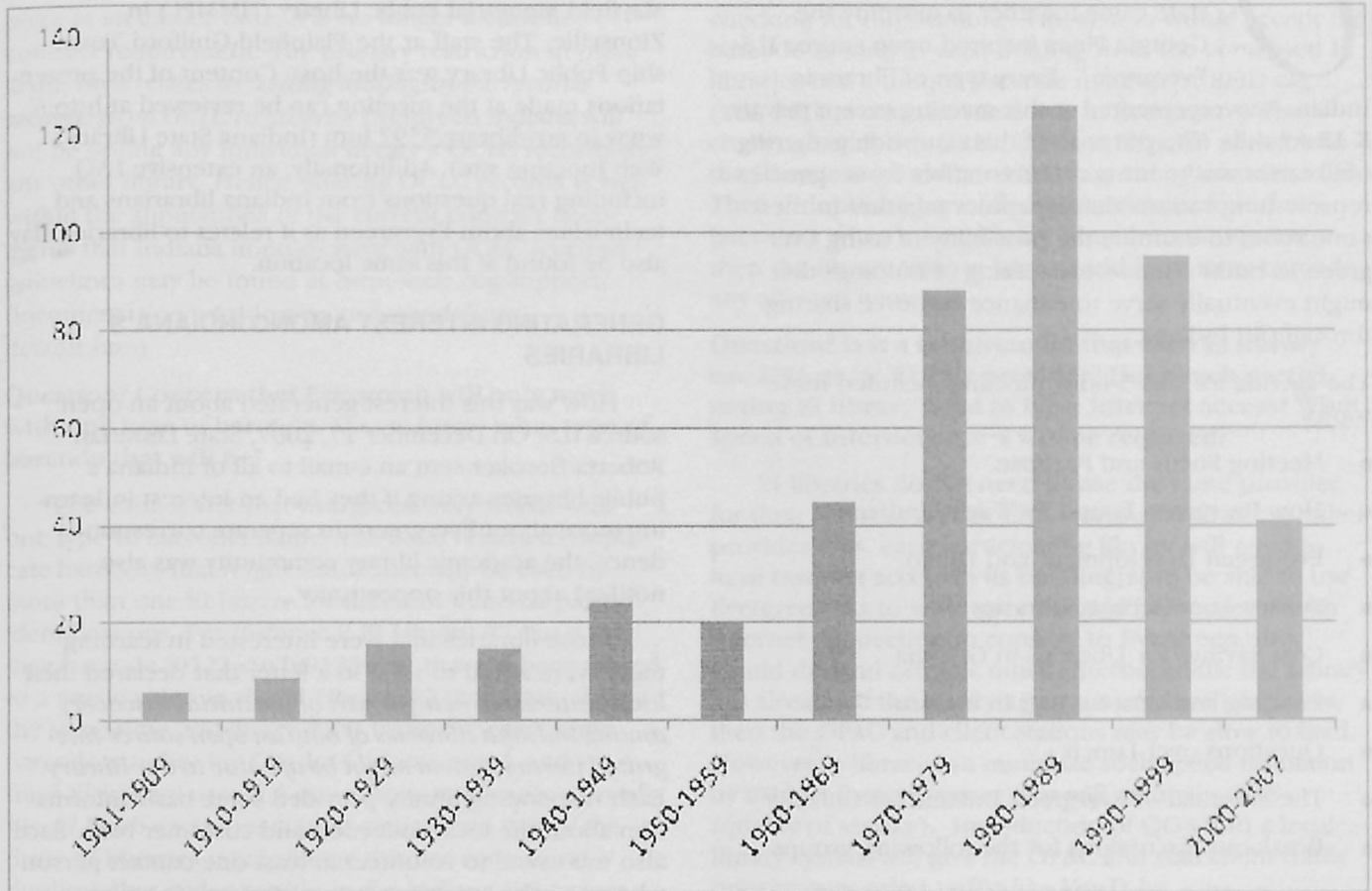


Figure 1. Pain – Assessing, Understanding, Managing 485 titles in Dental Collection – by date of publication