

## Academic Libraries Without Print

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Librarians from four university library environments—Western Oregon University, University of California Merced, Brigham Young University, and Cleveland State University—discussed changes occurring in their library operations as they transition to services centered in e-resources. They explored, through the evidence of their changing library operations, a range of topics including trends in collection development and usage; developments in open access publishing; instruction; and evolving peer review and publication processes. The moderator initiated the discussion with a review of a few of the year's relevant technology changes. Overall the cadence of change is brisk and has become the familiar norm.

### **Introduction by Allen McKiel**

E-books continue to be a major focus of the evolving world of library operations with offline mobile access becoming a central issue. Ebrary initiated a survey in March, 2011 of over a thousand librarians. About a third of the librarians reported that their libraries provided offline mobile access with about a third more reporting the intent to provide it. Over 95% of the librarians stated that tethered mobile access (interactive with vendor database) did not eliminate the need for offline mobile access (downloaded copy).

The following is a summary of other e-book news of the year:

Amazon is courting authors and making publishers nervous.

Google may yet have a deal with publishers and authors. The judge has given them one year to settle or they will be back in court. The word they are jointly releasing is that they are very close to a deal.

HathiTrust is nearing 10 million e-books scanned but is getting sued by the Author's Guild.

More libraries and consortia are gaining experience with the patron driven access (or acquisition) model of e-book distribution.

Project Muse makes an entrance into e-book distribution this January with the University Presses Content Consortium.

A summary of other library related news includes:

The ongoing march toward unlimited mobile broadband has taken a step backwards (albeit perhaps necessary) with mobile phone companies structuring multiple layers of access through increasing levels of pricing. The bandwidth reportedly cannot handle the demand at the lower rates for unlimited access.

EPUB 3 was adopted as a standard October 11<sup>th</sup>, 2011. It provides enhanced e-publication features which include facilitation of complex layouts like those in many textbooks, rich media (audio/visual) and interactivity, as well as expanded global typography.

Tablets and Internet phones continue to proliferate. Android 4.0 brings a variety of new features to phones and tablets. Perhaps the most significant is that Ice Cream continues the convergence of WIFI and cellular technologies. Google has unified the phone and tablet versions of Android in release 4.0. Formerly, the phone version of Android was Gingerbread and the tablet version Honeycomb.

Google's recent survey of mobile device users provides a picture of how they are used. The number one slot goes to games with 84% of the

respondents selecting the activity. The second most popular activity is searching for information with 78% selecting it. The other choices were emailing with 74%, reading the news 61%, accessing a social network 56%, consuming entertainment (music/videos) 51%, reading an e-book 46%, and shopping online 42%. Games drive the market but searching for information is right behind it. E-book reading is a bit of a surprise with nearly half the population of mobile users in the survey selecting it.

**Western Oregon University Report by Allen McKiel**

Increased access for e-books via the subscription model costs dramatically less than the purchase of individual titles (see table 6 below). The average cost of additions was \$3.10 per e-book. The average cost of print purchases was \$80.44. They were pri-

marily from the increase in ebrary titles (7,489 titles) as part of the subscription.

The expenditures at Western for print books dropped from \$86,247 last year to \$63,233 this year. This year’s average cost of a print book title was \$80.44. It is calculated as this year’s expenditure divided by the number of new titles (\$63,233 / 786).

When print book usage (including checkouts and in-house use) is compared with e-book usage, print usage comprises 78% of usage and e-books 22%. They demonstrate relatively synonymous usage when viewed with respect to their percentage of available books (79%) and e-books (21%). E-book usage has risen dramatically over the past year from 3,582 uses to 8,443 (135%). Comprehensive instruction of freshman that included accessing and using e-books is likely the reason.

	<i>Total</i>	<i>Print</i>	<i>% Print</i>	<i>Online</i>	<i>% online</i>
Usage books	38,420	29,977	78%	8,443	22%
# of Volumes	286,226	224,906	79%	61,320	21%
Annual Expenditure	\$86,449	\$63,233	73%	\$23,216	27%
Average Title Cost*		\$80.44		\$3.10	

As a member of the Orbis Cascade Alliance, Western is participating in the cooperative purchase of e-books through YBP and EBL. The intent is to purchase a collection as one entity through patron selections. We are still working on the details of the model. An overview from Western’s vantage point shows access to the 5,000 e-books as the initial trial that patrons from across the Alliance have access to pending purchase based on use algorithms. Our price for participation was \$7,000 in the trial. That provides access for \$1.40 per e-book.

The library will continue its strategy of replacing print subscriptions with less expensive and more extensively used electronic versions as they become available. The average cost of use for electronically accessed journals is \$1.33. The online usage is gathered from the reports from vendors on the viewing

of the full text of articles. The cost per use is calculated as the total annual cost of access to electronic journal articles divided by the total annual full text use of articles. The average price includes the relatively high cost of some pay-per-use articles (average of about \$30). The library continues to shift resource purchases to those that provide optimal access to available resources for the lowest cost for our usage patterns. The strategy includes a heavy reliance on pay-per-view through Science Direct, OVID, and Ingenta Connect. It has resulted in decreased cost, increased journal titles available for research, and increased usage. The chart below provides the stats. The costs are the total cost for journals—print, electronic by title, databases including indexes, and pay-per-view. Pay-per-view was initiated in 2010.

Year	Cost*	Titles	Article Usage
2008-09	\$317,849	27,265	160,496
2010-11	\$273,454	56,109	234,206
Change	-14%	105%	46%

Instruction is the 'on-the-ground' access improvement effort of WOU librarians. We initiated an LSTA grant funded cooperative to produce shared online information literacy tutorials and assessments. The project is called CLIP—Cooperative Library Instruction Project. The effort has coalesced around a state attempt to develop standard information literacy objectives and assessments for the state's community college two-year transfer degree. If the curriculum becomes standard for the community colleges, it will inform our IL efforts in the universities. CLIP has produced 17 online open access instruction modules with accompanying multiple choice assessments. Usage is growing rapidly. Last year the modules were accessed over 95,000 times (global Internet access). We use the modules as part of WOU's IL program by inserting relevant modules in our course-associated Libguides along with links to relevant resources and other instruction in a variety of formats.

**University of California Merced Report by Jim Dooley**

As the University of California Merced enters its seventh year, the student body continues to grow rapidly (now 5,200, an increase of 15% over last year). This growth has occurred in spite of the serious recession affecting California. While the recession has resulted in more than one billion dollars in cuts to state support of the University of California system, the Legislature and the UC Office of the President have continued to support the growth of UC Merced. The chief constraint on future growth is the delay in the construction of necessary academic buildings caused by the recession.

Library collections and operations budgets have remained relatively flat. While this is good news in comparison to libraries that have experienced significant cuts, library budgets have not kept pace with the increases in students and faculty. The collections budget has been impacted by the necessity to pro-

vide expensive electronic resources in support of the specialized research interests of newly-hired faculty. The response to this situation will likely be a continued reduction in the purchase of print monographs.

The library collection continues to be approximately 90% electronic and electronic resources comprise over 80% of the total information resources budget. There are effectively no print serials; patrons have access to over 70,000 subscription and free online journals. While the library houses just over 100,000 books and DVDs, it provides access to over 700,000 e-monographs, including government documents, reference works and e-books. Library patrons have access to the 37 million volume University of California collection through the libraries internal borrowing system called Request.

The library first began to acquire e-books through a subscription to ebrary Academic Complete. The intent is to retain this subscription because it provides access to a large number of titles at a very low cost per use. Usage statistics continue to demonstrate that this resource is heavily used. The library also participates in system-wide licenses for Springer and Wiley e-books. The Springer agreement covers 2005-2011 publication dates and may be extended through 2012; the Wiley agreement includes 2011 titles only. Springer usage continues to be significant; chapter downloads continue to equal approximately 80% of total annual print circulation. While the library continues to employ these means of acquiring e-books, patron selection plans remain the exclusive method of title-by-title acquisition of e-books.

Why patron selection? The answer lies in the "long tail" phenomenon—some titles are accessed large numbers of times while others are not accessed at all. A study published in *Library Resources & Technical Services* in 2010 showed that an average of 35.5% of print books purchased on approval by two

large ARL libraries did not circulate within 21 to 33 months of receipt. Both libraries spent a combined \$381,723 on books that did not circulate during the study period. For the Springer e-books purchased by the UC system, 19% were not accessed even once in 2010, 73% were accessed at least once and 8% were accessed more than 100 times. These are simply two examples of the unsustainability of “just in case” purchasing of library materials.

The UC Merced Library has patron selection e-book plans with EBL and Coutts/MyiLibrary. The plans are structured differently. The entire EBL catalogue is visible to UC Merced patrons; this includes titles that would not ordinarily be acquired by an academic library, e.g. travel guides, popular psychology books, etc. A title is purchased on the fourth access after three short-term loans. The Coutts/MyiLibrary plan is limited by publisher to research-level STEM titles; there are no short-term loans so a title is purchased on the second access.

Over several years, the library has averaged 154 transactions per month with EBL. A transaction is either a short-term loan or a purchase; it does not include free browsing. During the same period the library has averaged four purchases per month and nine transactions per month involving non-academic content. The latter is significant in that it appears to demonstrate that opening the entire EBL catalogue has not resulted in significant costs for non-academic content. As currently configured, the EBL plan is functioning as a very cost-effective supplement to traditional ILL rather than as a mechanism to purchase significant numbers of titles. The average short-term loan costs \$15.00 and the average purchase \$85.30. Short-term loans for the non-academic content average \$3.00.

An average of six titles per month is purchased through the Coutts/MyiLibrary plan with the average purchase price being \$121.50. This is understandable given the focus of the plan on relatively expensive STEM titles.

Overall, both plans have helped to produce a balanced e-book collection, have resulted in predictable expenditures in spite of the significant increase in the size of the student body and have provided good value. There is no evidence that patron-

selection has produced an e-book collection inferior in quality to what would have been selected by librarians. There is also no evidence that any individual purchaser has had an inordinate influence on the shape of the collection. Even exposing large amounts of non-academic content has not skewed the collection.

Expenditures for EBL have averaged \$2,640 per month during the past two years with little variation. It is to be expected that expenditures will trend higher with increases in the number of students, but there have not been wild swings that would impact the information resources budget.

Average costs were given above. The costs for EBL short-term loans in particular represent significant savings over the costs of traditional print ILL. Most important, all the costs were incurred in providing titles that were actually used. During the past two years 4% of the available EBL titles have been browsed. If the library had purchased an additional 2% of the available titles, that would have been an expenditure of over \$250,000 for un-accessed titles. In the context of cost avoidance and “just in time” acquisition, PDA continues to represent good value for the UC Merced Library.

At the end of spring semester 2011 the library ended its program to loan laptops to students. While popular with students, this program proved to be financially unsustainable and also unnecessary as almost all UC Merced students have personal computers. An important priority is to make as many information resources as possible available through mobile devices. The library still does not maintain a reference desk staffed by librarians; reference services are provided through a triage model with librarians available as necessary. Online reference is provided through participation in OCLC Question Point. Food and drink continues to be allowed throughout the building. This has not resulted in damage to the collection or the building.

Many important developments continue to occur at the system-wide level as the UC Libraries continue to work toward greater cooperation and efficiencies. In 2009 the UC Collection Development Committee developed a document titled *The University of California Library Collection: Content for the 21<sup>st</sup>*

*Century and Beyond* that was endorsed by the University Librarians ([http://libraries.universityofcalifornia.edu/cdc/uc\\_concept\\_paper\\_endorsed\\_ULs\\_2009.08.13.pdf](http://libraries.universityofcalifornia.edu/cdc/uc_concept_paper_endorsed_ULs_2009.08.13.pdf)).

One of the most significant aspects of this document was the explicit statement reflected in the title that the UC Library collection was to be managed as one collection rather than as ten separate collections. In support of this vision and as a means of reducing unnecessary duplication across the system, various shared print activities are underway. One project is to identify lightly-used print series that one campus will agree to collect so other libraries can cancel their subscriptions. Such materials will be owned in common rather than by an individual library and will be managed according to agreed policies. In order for such projects to succeed, and receive faculty support, there must be a very robust resource sharing system in place. Currently work is underway to rationalize loan periods across the campuses.

Along with developments in collection management, the Next Generation Technical Services initiative seeks to “redesign technical services workflows across the full range of library formats in order to take advantage of new system-wide capabilities and tools, minimize redundant activities, improve efficiency and foster innovation in collection development and management to the benefit of UC library users” (<http://libraries.universityofcalifornia.edu/about/uls/ngts/index.html>). A series of teams made recommendations that were approved and prioritized by the University Librarians in December 2010. In 2011, implementation teams have been created in the following areas:

- Build the system-wide infrastructure for digital collections
- Transform cataloging practices
- Accelerate processing of archival and manuscript collections
- Simplify the recharge process
- Maximize the effectiveness of the Shared Cataloging Program
- Develop system-wide collections services operations
- Transform collection development practices

Specific information about the activities and progress of these teams is available at (<http://libraries.universityofcalifornia.edu/sopag>).

The ongoing development of HathiTrust will have significant impacts on collection management in the UC Libraries. According to the HathiTrust *Update on September Activities* there are now almost 9.7 million volumes in HathiTrust with almost 2.6 million of these being in the public domain and thus available online with full text to users at partner institutions. The University of California is the second largest contributor of digitized content to HathiTrust with almost 3.15 million volumes ingested. Records for HathiTrust titles are being continually loaded into WorldCat and HathiTrust has developed a catalog based on OCLC WorldCat Local. At its recent Constitutional Convention, the organization agreed to investigate becoming involved in the archiving of print monographs and U.S. Federal documents. It is reasonable to believe that these developments in mass digitization and print archiving will allow significant print deduplication within the UC Libraries with corresponding cost savings and repurposing of space.

Libraries are also attempting to repurpose space by addressing deduplication of print journal collections. One such initiative is the Western Regional Storage Trust (WEST). The Andrew W. Mellon Foundation has funded development of an operating and business model and initial implementation for a distributed retrospective print journal repository involving many research libraries and library consortia in the western United States including the University of California. The California Digital Library is providing ongoing operational and management support to WEST.

### ***Brigham Young University Report by Robert Murdock***

#### **Digital Transformation: Changing Library Operations**

In looking back and assessing the various factors that have prompted changes within my library, it is of little surprise that digital publishing and related technologies, coupled with the ways in which society is embracing digital communication is impacting library operations and strategic directions in a most

significant way. Certainly this is the case at Brigham Young University. For the purposes of this presentation I want to highlight several areas where we have made changes or adaptations in operations to better accommodate an environment that is being influenced so dramatically by a rapidly expanding digital environment.

### **Library Space**

Perhaps the biggest and most significant story to be told relating to adaptations to digital publishing relates to library space and facilities. The Harold B Lee Library serves as the main library for Brigham Young University. In 1999 a new 235,000 sq. ft. addition to the library was completed. This building addition was constructed with the expectation that the new space would accommodate collection growth for approximately 15 years, at which time additional library space would be required. As early as 2003 discussions were under way to begin planning for an off-campus auxiliary library storage facility to house the growing print journal and monograph collections.

Now, just four years shy of when an auxiliary collections storage facility was forecasted to be constructed and operational, that facility is no longer required. What erased the need to invest millions of dollars into the planning, construction, and operation of a new auxiliary storage facility? The answer is obvious to most of us—the major factor was the rapid acceptance and adoption of electronic journals and information databases.

Today approximately 94% of the BYU's journal subscriptions are in electronic format. The library's decision to adopt electronic journals over print journals as its preferred format, as well as embracing a growing trend to acquire e-books has virtually eliminated the need to expand the library's building footprint or need for an offsite storage facility for the foreseeable future.

Another change in our library's operations that is impacting space is the implementation of a multi-year plan to install compact shelving in the basement level of the library to house a closed stack auxiliary collections, made up of less used print resources.

In addition to actions taken on a local level to better manage the library's physical collections and space, BYU became a member of the Western Regional Storage Trust (WEST). Through membership in this print archive and storage trust, we hope to provide increased opportunity to reduce print holdings in our library without negatively impacting access to needed resources.

The growing demand and reliance on digital resources and technologies is allowing the library to repurpose its functions. Emphasis no longer is placed on putting a premium on physical collections. The library is now able to allocate space and other resources for enhance learning stations, collaborative work areas, flexible study accommodations, multimedia viewing rooms, and expanded exhibit and interactive learning areas. The library is also actively partnering and sharing space with various university student learning services such as writing centers, advisement.

These combined actions are saving the university millions of dollars in construction and equipment costs. Hopefully the university will channel of some of the funds which would have been used for library building facilities toward collections and services support.

In short, digital publishing and associated technology opportunities are allowing the library and university to shift one of its most expensive and major priorities away from accommodating physical collection growth and storage, to new priorities aimed at accommodating learning and creativity.

### **Collection Development**

The digitization of scholarly communications and publishing and sound and visual media have had a profound impact on our library's collection development focus and practices.

#### ***Digital Resources consumes a growing percentage of Materials Budget***

At the present time, nearly 78% of our library's materials budget is directed to the subscription or purchase of electron/digital resources. This includes journals, database resources, media, and targeted

e-books. Because of the ever expanding interest in digital resources, we have modified our collection policies to focus on curating content and building collections that allow ubiquitous access and use of e-resources, rather than giving primary attention to print resources.

Three years ago Brigham Young University launched its first experiment with Demand Driven Acquisitions (DDA) with ebrary. Even though this was a fairly modest project, we learned a lot of useful information and determined the project to be a success and that we would implement additional DDA projects.

Currently our library is involved in two new Demand Driven Acquisition Projects. One of the projects includes partnerships with ebrary and YBP. In this model, the Demand Driven e-book pool and associated bibliographic records is determined by profiles established by our subject librarians and is managed through YBP. The second DDA project is with Elsevier. This DDA model provides patron access to the entire collection of e-books published by Elsevier during the past four years and commits the library to spend an agreed upon amount of dollars. Actual e-book purchase decisions do not occur until a twelve month cycle is completed. At the end of the year cycle, subject librarians will examine patron usage data and then select specific titles to be purchased.

Beginning in the 2012 budget cycle, BYU will build Demand Driven Acquisitions into its collection development and acquisitions processes and practices. In at least the near future, there is little doubt a variety of Demand Driven Acquisitions models will be tested and implemented in the months to come, however we confident some forms of DDA will be an essential part of our ongoing collection acquisition process.

As collection development methodology changes, one of our biggest hurdle to overcome is to effectively weave the role and value of YBP, our subject librarians, and publishers/e-book suppliers into a seamless and complimentary workflow that capitalizes on the strengths, expertise, and tools

of each while at the same time avoid unnecessary redundancy.

### ***Licensing***

One of the most profound adjustments we have made in library operations relating to digital publishing, was the need to create and integrate “Licensing and Electronic Resource Management” into our Collection Development and Acquisitions organization and workflow. The two most significant requirements included:

**Knowledgeable and Skilled Personnel:** Having knowledgeable and skilled personnel as part of our organization that have expertise in resource agreement negotiations, legal and rights issues, and contract language and law is now an absolute necessity.

**Resource Management System:** A Resource Management System designed to document, archive individual licenses and associated agreement terms, right restrictions, obligations, etc. has become an essential tool and resource in our library’s operation. Some form of licensing is now required for almost all digital acquisitions and subscriptions. Since the content contained in license agreements impacts so many library operations and is needed by a growing number of librarians and staff members, licensing documentation is now integrated and accessible throughout the library.

### ***Ownership vs. Subscription***

Digital publishing and the reformatting of physical objects into digital facsimiles is drawing new attention, debate, and considerations has to the value, need, and/or cost of owning resources as opposed to subscribing or leasing access to content. Subject librarians in our library now attempt to assess the cost/benefit of purchasing or leasing resources based on criteria such as, how time sensitive is the content, does the content have enduring value, and how frequent will the content be updated. Other important collection development questions our librarians are addressing include: How important or necessary is it to own material as long as discovera-

bility and access to needed resources is available? To what degree should our library continue to promote a “Just-In-Case” collecting model in a digital information world? Will digital publications go out of print? What impact does an Open Access Environment have on collection ownership policies?

### ***Open Access***

Our collection development, acquisition, and cataloging practices are being adapted to accommodate the growing impact of Open Access Materials and associated issues. The library’s participation in Internet Archives and its planned involvement with HathiTrust is forcing changes in various internal operations all of which impact collecting decisions, digital projects, and discovery portals.

We are currently exploring the best ways we can integrate open access discovery tools and finding aids into our catalog database and other discovery portals. Additionally, our library continues to expand its Institutional Repository and promote open access involvement and initiatives with our teaching and research faculty.

### ***Media***

The interest and demand for audio visual resources significantly rising. We believe this trend will continue to increase in the foreseeable future. Changes have had to take place in our collection budgets to accommodate this shift in collecting. Acquisition and licensing operations are also being adjusted to better address the need to acquiring performance rights, licensing media for classroom and reserve use, and integrating video streaming into library services.

### **Changing Operations in Technical Services**

**Shelf-Ready Acquisitions:** The majority of the cataloging and processing for the library’s English language acquisitions has recently been outsourced and now arrives shelf-ready. This action has freed up a number of library positions to be redirected toward assignments and needs having a higher priority.

**Cataloging Position Reallocation:** The implementation of a Shelf Ready Program has allowed the library the opportunity to repurpose library positions. A strategic goal of the library is to provide the

best possible cataloging, metadata, and finding-aid for materials associated with Special Collections and Archives, Foreign Language Area Studies, and the library’s own Digital Library. To make this happen, five repurposed positions have been assigned to the Special Collections and Archives Cataloging Department and the Area Studies Cataloging Department in order to expand cataloging and discovery output for content associated with these important collection areas. These new positions are also beneficial because they bring add new strengths and depth to the cataloging and metadata expertise.

### ***Demand Driven Acquisitions***

The decision to become more involved in Demand Driven Acquisitions is requiring our library to load bibliographic records into our catalog prior to the purchase of materials, which is a change in operations. Since almost all DDA bibliographic records are provided by vendors, the library’s commitment to out-sourcing cataloging in continues to expand. By including DDA into library operations, workflow adjustments and procedure changes have been required in order to maintain an ongoing inventory of bibliographic records that are linked to materials that have been purchased through DDA. At the same time new workflows and system adjustment have been created to keep track of the records for e-books that not reached a trigger threshold for purchase.

### **Content and Service Assessment**

Assessment of library services, operations, and content has taken on renewed interest and a higher priority within the library. New tools and resources have been put in place in order for library personnel to better evaluate the use of library resources and services. We recently designated an Assessment Officer and are engaged in many more library-user surveys and testing. We are creating new programs and relationships with the university’s Assessment Office in order to capture and study data. The objectives of our assessment program are to:

- 1) Become more user-centered in implementing and evaluating services, resources, learning tools, and student and faculty needs.
- 2) Assess and use reliable and relevant data for reporting and evaluation purposes.



- 3) Provide needed resources and data to strengthen decision making processes.

### **What Next**

Our library is currently engaged in two major studies which most likely will bring additional changes to our library's operations:

- 1) An examination of the library's internal Digital Library Program: The study will include mission, goals, collection priorities, collection development policies, relationship with national/global initiatives, rights management, institutional repository, metadata standards, preservation, and resource/funding commitment.
- 2) An examination of the role of library faculty in the coming decade as it relates the multitude of current and anticipated changes taking place in higher education and in academic/research libraries.

### ***Cleveland State University Report by Carol Zsulya***

Cleveland State University (CSU) continues to grow with a record number of freshmen as well as a marked increase in the number of undergraduate and graduate students entering in Fall 2011, another new building for resident students has been completed, and the continual requests and preferences for e-resources. CSU's membership in OhioLINK for journal, database and monograph acquisitions continues to influence our acquisitions decisions. The State of Ohio's budget crisis has particularly affected CSU with Ohio's reduction in fund-

ing to higher education. All state budgets have been adversely affected, including the OhioLINK budget. And yet, Ohio academic libraries continue to maintain a vibrant core of scholarly research materials with careful spending at the individual university level and at the OhioLINK level.

The issues impacting the operations of Ohio's academic libraries include the following:

- State and individual university budget cuts
- Requests for e-books continue to increase for all disciplines
- Consideration of leasing e-books rather than perpetual access
- Purchase of e-books as publishers are providing e-content as well as print content
- Continuation of problems with the differences among vendors and publishers in accessing, reading, searching and downloading e-books
- Improved access to all e-resources via a discovery layer, LibGuides or similar products
- Review of responsibilities of staff to maintain excellent service in all library departments despite reduced budgets, retirements and limited hiring
- Evaluation of space and de-selection projects within academic libraries and within state depositories
- Ownership of e-titles and print titles within the state and the role of the state depositories
- Use of e-readers and social media among students and faculty