



## STRUCTURE AND MANAGING DIGITAL RESOURCES IN LIBRARIES – A STUDY

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### ABSTRACT

This paper discussed that 'Structure and managing digital resources in libraries-A study. The library and resource center of the future will be digital and have the following features: Constrain all recorded knowledge online; Distributed, maintained globally; Accessible by: any person in any language any time anywhere on earth via the Internet Act as the information resource for the 21<sup>st</sup> century.

The use of digital resources, though highly individualized, was significantly related to subject and discipline area. The different disciplines could be grouped into three main types of use. The librarians' relationships with academics varied though in general, there was a noticeable gap between library and academic staff. Within the 'pre-1992 university each department had a member of staff responsible for library liaison but communication with the department, other than for subscription services, often relies upon the development of personal relationships rather than a formal link. A department with a notably close relationship to the library was Law where the subject librarian attended staff meetings regularly and was trusted to buy new digital resources. The use of digital resources within different departments did not necessarily depend on the relations between academic staff and the corresponding librarian. The use of digital resources was reported by librarians to vary markedly within subjects and disciplines. Chances are an increasing share of your library's materials budget is shifting to digital resources every year. Popular educational reference book publishers are publishing e-books and online databases.

**KEYWORDS** : Selection –Acquisition–Promotion and display–Cataloging–circulation –control–Inventory–Evaluation

### Introduction

Library patrons in today's environment expect access to electronic items as well as physical materials. In fact, publishers are abandoning the traditional print model in favor of electronic formats that can be substantially less expensive for them to deliver. Physical and electronic versions of scholarly resources serve different purposes. Building a Digital Resource Center is a daunting challenge, involving a wide variety of technological, social and policy issues. The library and resource center of the future will be digital and have the following features: Constrain all recorded knowledge online; Distributed, maintained globally; Accessible by: any person in any language any time anywhere on earth via the Internet Act as the information resource for the 21<sup>st</sup> century.

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- Needs assessment/collection development
- Selection
- Acquisition
- Promotion and display
- Cataloging, circulation and control

- Inventory
- Evaluation

And each of these resource management tasks is applicable to digital resources. But online resources have unique characteristics that make working with them quite different than the books, magazines and AV materials we've managed in the past. And I'm sure you've already encountered some of those differences.

### Needs assessment/collection development

Unless you have an unlimited budget, your digital resources must be selected to meet the needs of your school, its curricula, and teachers. Long gone are the days of the "balanced" school library media center collection where collection building meant having something available on every possible topic. While general reference sources are still needed, the "free" Internet, interlibrary loan, and local public and academic libraries give students access to a rounded set of materials.

Many states also purchase general resources for all libraries, public, school, academic, and special, to use. A first question to ask in a needs assessment is "What do I need in addition to the resources provided by my state?" Some state collections are amazingly comprehensive. Familiarity with these resources is a must for every LMS for their collection development process.

The LMS can concentrate on building a collection based on specific needs down to course, unit and even project level. Just as there is little sense in acquiring books on a topic that is not part of a curriculum or meets a reading program goal, there is no sense in selecting a subject-specific database for a subject not researched in your school. And traditional needs assessment methods can be used to determine areas of need in your collection.

Increasingly the question about meeting those needs centers around whether digital or print resources are best suited to meeting them. How will your students and staff get the biggest "bang for the buck?" In making that choice, you need to ask a few questions:

- How timely does this resource need to be?
- How much access to computers or e-book readers do your users have in the LMC, in the rest of the school, in their homes and in the community?
- What resources do your users seem to enjoy using the most? Studies of our "net generation" students indicate they have a definite preference for digital resources.

- How important is accessibility to this information from outside the school? For multiple users to have access at one time?

The "right" choice will depend on your own demographics and resources. While both you and your users may prefer a digital encyclopedia, if there are only a very few workstations in your library on which one might be accessed, the print version is still a better choice.

### Resource selection

Just like choosing a print resource, good selection procedures need to be followed, including knowing the board selection policy and using unbiased review sources when making a selection. I believe good reviews and comparisons are more difficult to find for electronic resources than for traditional ones. Given the changeable nature of online resources, reviews may no longer reflect the actual product (a full-text periodical database may have added or dropped titles, change years of back issues, etc.)

One method of reviewing online resources, however, is available that is not traditionally used with print materials: the trial subscription. You and your patrons can use the product from 14 to 60 days before deciding whether to subscribe or purchase it. "Before I spend money on a database I try to have at least one teacher use it with their students. If there are glitches or the instructions/process is unclear — the problem will usually show up quickly. And by using this method we can also gauge if the literacy level/instructional level of the information is on par with the level of the students." Gary Schwartz, LMS from Owatonna (MN) High School advises.

Another important review challenge is that many digital resources tend to be collections of materials, not distinct titles. It is one thing to purchase a DVD title; quite another to select an entire collection of educational videos. This makes a review imperative since a hands-on, eyes-on examination of every title is impractical if not impossible. It's also a good time to review a basic selection precept that we include materials based on their strengths rather than censor them based on a small percentage of material that *may* be objectionable. Mary Alice Anderson, LMS for Winona Schools reports: *Had an interesting experience with purchasing a health database. The LMSs previewed it and asked counselors, health teachers and a couple others to look at it, too. People liked it. But one administrator questioned placing content like that on the web site because there are students whose parents don't let them attend classes in topics such as sex ed. I explained we buy databases to steer kids into good content instead of whatever they find on their own via Google. I saw that as another example of how we need to be continually educating administrators.*

Additional considerations are operating system compatibility (less problematic with web-based materials), bandwidth and storage capacity necessary. Some companies (Digital Curriculum, for example) will allow a school to house the product's digital content onsite so that only wide area network or in-building network capacity is a factor, not bandwidth to the Internet itself. When the medium being accessed is comprised of large files, like video programs, this is an important factor in selecting a resource, but the server on which the material is stored may need to be very large. With the purchase of materials that are meant to be a permanent part of the collection (e-books, perhaps) there is the question of how accessible such materials will in future, years as programs, operating systems and storage media change. (Tried to read any files created on an Apple IIe lately?). And finally, we also need to recognize that the resource interface, not just its contents, needs to be age appropriate. Happily, many companies recognize that younger users need less sophisticated search tools, larger icons, and brighter images.

### Acquisition

Getting the resource should be as easy as entering a URL — right?

Not quite. Giving a school's users access means working with your IT department in most cases and selection must be done in coordination with it. One decision to be made, when the option is available, is whether to give access to an online resource by password, by IP addressor both. If access is given by IP address, patrons at any computer within a range of IP numbers do not need a username or password to log on. The product recognizes the IP number as one in an organization that has purchased the product. This is convenient and reduces the amount of work needed to track usernames and passwords and is fairly secure method of limiting access only to licensed users. Access by username and password has advantages as well. Control can be given to only select users to certain materials; users may have access to individual areas where they can store results of searches or play lists; users can get access to the resource from computers outside the school's IP range (without having to set up a proxy); and usage can be tracked more precisely. If access is given by individual rather than generic username and password, I would strongly suggest working with your IT department to set up an database, such as an LDAP directory, where usernames and passwords can be stored and used for authentication in multiple applications. Home access is an important factor we consider when our district selects a resource. The movement is toward 24/7 learning and making sure learning resources are available 24/7 is important. Online courses and hybrid classes will continue to demand access to good digital materials since a students may not be near the physical library for extended periods of time. One management/budgeting tip is to make sure your subscriptions begin and end when your school fiscal year begins and ends. Most companies will work with you to bill your district for a partial year or, more likely, a year plus the months needed to end the subscription at the end of your school year.

### Promotion and display

How do you educate kids (and teacher's) to use authoritative online sources and not just "Google it?" How do you teach your users to see the library as a portal to trusted sources? Online resources do not jump out at students And staff and holler "use me" anymore than library books ever did. They need to be promoted and displayed.

Library orientation programs must of course demonstrate online resources as well as the physical ones. Introduction to online resource is best done during research units themselves — when students actually need the information they contain. Any bibliography or webquest prepared for a unit should reference electronic tools as well as those in print. As LMS Jaime Jeanne Meadows St. Helens (OR) High School puts it. "The piece of the puzzle that I try to add is instruction. When I get a new "toy" I like to show the staff how to use it, hopefully during an in-service day, and then if it's a student use item, show them how to use it on a case by case or class by class basis."

LMC webpages should clearly mark links to their digital resources, either on the homepage or on a separated page that has a clear link from the homepage. A note by the link that tells the user any special instructions for accessing the resource not only helps the user, but will cut down questions. Oh, posting a generic username and password on a public website, no matter how convenient, is *not* appropriate.

Students and teachers can be subtly reminded of the schools' online resources if guides in the form of posters are visible near workstations. These resources need to be promoted at teacher meetings and in teacher newsletters. The LMC's webpage with links to its digital resources should be the default page when any web browser is launched.

### Cataloging, circulation and control

Should digital resources be cataloged? Well, of course. Follett's eBooks come with MARC records. Online reference materials should be found when doing a catalog search just like their print cousins. When feasible, the ability to search digital resource using a federated search tool must be made available. Few electronic

resources circulate per se. Multiple users can access them all at one time a major advantage of these tools.

E-books are the exception to this rule. Follett and NetLibrary allow only single users to access titles with libraries determining "circulation" length as they would with any print resource. The specific rights for e-book use vary not only from supplier to supplier, but from publisher to publisher within suppliers' lists. This includes whether a title can be accessed by multiple users, can be downloaded and read by portable devices, and can be printed. NetLibrary suggests that most users treat their e-books as a reference source with an average use time of 35 minutes. Supplying digital materials like e-books, may require the circulation of portable devices on which to read the materials such as e-book readers or digital audio players. When a single digital device may hold multiple items (one e-book reader with a dozen titles on it), counting circulation will become very tricky. Good luck with that.

Regular checks to see if right users have the access are important, as is checking the resources' links from the LMC's webpage to make sure they are working. As Australian librarian Margaret Dennerley opines, with tongue in cheek, "One really cool thing our IT department does is change our external IP ranges without advising us and without thinking it might have an impact on our patrons being able to access those sites that are IP authenticated."

### Inventory

Counting subscriptions is usual pretty simple to account for since they aren't very numerous and impossible to steal, even by ingenious 8<sup>th</sup> graders. Tracking licenses of software that is installed on computer workstations is more problematic —making sure that your school is not running more copies of an application than for which it holds a license. Our district, to help stay in compliance, runs a remote survey of all computers to get a list of licensed program files on each. These lists are then compared to licenses for which we hold records, and if any unlicensed software is found, our department takes action. Limiting the rights for installing software also helps keep licenses from stretching too broadly. Oh, we like purchasing site licenses for products when possible. It is not only economical, but helps save the hassle of inventorying the product on individual computers. Do keep good records of your licenses and subscriptions. It may not be possible totally stop software pirating, but your district needs to show it has made a good faith effort to do so.

### Evaluation

Most vendors of digital information make it possible to track the usage of their products. It is, after all, in their own best interests to have LMSs and their administrators know just how heavily a resource is being used.

### Managing Digital Resources in Libraries

Library patrons in today's environment expect access to electronic items as well as physical materials. In fact, publishers are abandoning the traditional print model in favor of electronic formats that can be substantially less expensive for them to deliver. Physical and electronic versions of scholarly resources serve different purposes: the former may be preferred for embedded graphic objects, whereas electronic versions are easier to access, often in varying combinations of portable document format (PDF), hypertext markup language (HTML), MS Word, extensible markup language (XML), and text.

The chapters of the book are divided into four major sections, the first of which is licensing. This topic includes discussion of the impact of licenses on library collections and licensing issues in an integrated collection. The authors address the reality that restrictions imposed by licensing agreements result in a bifurcation of library resources for those resources that are owned and/or leased. The authors claim that, given the restrictive climate, libraries must support the first sale and fair use doctrines to thrive in the

digital environment.

The second topic of opinions, research, and analysis concerns open archives and the role of academic libraries and the electronic librarian in acquiring online journals and solutions to providing access. The authors discuss the open access movement and conclude that an electronic prints archive would complement traditional means of scholarly communication and publishing. Several timely questions are posed, including provision of article-level access to journals, effect on collection management of purchasing from journal aggregators, and MARC as an appropriate, let alone relevant, format for cataloging.

The third topic is systems and software, which addresses choices in cataloging electronic journals, the use of the electronic library information navigator ELIN@, an "electronic journal finder," integration of print and electronic resources, and electronic journals in aggregated collections. The authors describe various formats used to provide access to and fully integrate collections of journals in all formats. A summary of the advantages and disadvantages of each option is discussed. Also reviewed is a solution to the problem of providing access to e-journals using e-journal management software. Various e-journal management systems in different libraries are described. The section concludes with a discussion of a twofold solution to providing access to the content of full-text aggregators and collections: access through the online public access catalog (OPAC) and a database available from the library's Website.

The final topic of special projects and histories covers integrating resources for PDA users, issues in developing an all-digital public health library in Michigan, and two case studies of electronic collection management. The authors describe the steps necessary to successfully integrate PDA-accessible resources into a library collection that necessitate novel solutions to the issues of licensing, cataloging, processing, and storing of such materials. Also discussed are the unavoidable problems of collecting and jointly managing print and e-resources with decreasing budgets.

Addressing the challenges of and barriers to the preservation and dissemination of electronic information, *Managing Digital Resources in Libraries* provides a compendium of working knowledge addressing the aforementioned central issues. Each chapter concludes with references, including relevant Websites. Moreover, the book is thoroughly indexed and many chapters conclude with references and useful appendixes. This anthology outlines what librarians are thinking, doing, and planning in the new world of digital resources, in a time of shrinking budgets and increasingly complex access and purchasing arrangements. The contributions range from the theoretical to the eminently practical. Major emphasis is on the management of e-journals, although a chapter on the use of PDA technology gives the collection greater breadth in terms of formats addressed. An interesting and important compilation of reflections on today's issues in managing digital resources, *Managing Digital Resources in Libraries* also has a global reach, addressing projects outside the United States. The range of solutions offered for accessing and managing digital resources illustrates that no one method will achieve management of digital materials in all libraries because, as many authors maintain, one size cannot fit all.

Finally, the chapters address copyright issues, licensing concepts, and issues surrounding bibliographic control. The case studies inclusively cover situations found in a variety of libraries, such as academic, health sciences, and public libraries. These vary from the ways librarians cope with digital resources, questions about how different formats and titles are selected, ways limited funds are allocated to lease or purchase electronic resources, to the effects consortial arrangements have on funding problems and the extent such relationships require libraries to purchase content that is out of scope. The book will serve as a very useful resource for all collection development librarians as well as for digital resources librarians.

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