Reconfiguring Academic Collections: Stewardship, Sustainability and Shared Infrastructure

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Roadmap

- A framework for academic collections
- Some remarks on libraries in the higher education landscape
- A gloss on changes in the Penn State University Libraries
- Emerging infrastructure and its impact on the organization of academic libraries
Collections Grid

- Purchased materials
- Licensed E-Resources

In many collections

- Open Web Resources

Licensed

Purchased

High Stewardship

In few collections

- Special Collections
- Local Digitization

Low Stewardship

Research & Learning Materials

Credit: Dempsey, Childress (OCLC Research. 2003)
Library attention and investment are shifting

- **High attention**
  - Limited
  - Occasional

- **Less attention**
  - Intentional
  - High Stewardship

- **Limited**
  - In many collections

- **Occasional**
  - Limited
  - Low Stewardship

- **High Stewardship**
  - In few collections
Academic institutions, today and tomorrow

Univ. library spend on e-resources in 2008:
Aggregate US ARL = $627M US  (41% total library exp.)

Redirection of library resource

Licensed

Purchased

Today

In 5 yrs

High Stewardship

Low Stewardship

In Few Collections

In Many Collections

Low Stewardship
Change in academic collections

• Shift to licensed electronic content is accelerating
  Research journals - a well established trend
  Scholarly monographs - in progress

• Print collections delivering less (and less) value at great (and growing) cost
  Est. $4.25 US per volume per year for on-site collections
  Library purchasing power decreasing as per-unit cost rises

• Special collections marginal to educational mandate at many institutions
  Costly to manage, not (always) integral to teaching, learning
What factors are driving this change?

- Erosion of library value proposition in academic sector

  *institutional reputation no longer determined (or even substantially influenced) by scope, scale of local print collection*

- Changing nature of scholarly record

  *research, teaching and learning embedded in larger social and technological networks; new set of curation challenges for libraries*

- Format transition; mass digitization of legacy print

  *Web-scale discoverability has fundamentally changed research practices; local collections no longer the center of attention*
The ubiquitous question of whether electronic journals are capable of replacing paper versions is beginning to be answered. The author discusses patterns of use observed in a scholarly setting where severe remote library storage [shortage] created greater incentive to rely on electronically archived journals (JSTOR). As awareness of electronic access increased, use of the equivalent paper collection declined. In fact, electronic use is on a significantly larger scale than that measured for paper. These observations permitted the author to confidently transfer all electronically archived journals to remote storage and to conclude that electronic journals can substitute for paper.

A long term, system-wide trend

US Academic Library Expenditures vs. Total Spending on Post-Secondary Education

Shift in provision of higher education

Distribution of Post-Secondary Educational Institutions in the United States by Source of Funding

A limited population with growing expenses

US Academic Libraries & Operating Expenditures
1977-2008

In US research libraries, a tipping point ...

Majority of research libraries shifting toward e-centric acquisitions, service model

Shrinking pool of libraries with mission and resources to sustain print preservation as ‘core’ operation


Derived from ARL Annual Statistics, 2007-2008
... the books have left the building

In North America, +70M volumes off-site (2007)
~30-50% of print inventory at many major universities

Growth in library storage infrastructure

*Derived from L. Payne (OCLC, 2007)*
It’s not about space, but priorities

- If the physical proximity of print collections had a demonstrable impact on researcher productivity, no university would hesitate to allocate prime real estate to library stacks.

- In a world where print was the primary medium of scholarly communication, a large local inventory was a hallmark of academic reputation.

  We no longer live in that world.
We’ve moved from infrastructure designed to instill and reinforce a common cultural identity

* a locally managed copy of the canon

to a decentralized model supporting disciplinary development and scientific innovation

* specialized departmental libraries

re-aggregated and embedded in larger social and technological networks

* knowledge commons, virtual “libratories”
A Penn State perspective, ca. 1924


[mdp.39015070462232]
A traditional configuration, ca. 1900

In 1905
~22,000 volumes

By 1926
~92,000 volumes
~55,000 circulations
By 1940s, 
~200,000 volumes

In mid-1950s, 
~400,000 volumes 
(25% in dept’l libraries)

64% of library space allocated to stacks;

<6% to academic functions

**center of scholarship or warehouse of books?**
A boon for research and learning in all of the colleges was the computerization of the University libraries, begun in 1975. The libraries' holdings, except for those in a few specialized areas, were still inadequate for an institution the size of Penn State. … Patrons also had access via computer to the bibliographic resources of the Research Libraries Group (a consortium of the nation's leading research institutions), thus partially offsetting the limitations of the University's own collections.

Reconfiguring collections and services

Books are moving
Use the "I Want It" button in The CAT. Read More »

Naming Opportunities at a Glance
Your named space will touch the lives of current and future Penn State students.

1. **DEDICATED POST-PRODUCTION SUITE** ($40,000)
   - A dedicated multimedia editing workspace.

2. **CONSULTANT OFFICE** ($25,000)
   - Provides space for IT assistance.

3. **STUDY ALCOVE AND SOUND BOOTH** ($20,000)
   - Provides a quiet study area close to services.

4. **POST PRODUCTION ROOMS** ($40,000)
   - Provides technology to edit and view multimedia projects in small groups.

5. **PRESENTATION PRACTICE ROOMS ($40,000)
   - Provides equipment and space to practice oral communication skills.

6. **MULTIMEDIA CLASSROOM** ($20,000)
   - Provides a classroom for instruction featuring multimedia.

7. **MEDIA HELP DESK** ($25,000)
   - Provides a service point for media equipment consulting and circulation.

8. **KNOWLEDGE COMMONS MANAGER** ($25,000)
   - A central location for the manager to observe usage and provide services for students.

9. **KNOWLEDGE COMMONS HELP CENTER** ($100,000)
   - Provides professional reference and technical assistance.

10. **GROUP STUDY (6 @ $50,000 each)**
    - Provides private space for four to six students to work on course projects.

11. **GENERAL WORKSTATIONS** ($50,000)
    - Provides 68 computer-equipped workspaces with ample space.

12. **QUIK ACCESS SERVICE AREA** ($25,000)
    - Provides reading stations for rapid access to Library resources.

13. **LARGE STUDY ROOMS** ($4 @ $25,000 each)
    - Located within Adaptive Technology Services and equipped with assistive technologies for students with special needs.

14. **GROUP STUDY ROOM** ($50,000)
    - Provides private group study space for students with special needs.

15. **CENTRAL ATRIUM (2 @ $50,000 each)**
    - A light-filled room with a soaring glass ceiling, connecting all three levels of the Pattee Library.

16. **READING ROOM (2 @ $75,000 each)**
    - Provides a place to relax and study — with a library reading collection.

17. **CENTRAL PATTEE ENTRANCE LOBBY ($250,000)
    - Serves as the gateway to the academic enterprise and scholarly excellence, where more than two million visitors pass through annually.

18. **ATRIUM MEETING (4 @ $50,000 each)**
    - Provides a comfortable and welcoming area where students can see and be seen by others involved in research, study, or relaxing.

Note: Design scheme is envisioned October 2019; subject to change as naming opportunities evolve.
“...cyberinfrastructure is literally becoming the central nervous system for institutions like Penn State”

Kevin Morooney, Vice-Provost for Information Technology
### Usage and growth of digital repositories

### Faculty uptake of Open Education Resources

The Penn State Strategic Plan - Priorities for Excellence - 2009-2010 through 2013-2014
A global change in the library environment

Academic print book collection already substantially duplicated in mass digitized book corpus

June 2009
Median duplication: 19%

June 2010
Median duplication: 31%

Academic print book collection already substantially duplicated in mass digitized book corpus

Nearly 30% of titles in University Park Libraries are duplicated in the HathiTrust Digital Library.

3.2 million Penn State University Park holdings in WorldCat

~885K are duplicated in HathiTrust Digital Library

OCLC Research. Analysis based on HathiTrust and WorldCat snapshots. Data current as of December 2010.
Using recent life-cycle adjusted cost model* for library print collections,

$4.25 per volume per year --- on campus
$ .86 per volume per year -- in high-density storage

Penn State University is spending between

\[ 885K \text{ titles} \times .86 = \$760K \text{ to } \$3.76M = 885K \text{ titles} \times 4.25 \] annually

to retain local copies of content preserved in the HathiTrust Digital Library

**The library is not financially accountable for these costs but it is responsible for managing them**

Penn State’s Collections Grow by Millions With HathiTrust

Over the past three years, Penn State has expanded its collection by millions, greatly widening possibilities for research and opening access to valuable out of copyright collections from other institutions.

This virtual expansion of the Libraries’ collections was made possible through an agreement entered in 2007 by the provosts of the CIC (the Committee on Institutional Cooperation—a consortium of the Big Ten universities plus the University of Chicago) and Google, which aimed to digitize up to 10 million volumes—the Google Book Project. From the thousands of volumes sent by Penn State to Google for the project, the out of copyright materials have been deposited into the “HathiTrust,” a repository founded by the CIC in 2008. Through the agreement, Penn State has joint access to over 1.7 million full-text digital books that are out of copyright, including many rare gems from sister institutions of the Big Ten and other libraries, including Columbia, Princeton, and the University of California.

“When we think about our library collection we have to think of it more globally. All the material in Hathi is also part of our collection, no matter who digitized it,” says Lisa German, assistant dean for technical and collections services. “Anyone has full access to those books, including alumni. Alumni can go to the HathiTrust and look at any of the digitized materials, not just Penn State’s.”

- **Penn State holdings contributed to HathiTrust**
  Increased visibility, accessibility
  Shared investment in repository infrastructure

- **HathiTrust content not held by Penn State**
  Extends local collection at reduced cost

**Penn State-owned content duplicated in Hathi**
Redirection of local print management
Reduces costs as inventory is rationalized
Supports reconfiguration of library space and service portfolio
Leveraging shared infrastructure

additive vs. transformative
Pre-automation period...4 circulations in 7 years
It all stacks up: ROI for shared infrastructure

- Duplicated in PSU Library Collection
- Public domain titles NOT in PSU Library Collection
- Contributed by PSU Library

Content PSU Libraries can now **manage more efficiently**

Content PSU can **source at greatly reduced cost**

Content PSU contributes to **transform global library system**

**OCLC Research.** Analysis based on HathiTrust and WorldCat snapshot data, Dec 2009 - Dec 2010.
Reconfiguring collections: an evidence-based approach

Subject Distribution of Titles Held by PSU Libraries and Duplicated in HathiTrust Digital Library


115,319 titles in History alone
14,565 in the public domain

OCLC Research. Analysis based on HathiTrust and WorldCat snapshots. Data current as of December 2010.
Assessing risks . . .

Unlikely to represent distinctive institutional asset

System-wide Library Print Holdings for PSU-owned Titles Duplicated in HathiTrust Digital Library

OCLC Research. Analysis based on HathiTrust and WorldCat snapshots. Data current as of December 2010.
... and quantifying benefits

System-wide Library Print Holdings for PSU-owned Titles Duplicated in HathiTrust Digital Library

Represented almost 10 miles of library shelving, or nearly 68,000 assignable square feet of library space.

>99 libraries 73%

25 to 99 libraries 23%

OCLC Research. Analysis based on HathiTrust and WorldCat snapshots. Data current as of December 2010.
Academic libraries in the Keystone State: a common trajectory, different timelines

The next few years are critical

The end game?

- Enabling a renewal and revitalization of the library’s core service mission to the University
- Redistributing the costs and benefits of stewardship across research library sector
- Ensuring the long-term survivability of low-use, long-tail content for future generations of scholars

Reconfiguring academic collections is not about “removing books” or devaluing scholarly interactions with legacy print.
A vision of the future

In 2015, interdisciplinary studies at PSU are supported by a robust cyber-infrastructure enabling faculty and students to identify and explore previously unknown connections in a corpus of scholarly materials 10X the size of the current library collection.

Library expertise is redirected to the appraisal and curation of locally-created research and learning materials, increasing scholarly productivity and enhancing the University’s reputation as a center of research and learning.
Reconfiguring academic collections is a delicate operation.

*The fate of the library* is not at stake, for each generation will find where it best fits.

Photograph by James LeVeque from MakerFaire 2010 (flickr)
Thanks for your attention.

Comments, Questions?
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