Creating Values in the Digital Domain
Library as a physical space
Digital Revolutions
Digital Libraries
Creating Values in the Digital Domain
1. Web Presence
2. Social Media
3. Mobile
4. Digital Collection
5. Digital Libraries
6. Digital Reference
7. Virtual Instruction
8. Digital Alerts
9. Virtual Exhibition
10. Researcher’s Online ID

Outline
1. High-speed wireless broadband
2. 24/7 IT support
3. The cloud
4. Digital textbooks
5. 21st C professional development for faculty and administration
6. MOOCs
7. Online course management system
8. Big data
9. Security
10. Social media done well


10 Technology Hallmarks of every campus
Transformation of Physical Libraries

- Commons
  - redefined the use of space

- Library space has been transformed and rejuvenated to become
  - inspiring
  - inviting
  - stimulating

A Physical Library is

- A learning space
- A research space
- A social space
- A cultural space
- An innovative space
- A flexible space
- An open platform
» 8 Government-funded academic libraries in HK

» Joint University Librarians Advisory Committee (JULAC) was established in 1967

» Chinese University of Hong Kong
» City University of Hong Kong
» Hong Kong Baptist University
» Hong Kong Institute of Education
» Hong Kong Polytechnic University
» Hong Kong University of Science & Technology
» Lingnan University
» University of Hong Kong
<table>
<thead>
<tr>
<th>Category</th>
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<td>Schools</td>
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<td>Departments</td>
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<td>Research Centers</td>
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<td></td>
<td>For 753 projects (2012/13)</td>
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<td>Faculty members</td>
<td>627</td>
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<td></td>
<td>100% with doctorate degree</td>
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<td>Students</td>
<td>13,079</td>
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<td>UGs: 8,849 PGs: 4,230</td>
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<td>QS World 40</td>
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<td>QS Asia 5</td>
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HKUST Learning Commons
Learning Path

Bubble Group Study

Multi-purpose

Whiteboard Wall

CUHK Learning Garden
Digital Revolution 1: Broadband at home – from 3% to 70%

Source: Rainie, L. Pew Research Internet Project, 2015

First revolution: Internet / Broadband

[Graph showing the increase in broadband usage from 2002 to 2012, with a significant rise in broadband usage compared to dial-up internet.]
Digital Revolution 2
Mobile – 91% ... smartphone 56% ... tablets 34%
Source: Rainie, L. Pew Research Internet Project, 2014
Digital Revolution 3
Social networking – 61% of all adults
Source: Rainie, Pew Research Internet Project, 2014
Seven Media Attention Zones:
1. Stacks – serious study or research
2. Signals – alert on smartphone to check news
3. Snacks – user checks mobile device when one has time
4. Streams – user dips into a variety of media streams
5. Socials – user dips into social media scanning
6. Split screens – user watches a big screen and socializes on a small screen
7. Synthesized spaces – user gets information when one’s body, car, appliances, are connected
Transformation of Physical Libraries
» Digital revolutions
» Into Digital Domain
  > 1991 NSF Digital Library workshops

Virtual Information Access
» “The world’s total yearly production of print, film, optical and magnetic content would require 1.5 billion gigabytes of storage and soon it will be technologically possible for an average person to access virtually all recorded information.” -- Peter Lyman and Hal Varian, information scientist at UC Berkeley
Digital Libraries are:

1. “A set of electronic resources and technical capabilities for creating, searching and using information”

2. “Constructed by a community of users, and their functional capabilities support the information needs of that community”

Facets:

» Digital data
» Enabling technologies
» Services
  > Collecting
  > Organizing
  > Searching
  > Using information
» Community-based
» Use-centered
» Emphasis on life cycle of information

Definition from Borgman, 2000
Free up space
7x24 access
Multiple concurrent access
Effective retrieval of information
Better preservation and conservation
Add value to the physical collection
Easily accessible
» Patrons do **not** need to visit a library in person to use its resources
» **Search** OPAC online
» **Renew** and reserve book online
» **Access** to databases, e-journals, e-books, e-reserve
» **Book** a study room online
» **Chat** or text for help
» **Anywhere anytime**

**A Virtual Sense of Place**
Creating Values in the Digital Domain
Physical Space

» Physical space and presence

Virtual Presence

» 24/7 access
» Extend outside library walls
» Access materials from home, classroom, and dormitory at the touch of a button
» Promotes library programs via blog posts, photos, virtual display, curated links
» Reach out to mobile users

Source: rtmsd.org
Top Academic Libraries Website
> by Emily Singley, Harvard University Library

> Googleable
> Searcheable
> Helpful
> Navigable
> Readability
> Modern attractive design
> Help with research
> Technology help
> Integration with external sites

Website Design
3 Interactive Web Design Workshops

Post-it notes to describe online activities

Marking what are useful and not useful

Designing layout and navigation paths

Online Survey

- Simplify the layout
- Improve the search area
- Use more icons / images
- Highlight resources
- Make events more accessible

Users’ Input in Website Design @HKUST
» 76% US academic libraries using social media with Facebook, blogs and Twitter being the top 3 for promotion of service, marketing events and community building

» 93% of US public libraries (500,000+ population) had social media accounts, with facebook, twitter & Youtube top 3

» Source: State of America’s Libraries Report 2014
1. Do we design and manage physical and virtual space well?

2. Do students visit both spaces often?

3. Do we provide good services in both space?
To access email, Internet; take pictures; do texting; play games, read, watch video...

Someone with a PC, Kindle, an iPad, can access more books, videos and music than any library can provide.

3. Mobile Access
HKUST Library Mobile Home Page

<http://library.ust.hk/m>
HKUST Library Floor Plans app brings users to Room Booking System.

Click this button to book the room.
Orange County Library System

- K-Ready App
- Shake it
- Ask a Librarian
- Axis 360
- BluuBeam
- Freegal Movies & TV
- Freegal Music
- ResumeMaker on-the-go

Source: http://www.ocls.info/downloadables/mobileapps.asp?from=vurl_apps
4. Digital Collections

Physical Collections
» Books
» Journals
» Indexes & Abstracts
» Media
» Special Collections

Digital Collections
» E-books
» E-journals
» Databases
» Streaming videos
» Digitized objects
E-reading is on the rise

% of all 16+ who read a book in each format in the past year

- Print books in 2011: 72%
- Print books in 2012: 67%
- E-books in 2011: 16%
- E-books in 2012: 23%

Source: Pew Internet December 2011 / November 2012 surveys.

Which is better for these purposes, a printed book or an e-book?

Among those 16+ who read both a print book & an e-book in the past year (2011)

- Reading with a child: 81% Print, 9% E-books
- Sharing with others: 69% Print, 25% E-books
- Reading in bed: 43% Print, 45% E-books
- Having a wide selection: 73% Print, 53% E-books
- Reading while traveling: 19% Print, 13% E-books
- Get books quickly: 83% Print, 83% E-books

Source: Pew Internet December 2011 survey.

E-reading
Mexico City - e-book Portal Project

- In 21 metro stations
- 35 book covers with QR codes
- Updated periodically
- Source: the-digital-reader.com

Romania

- A subway station into a digital library
- 49 e-books
- 10 audiobooks
- Source: the-digital-reader.com
Project Pingeborg Klagenfurt, Austria

- Turning the city into a virtual library
- 70 QR codes around the city
- Each code leads to a free ebook or mp3
- Titles from Project Gutenberg and Librivox

Source: http://pingeb.org/ueber-uns
E-Reading @HKUST
Cicada
ERALL
MylLibrary
JSTOR DDA

Ebook Licensing in HK
» 42 academic libraries in Taiwan, 6 in HK
» Access to 42,000 titles @ very low cost per title
» Perpetual access
» Multiple publishers, multiple subjects
» 60% from 2000-2006

» Electronic Resources Academic Library Link
» 8 JULAC libraries and 50% funded by Government
» 15,000 titles in 18,000 vol.
» 1, 2, 3 copies and unlimited access
» At least 61% saving

» % Duplicate Print/E 76%-84% from different publishers

ERALL, 2006-2008
MyiLibrary Inter-Regional Consortium

<table>
<thead>
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<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2012</th>
<th>2014 Kompass</th>
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<td>Title</td>
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<td>60 libraries</td>
<td>14 libraries</td>
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<tr>
<td>Title</td>
<td>4,400</td>
<td>3,660</td>
<td>4,400</td>
<td>1,478</td>
</tr>
</tbody>
</table>

IRC1 and IRC2 - 10 from China, 5 from HK
IRC3 – 60 libraries including Singapore and Taiwan and 4 groups
Kompass Consortium 2014 for 14 HK and Macau libraries
Mainly on Humanities & Social Sciences, some focus on SciTech
» 8 JULAC libraries
» 4,500 titles loaded in Catalog
» **Reasonable** multiplier
» DRM free
» Purchase trigger set at either collective 40\textsuperscript{th} chapter viewed OR 24\textsuperscript{th} chapter downloaded
» Purchased 318 titles
» A formula on cost sharing
» Electronic theses
» Digital photos & images
» Rare books
» Archives
» Institutional Repository
» Exam papers
» Student projects
» Oral history
» Open Access Databases (BioMed Central, EDGAR, IDEAS, OAIster, USPTO Web Patent)

5. Digital Libraries
130 projects by libraries

Chinese Medicinal Materials Images
By HKBU

Hong Kong Oral History
By HK Public Libraries

HK Digitization Projects
HKUST Scholarly Publications

- 500+ Scholar Profiles
- 53,000 publications
- Highly cited articles
- Searchable by
  - Format/Author
  - Subject/Journal
- With bibliometrics, altmetrics
- Viewed in 2014
  - 660,000 pages
- In university’s webpage

http://repository.ust.hk/ir/sp
Reference Desk

» Reference Desk
» Phone

Source: UCLA Law Library

Digital Reference

» Email
» Ask-a-librarian form
» IM – Trillian, Fire
» SMS – Google SMS
» VoIP, Video or Co-browsing Reference – Skype, Windows Live Messenger
» Chat service – QP
» Text service

6. Digital Reference
HKUST Users Like the WhatsApp Service

Hello! 5:49PM

My name is [redacted]. 5:49PM

I am turning to a librarian with a request? 5:49PM

I just left the library and am on a bus towards sai kung. Regardless, i forgot my octopus card on the printer in lg1. 5:50PM

The one that is next to the room with mac computers 5:51PM

Is it possible that someone collects it and i pick it up later? 5:51PM

?? 5:52PM

We can calling the LC helpers to check 5:53PM

I would be very thankful! 5:54PM

I left it just 15 min ago 5:54PM

Found. Are you coming back to pick it up? Lost & found item will be forwarded to the Circulation counter and the main library will close at 7:00pm today. 5:56PM

I have a business ethics project for 4 hours in sai kung, so i will collect it as i return to campus! 5:56PM

I assume i can pick it up tomorrow in such case 5:57PM

Thank you so much for the assistance! 5:57PM

OK, don’t worry. The card is sent to the Circulation counter (where you borrow and return books). 6:02PM

Wonderful! Your help has been greatly appreciated!!! 6:02PM

You are most welcome. 😊 6:03PM
7. Virtual Instruction

Face-to-face Instruction

» Information Literacy workshops

Virtual Instruction

» e-learning videos
» Libguides
» Remote Video Capture and streaming videos on
  » Information literacy classes
» Author workshops
» Publishing workshops
» Book talks

Source: HKUST Library
8. Virtual Alerts

Physical Service
- New book/journal/media display
- Posters
- Newsletters

Virtual Service
- RSS, News blog
- Publishers’ alert service
- E-board with QR codes
- Social media
- BrowZine

Source: altoonalibrary.org

Source: thirdiron.com
9. Virtual Exhibition

**Physical Display**

» Gallery

**Virtual Display**

» Virtual exhibition of photos, artworks, images, art demo

» Flicker, Pinterest with tagging and album display

» Virtual tours

» Virtual feedback

Source: HKUST Library
» Researcher’s Online Identity

» About.me

» Academia.edu

» Google Scholar

» Linkedin

» ORCID

» ResearchGate

10. Researcher’s Identity
Academic libraries have been leveraging digital technology to create values in these areas:

1. Have appealing Web Presence
2. Connect users with Social Media
3. Be accessible by Mobile Device
4. Owe proprietary Digital Collection
5. Develop own Digital Libraries
6. Provide help using Digital Reference
7. Teach with Virtual Instruction
8. Offer Digital Alert service
9. Open Virtual Exhibition Space
10. Help in setting Researcher’s Online identity

To Summarize
References:


Hoffelder, N. The Digital Reader, various issues, available at:
http://www.the-digital-reader.com/


References:


