Transformation of Research Support Services at CUHK Library – Changes in the Role and Positioning of the Library

Dr. Louisa LAM
Senior Sub-Librarian
Head of Research Support & Digital Initiatives
The Chinese University of Hong Kong Library

October 20, 2017
Previous Positioning of Research Support Service

1. Research support is just another reference service under the umbrella of user services
2. Lack of focus and direction
3. Not visible to users
Drivers for Change 推動轉化的因子

- How should we respond to these changes?
- "Change before you have to." — Jack Welch

- How should libraries re-align their services?
- Changes in scholarly communication in digital era
- Growth of e-science and digital humanities
- Changes in research libraries — need to demonstrate our value
- Changes in research environment
Responses of CUHK Library (1)
中文大學圖書館的回應 (1)

- Re-organization to focus its resources on research support
- Embed into the workflow / life-cycle of researchers
- Build connections with postgraduates and young researchers
- Foster partnership and collaboration
- Content is king – create more digital objects of value to researchers
- Provide more access points discoverable by Google
- Leverage digital technologies in services
Responses of CUHK Library (2)
中文大學圖書館的回應 (2)

Strategic themes and objectives

1. Realising the potential of our collections
   1.1 Build our research collections to fit with University priorities
   1.2 Promote Special Collections as a source for primary research
   1.3 Ensure students have access to their core learning materials
   1.4 Facilitate discovery and easy access to collections and resources

2. Transforming our research support
   2.1 Create specialist services, reflecting the University’s research priorities
   2.2 Build capacity in ULS to support e-research
   2.3 Lead discussion on changes in scholarly communications
   2.4 Grow Library services to research postgraduate students

3. Supporting the student journey
   3.1 Enhance our students information and digital literacy skills
   3.2 Continue to develop innovative, technology-rich study spaces
   3.3 Deliver seamless services that encourage independence
   3.4 Cultivate students by offering project work, volunteering, internships and employment

4. Sustainability
   4.1 Progress towards environmental sustainability wherever possible
   4.2 Deliver and demonstrate value and fiscal responsibility
   4.3 Optimise collection space, storage and preservation
   4.4 Secure the organisational structure and staff skills needed to deliver the ULS mission and vision

5. Working in partnership
   5.1 Work with faculty to understand their Library needs throughout the research life cycle
   5.2 Engage with students and faculty to identify how the Library can best support the student journey
   5.3 Deepen collaboration with our internal partners, and with libraries and consortia locally, regionally and beyond.
   5.4 Develop a supportive Library working environment

- CUHK Library Strategic Plan 2013 – 2016
- Partnering for Success
New Organization Structure

- A new team, Research Support & Digital Initiatives, has been established since July 2015.
# Approach 方法

<table>
<thead>
<tr>
<th>Mission</th>
<th>Strategies</th>
<th>Core Users</th>
<th>Action Plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>To partner with Faculty and Researchers to support their Research Journey</td>
<td>Embed services into the workflow and research life-cycle of researchers in the direction of E-Research</td>
<td>Faculty, Researchers, Postgraduates</td>
<td>Set up Digital Scholarship Service</td>
</tr>
<tr>
<td></td>
<td>Professional support and practices, not tools and platforms</td>
<td></td>
<td>Set up Scholarly Communication Service</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Set up Digital Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Transform Research Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>All supported by Digital Technologies team</td>
</tr>
</tbody>
</table>
Supporting Research Life-Cycle
支援研究生命週期

- Planning for Research
  - Provision of Data Analysis Tools
  - Research Skills & Tools Workshops
  - Digital Scholarship Lab Service
  - Creation of Digital Collections
  - Citation Management Support
  - Data Citation Support
  - Research Café

- Undertaking Research
  - Copyright Advice & Support
  - Writing & Presentation Skills Seminars
  - Academic Publishing Seminars
  - Impact Measures Support
  - Open Access Publishing Support
  - Author Identity Management Support
  - Digital Publishing

- Publishing Research
  - Researcher Profiles in AIMS
  - CUHK Research Portal
  - CUHK Digital Repository
  - Digital Scholarship Projects
  - Research Poster Exhibition
  - Open Access Support
  - Digital Preservation
  - Citation Search Service
Faculty & Researchers can ...  
- Request tailor-made workshops for groups  
- Discover relevant research resources  
- Seek help in 1-on-1 research consultation  
- Ask subject specialists for literature search  

- Conduct research & research-related activities with your team at Digital Scholarship Lab  
- Consult Library team on digital scholarship tools & methodologies  
- Collaborate with the Library on digital scholarship projects  
- Explore digital collections at CUHK Digital Repository for research & teaching  
- Seek help on reference & data citation  
- Access to datasets  
- Get advice on research data management  

- Seek copyright advice on research & teaching  
- Obtain updates on impact measures of research outputs  
- Get advice on publishing in open access journals  
- Collaborate with the library to publish your research  
- Establish your author identifier (e.g. ORCID) to make yourself discoverable online & build global connections  

- Establish researcher profiles in AIMS for research collaboration  
- Deposit your research outputs in AIMS to make them discoverable & preserved in CUHK Research Portal  
- Collaborate with the Library to build & preserve digital collections & digital scholarship projects in CUHK Digital Repository and other library platforms  
- Get help on open access issues  
- Request a citation report of your publications  

Open • Connect • Sustain

Postgraduates can ...  
- Join workshops to enhance research skills  
- Discover relevant research resources  
- Consult research guides at a starting point  
- Seek help in 1-on-1 research consultation  
- Use Idea Exchange for networking  

- Utilize research tools such as NVivo, SPSS, ArcGIS & Gephi  
- Use Digital Scholarship Lab for conducting research  
- Consult Library team on digital scholarship tools & methodologies  
- Join workshops on research skills & tools  
- Seek help on citation management such as using RefWorks  
- Get training on research data management  
- Participate in Research Café for inter-disciplinary research idea exchange & project presentation  

- Join thesis writing & presentation seminars  
- Seek copyright advice on thesis  
- Join academic publishing seminars to build publishing strategies  
- Establish your author identifier (e.g. ORCID) to make yourself discoverable online & build global connections  

- Deposit your research outputs in AIMS to make them discoverable & preserved in CUHK Research Portal  
- Deposit thesis in Electronic Theses & Dissertations Collection at CUHK Digital Repository  
- Participate in Research Poster Exhibition to showcase your research projects
Digital Scholarship Service 數碼學術研究服務

- Support for Digital Scholarship projects
  - Sourcing of research data and information
  - Consultation
  - Project planning and management
  - Technology support
- Building a Digital Scholarship Lab
- Training Workshops & Seminars
- Consultation on Digital Scholarship research
- Data services
- Promotion Events
- Provide learning resources
Digital Scholarship Lab 數碼學術研究室

• A cutting-edge space for supporting digital scholarship (DS) research and collaborative research work
• Encourage informal interactions in the space
• Increase opportunities for library-faculty collaboration
• On-site consultation service on DS projects provided by Digital Scholarship Librarian
• Workshops provided to promote DS research on campus
Visualisation Room & Seminar Room 視覺室及研討室

● Two different space that can be used individually and separately
● A technology-rich space to support:
  ○ digital information visualisation for research projects;
  ○ collaborative research
  ○ application of digital scholarship software & tools for research data analysis, processing and online display
Digital Display Wall
數碼顯示屏幕

- 12 nos. of 55-inch LED TVs made into a 5m wide x 2m high video wall
- Extremely high resolution of 24,883,200 pixels
- From 1-12 input sources with different layout choices to allow comparison of data or information from different sources to facilitate research discussion and collaboration
- Best for visualization of large images, exploring big data
- Support of various format of inputs allows users to bring their own mobile devices for connection
<table>
<thead>
<tr>
<th>Software in PCs</th>
<th>Software in iMacs</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArcGIS Teaching &amp; Research Lab Kit - Geographic information system (GIS) software for mapping &amp; geospatial data analysis</td>
<td>Adobe Creative Cloud - Includes Photoshop, Dreamweaver, Illustrator, Premiere Pro and all the available apps in the package</td>
</tr>
<tr>
<td>Adobe Creative Cloud - Includes Photoshop, Dreamweaver, Illustrator, Premiere Pro and all the available apps in the package</td>
<td>Adobe Creative Cloud - Includes Photoshop, Dreamweaver, Illustrator, Premiere Pro and all the available apps in the package</td>
</tr>
<tr>
<td>AutoCAD - For 2D and 3D computer-aided design and drafting</td>
<td>AutoCAD - For 2D and 3D computer-aided design and drafting</td>
</tr>
<tr>
<td>Cytoscape - For visualising molecular interaction networks and biological pathways</td>
<td>Cytoscape - For visualising molecular interaction networks and biological pathways</td>
</tr>
<tr>
<td>Gephi - For visualisation and exploration of graphs and networks</td>
<td>Gephi - For visualisation and exploration of graphs and networks</td>
</tr>
<tr>
<td>Google Earth Pro</td>
<td>Google Earth Pro</td>
</tr>
<tr>
<td>GRASS GIS - GIS software</td>
<td>NVivo - For qualitative research analysis (iMac No. 1 &amp; 2)</td>
</tr>
<tr>
<td>IBM SPSS - For statistical analysis</td>
<td>R - For statistical computing and graphics</td>
</tr>
<tr>
<td>MALLET - For statistical natural language processing and different machine learning application to text</td>
<td>TreeAge Pro Healthcare - For visualizing data by creating and analyzing decision trees</td>
</tr>
<tr>
<td>MS Office</td>
<td>MS Office</td>
</tr>
<tr>
<td>R - For statistical computing and graphics</td>
<td>TreeAge Pro Healthcare - For visualizing data by creating and analyzing decision trees</td>
</tr>
</tbody>
</table>

The following are online tools available in workstations:

- Omeka - For online exhibitions
- T.PEN (The Transcription for Paleographical and Editorial Notation) - Allow users to contribute images of manuscripts and transcription
- Voyant Tools - A web-based reading and analysis environment for digital texts
- MARKUS - For tagging personal names, place names, temporal references, and bureaucratic offices automatically in classical Chinese files uploaded by users.
Engagement with Faculty – Outreaching 與教研人員攜手並進－外展工作

- Attend their internal meetings in which Faculty members will attend
- Tailored-made presentations and briefings on specific services
- Proactively liaised with department organizers and offered the lab for their research seminars or conferences
- Meet with individual faculty at the Lab
Organized The First Digital Scholarship Symposium 31.03.2017

Academics from CUHK and other institutions presented their digital scholarship research and explore the roles of the Library.
The Digital Scholarship team offers help to your digital scholarship research projects and ideas!

- Digital Scholarship Lab facilities
- Identify sources of research data and materials
- Research software and other tools, e.g. Gephi, esri, omeka, R
- Data visualisation
- Copyright advice on the use of research data and materials

**Hours:** Every alternate Tuesday, 3:00 – 5:00 p.m. during term time
starting from 10 October, 2017

**Dates:**
- October: 10, 24
- November: 7, 21
- December: 5, 19

**Venue:** Digital Scholarship Lab, G/F, University Library

**Contact:** dslab@lib.cuhk.edu.hk
First Collaborative Project with Faculty of Arts
首個與文學院合作的數碼學術項目

GIS Mapping and Archaeology of Early China - Phase I: Shang Archaeology

This project is collaboration between the Digital Scholarship Lab and archaeologists. Humanities have become aware of the advantages in employing digital technologies. 2015 and the present, the officers of the Lab have been working with Professor Cai document her research data collected between 2005 and the present, regarding the River valley during the first millennium.
Scholarly Communication Services
學術傳播服務

- Provide new research tools and citation management tools
- Support Open Access Initiatives
- Manage CRIS (Current Research Information Systems) for institutional research outputs
- Promote ORCiD
- Copyright support
- Citation Management Service
- Support RAE (Research Assessment Exercise) requested by the research funding body of Hong Kong SAR
Research Tools 研究工具

Available online or use in the Library:
- SPSS
- NVivo
- R
- RefWorks
- Zotero
- EndNote
- Mendeley

Workshops & Seminars:

Learning objects:
- How to Find Citation Figures Using Web of Science
- How to Find Impact Factor of a Journal with Journal Citation Reports on InCites
Open Access Day 2016 at CUHK Library

- Raise the awareness of the University community on open access
- Lead the discussion on open access on campus
- Promote new CRIS (Converis Research Portal)
- Mobilize campus support for self-archiving at Research Portal
CUHK Research Portal 學術研究文庫

- From IR to CRIS
- Before CRIS: Non-validated metadata without full-text
- Now: fully open access CRIS for CUHK Library
- All the research outputs from a closed internal system were migrated: Currently contains +156,000 records
- New features developed to enhance its visibility:
  - Full-texts with DOI and/or publisher’s website
  - Citation Counts for records indexed in Web of Science
  - All auto-harvesting of records from external databases and ORCiD
  - A better interface to enhance browsing and navigation
Removal and recovery of nickel ion (Ni²⁺) from aqueous solution by magnetite-immobilized cells of Enterobacter sp. 4-2

Publication in refereed journal

CUHK Authors (Current)
Professor WONG Po Kung (School of Life Sciences)

Full Text
View Full-text in CUHK
Digital Object Identifier (DOI)
http://dx.doi.org/10.1615/S0141-0229(96)00002-8

Times Cited
Web of Science 24

Abstract
Cells of Enterobacter sp. 4-2 which could remove large amounts of nickel ion (Ni²⁺) from aqueous solution were immobilized on magnetite. The optimal conditions for the adsorption of bacterial cells onto magnetite were a pH of 9.2, Tris buffer pH 8.0 (dry weight basis). Cells were immobilized onto magnetite at a cell/magnetite ratio greater than 1:1. The buffer pH was adjusted to 8.0 with Tris buffer before use. The bacterial cells were immobilized onto magnetite. The optimal conditions for immobilized cells to remove Ni²⁺ from aqueous solution were Tris buffer at an initial pH of 7.0, the retention time greater than 100 min. Under selected conditions, retention time of 15 min, and retention time of 10 min, 50% of Ni²⁺ was removed by immobilized cells from the buffer at pH 7.0. Complete recovery of adsorbed Ni²⁺ from immobilized cells was achieved by washing the Ni²⁺-magnetite complexes with diluted citric acid. (C) 1997 by Elsevier Science Inc.

All Author(s)/List
Wong PK, Fung KY

Journal name
Enzyme and Microbial Technology

Year
1997

Volume
1

Issue Number
2

Pages
116 - 121

ISSN
0141-0229

Languages
English

Keywords
Enterobacter sp., immobilized cell, magnetite, nickel ion

Web of Science
BIOCHEMISTRY & BIOPHYSICAL SCIENCE, BIOCHEMISTRY, BIOTECHNOLOGY & APPLIED MICROBIOLOGY
CUHK Digital Repository 数碼典藏
CUHK Digital Repository 數碼典藏

- [http://repository.lib.cuhk.edu.hk](http://repository.lib.cuhk.edu.hk)
- The single home for all digital collections created by the Library
- Built on Islandora as the one-stop platform for all digital images
- OAI-PMH enabled to provide open access
- Full metadata to provide multiple access points
- Search Engine Optimization (SEO) to facilitate discoverability by Google
- Collaborated with Faculty to develop the collections to ensure they are valuable for research
Scholarly Collaborations 學術合作
Innovative Services for Research Postgraduates

研究生的創新服務
New Positioning & Roles of Library (1)
圖書館新的角色與定位 (1)

MIT Libraries Director Chris Bourg:

“The primary value that libraries provide to scholars and researchers is not answers, but rather the tools, resources, collections, expertise, and space to proactively explore a range of questions and to be inspired to ask new questions.”

New Positioning & Roles of Library (2)
圖書館新的角色與定位 (2)

• We are taking on new research tools and platforms to transform our research support services in addition to the traditional roles as a teacher of information literacy skills, custodian of information, provider of e-resources

• We have assumed following new roles:
  • Technology Specialist
  • Developers of research platforms
  • Manager of research platforms
  • Creator of digital collections
  • Hosting of institutional e-journals
  • Advisor on Copyright issues
  • Supporter of open access
Challenges 挑戰

• We are not there yet:
  • We have not fully embedded into researcher’s workflows
  • More collaboration is needed
  • More innovative research tools can be taken
  • More services can be delivered online

• What hindered:
  • Right mix of staff skills
  • Traditional service culture of the Library
  • Research culture of the University
  • Turnover of Faculty staff
  • Sustainable resources
The Way Forward 未來方向

- Continue to collaborate with Faculty
- Build staff capacity for more new roles
- More on e-Research: supporting digital curation and research data
- More integration in Research Portal
- Develop data visualisation service
Thank You!
謝謝！

Contact:
louisalam@lib.cuhk.edu.hk
@lamlouisa