

e-Research and the role of Librarians

Ah Chung Tsoi
Vice-President (Research and Institutional Advancement)
Hong Kong Baptist University

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Outline

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Publication in the Internet era
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What should I do as a librarian

Introduction

Library's role

Publication in the Internet era

Data

Collaboration

What should I do as a librarian

e-Research

e-Science is about global collaboration in key areas of science, and the next generation of infrastructure that will enable it (Taylor, 2001).

e-Research: to enable researchers to solve problems which cannot be solved so far with the help of modern information and communication technology infrastructure, data, collaborative and visualization means.

Cutting edge research

It is well documented that cutting edge research often occurs

- ▶ At the intersection among a number of disciplines
- ▶ Involving a number of researchers or research teams collaborating together (may have facilities for addition or drop-outs in the research teams)
- ▶ Using large amount of data
- ▶ Using large computational resources
- ▶ May involve visualisation of data/results obtained (on high resolution displays)

How to build collaborative teams

From cultural anthropology research (carried out in some Pacific Islands):

- ▶ Working on a common problem
- ▶ Have a common language
- ▶ Trust among the team members

Custodian of information

The Library has been the main custodian of information (quality and curated) throughout the centuries. Quality and curated information is preserved and pass from generation to generation. But because the media through which the information is made available is changing with technology, and hence libraries need to adapt to the modern *tempo* to satisfy the user demand.

Traditional Library model

- ▶ Printed information is made available to the Library (acquisition)
- ▶ The item is catalogued, indexed (classified so that it may be searched more easily)
- ▶ The availability of the item is publicized in the catalogue
- ▶ Users can retrieve the item and read it in his/her own leisure (retrieval)
- ▶ The item will stay in the Library and is preserved (if the item is valuable) for future use

Internet

- ▶ Publication model is challenged (anyone can make information available on the Internet and can be accessed by others at will) – issue of quality, authenticity, trustworthiness
- ▶ Cost of publication is lowered – it is relatively cheap to publish your own work on a web site (with almost no watchdog on the quality, or content).
- ▶ Preservation, archival – ??
- ▶ Linked information: one can find more information (background, supplementary, explanatory) through the (imbedded) links

Some issues brought about by modern technology: Internet

- ▶ The accuracy of Wikipedia articles
- ▶ Web 2.0, e.g. catalog system (cf. Amazon)
- ▶ Open access
- ▶ Digitization
- ▶ Libraries as a space and service provider to encourage knowledge exchange and solving information problems

Lynne Brindley, British Library

- ▶ Users
- ▶ Physical spaces
- ▶ Communication
- ▶ Digitization
- ▶ Continue to serve well in traditional services
- ▶ Invest in innovation and digital activities
- ▶ Skill development

Publishing world

Documents

- ▶ Publications: books, journals, conference papers, ...
- ▶ Semi-formal: technical reports, working papers, proposals ...
- ▶ Unpublished: websites, blogs, wikis ...

Data

- ▶ Observational
- ▶ Computational
- ▶ Experimental
- ▶ Records

Publishing world

Links

- ▶ Cited/citing documents
- ▶ Publications to data sources
- ▶ Data to publications in which reported
- ▶ Versions, proposals, related documents ...

Across boundaries

- ▶ Repositories
- ▶ Publisher databases
- ▶ Disciplines
- ▶ Countries

Publication

Function	Print	Digital
Legitimization: authority, quality, trustworthiness	Peer review	Peer review
Dissemination: awareness, diffusion, publicity	Publisher Pre-print Copy, email	Publisher Preprint Web, deposit
Access, Preservation Curation: discovery, availability, retrieval, persistence	Library	Library Publisher Repository Homepage

The role of data in digital publication

- ▶ Legitimization: Peer review – quality of metadata, documentation, “test drive” the data
- ▶ Dissemination: repository publisher
- ▶ Access, preservation, curation: repository: immediate access, embargo period. Curation responsibility

Data repository

The repository not only contains text documents, but also data.

- ▶ Ingestion
- ▶ Data description
- ▶ Publication, embargo, security, workflow
- ▶ Preservation
- ▶ Curation

Virtual organization

Ways of forming *ad hoc* groups which can be assembled and disassembled rapidly, with security implemented (only members have access to the collaborative group, and members can share resources like computational resources, data resources),

Library as an information storage and exchange

- ▶ As a librarian, it might be useful to be opened to the ideas of digital libraries, in embracing what is on offer in Web 2.0, and in making our libraries to serve the readers
- ▶ Find out how to implement some of what is on offer by Web 2.0, and take steps in implementing them. This might require change management of the library, IT, and faculty staff.
- ▶ Implement a repository (text and data) if at all possible. This might start something rolling within your university, as many people “hang onto” their data and would be reluctant to release them to others, let alone making them available publicly (change management).

The Library as a change agent

- ▶ The Library is facing many challenges in its operations.
- ▶ It would be useful if the Library can act as a change agent to help our users to become more savvy with the use of modern IT to help them to discover, identify, and retrieve information – data (whether it resides in the Library or on the Web).

The results: the users will come to you, rather than abandoning you (or find alternative sources of information).