Synergies Sparked: A Research Agenda for Practicing Professionals

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Synergies Sparked: A Research Agenda for Practicing Professionals

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Coleman's research agenda spans both sides of the information coin; she tries to examine representations of information and information usage in a unified program of inquiry. The research goal is to expand and integrate knowledge about uses and users in the organization of digital information and libraries. Using selected projects over the last 5 years as examples, Coleman will identify some ways to design, conduct, and manage doable research projects while also meeting the day-to-day demands of being a practicing professional. The focus, however, will be on the development of a cohesive research agenda that exemplifies and synchronizes with the values and challenges of practice, besides improving the quality of LIS research.
Source: Robert Matthews (columnist, Sunday Telegraph, UK - Matt's Stats)
http://members.fortunecity.com/templarser/spinning.html
Outline

★ My Research Agenda (incl. motivation)
  ★ Instruments of Cognition
  ★ dLIST

★ Developing a research agenda
  ★ Designing (research projects)
  ★ Managing (research projects)
  ★ Dissemination

★ Sample Sub-disciplinary Research Agendas
Bare bones research

- Distinct phases
  - Topic selection
  - Literature review
  - Study Design - Human subjects (IRB approvals)
  - Pilot/Conduct study
  - Analyze results
  - Publish your research
  - Next project please
Roles of Research in Practice: To Nurture, Enhance, Rejuvenate

Synergies

Connections

Conflict

Soul Food

How does research inform practice & vice versa?

Image Source: joanofparkdale.com/
Motivations

★ Attitudes, Beliefs, Passion
★ Skills
★ Research & Discourse in various disciplines
  ★ Is it all just techno-lust?
★ Information and Communication Technologies
  ★ Technologies - information organization
  ★ laptops, wireless networks, Internet, digital objects, digital resources, Adobe Acrobat reader, digital libraries, digital repositories
  ★ Uses of ICTs
  ★ Users of ICTs (non-users)
Concepts and Approaches - ICTs

★ Concepts
  ★ Barriers (example: access)

★ Research Communities (identify who and what)
  ★ Social informatics
    ★ Social aspects of computerization
      ★ Kling, Rob

★ Computer Mediated Communication
  ★ Lee Sproull & Sara Kiesler, *Connections*

★ Human Computer Interaction
Library and Information Science

★ Organization of Information
  ★ Bibliography, Cataloging, Classification, Controlled Vocabularies, Indexing

★ Human Information Behaviors
  ★ Information needs, Uses of Information, Information Seeking behaviors

★ Scholarly Communication
  ★ Bibliometrics, Informetrics, Scientometrics, Librametry
Library & Information Science

- Digital Libraries / Digital Repositories
- Human Computer Interaction (HCI)
- Information Retrieval (IR)
- Information Architecture (IA)
  - Andrew Dillon
- Knowledge Management
- Multimedia
  - Gary Marchionini
My Research Interests

★ Organization of Information
★ Complex objects
   ★ Digital information; Networked
   ★ Learning objects: Scientific models, Interactives
★ Embedded small technologies
   ★ Hyperlinks - this is a hyperlink; Citations - as Web links
★ Human Information Behaviors
★ E-learning, interdisciplinary contexts
★ Interaction behaviors & scholarly comm.
What are citations?

“What citations provide pellets of the peer recognition that is central to the normative reward system of science.” Merton (2000, p. 438)

★ Citations serve two different functions

★ Symbolic institutional
  ★ maintains the character of scientific intellectual property
★ Instrumental cognitive
  ★ Leads readers to assess the validity claims made in the citing paper
Research Questions

🌟 What are the different types of citations and web links that can be found in instructional materials?
🌟 Why do students use citations and web links?
Data Collection & (Analysis)

* You can't analyze what you haven't collected
  * Citations and Web links (Counts)
  * Citation and link content/context analysis (Categorization)
  * User study (Two types of written surveys and follow-up focus group interviews)
  * Usage tracking (Monitoring student activity on Web links in the course pages)
Instruments of Cognition - Logistics

★ Semester 1 (Fall)
  ★ Research proposal
  ★ Collaborators
  ★ Proposal Submitted
  ★ Funded
  ★ Planning begun
    ★ Instruments (Protocols)
    ★ Human Subjects
    ★ Roles nailed

★ Semester 2 (Spring)
  ★ Data gathered
    ★ Surveys & Focus Grps
  ★ Summ & Semester 3
    ★ Analysis & Sharing
  ★ Semester 4
    ★ Written
    ★ Accepted for publ.
Instruments of Cognition - Study

- Spring 2003, Course based in the Geography & Regional Development Dept., College of Social & Behavioral Sciences
- On-campus + Interactive Learning Modules + Labs
  - ILMs provide the theory, the labs the practice; the on-campus, real-time lectures served as the bridge between theory and practice.
    - 10 ILMs, Glossary, 12 lectures, 12 labs; No text
    - Each ILM had a similar structure
Participants

- 45 students participated
- Total class enrollment of 90
- Full participation turned out to be lower: mean n=26

Limitations - how much can you generalize? Questions about quantitative/statistical approaches and small n studies
Findings

• The typical student in this GIS course was
  • Male
  • Caucasian
  • Undergraduate senior
  • In the age group of 20-30
  • Was from out-of-state
  • Majoring in Regional Development
  • Worked fewer than 20 hours a week in a job
Nature of citations & web links

✶ 10 citing documents (ILMs)
  ✶ Size: 50.2 MB
  ✶ Glossary had 315 terms
  ✶ 16 bibliographic citations and 20 Web links (navigational links not included)
  ✶ Previously established categorization scheme (Duncan et al, 1981) of form and context (Implied purpose of the link)
Nature of Citations

• Form
  • 16 citations
    • Books
    • Illustrations (130)

• Context
  • Definition
  • Example
  • Illustration
Nature of Web Links

• Form
  • 20 links
    • 8 *.edu, 8 *.gov, 2 *.org, 2 *.com

• Context
  • Historical, Biographical information; Further detail; Data; Example

• Content
  • URL; Text; Graphic, Directive
Results - Use and Non Use

- The number of students who did not use the citations and links is greater than those who used them.

- Reasons for use
  - Starting points  "Citation offers a starting point from which to become really familiar with the history and information about GIS"
  - Further details  "I wanted to receive more information about what ArcView has to offer."
  - Clarification  "I was curious to know about Ian McHarg. Confused because I thought he did something else."
Reasons for Non Use

- Time constraints
- Information overload
- Uninteresting
- Familiarity
- Irrelevance
- Information elsewhere
- Technical problems
Cognitive Instruments?

- Written comments analyzed in terms of five rudiments of cognition.
- These include:
  - Anxiety
  - Arousal
  - Attention
  - Motivation
  - Self-regulation
Summary

Citations did not generate anxiety; links generated a greater negative or apathetic response.

Simplistic conclusion: citations and links don’t arouse.

In general citations didn’t gain attention but when they did it was to trigger a memory recall function; some web links were successful in gaining attention.

Exploratory learning behaviors stimulated by self-regulation.
Suggestions

- Categorize links as required, recommended, optional
- Present citations and web links as web citations
- Highlight citations and web links distinctively
- Compile lists (Lists of examples)
- Integrate the diverse IT environments
- Rate the quality of the citations and web links
Limitations & Challenges

★ Small study (participation rates fluctuated)
★ Human subjects (too many protocols)
★ Technical problems (Usage tracking with monitoring software had to be discarded)
★ Presentation of results
  ★ Negative findings about ICTs are not well received by anybody
  ★ Infrastructure for E-Learning research
★ Collaborative research (comm. & conflict mgmt skills)
Sustainable information behaviors

★ Four months ago at the CRITO Hour - slide #23 of 27, URL:  http://dlist.sir.arizona.edu/861/
★ Expand the study - More students; More courses (and more of conscious design); More disciplines
★ Investigate options for partnering - CRITO
★ Establish a test bed for e-learning (integrating digital libraries & learning) - SDSC + NSDL
★ Theory of sustainable information behaviors
★ Information Quality not Quantity
Scholarly Communication

- Use of IT for scholarly communication
  - Interested in affordances and barriers
  - Invisible colleges (communication colleges)
  - Specific technology: Digital Repositories - Open Access Archives
  - Open Access for LIS
  - dLIST (Digital Library of Information Science & Technology) http://dlist.sir.arizona.edu/
  - DL-Harvest - http://dlharvest.sir.arizona.edu/
What is dLIST?

- Digital repository – cross-institutional, cross-disciplinary, subject
- Open Access Archive
- For the Information Sciences
  - Archival Sciences, Library and Information Science, Information Systems, Museum Informatics,
- Founded in 2002
- All material types (research, teaching, practice)
Goals and Objectives

- To serve as a cross-institutional discipline repository for the Information Sciences.
- To build a Library and Information Science/Studies information commons (communities and collections)
- Connecting the communities

[Diagram showing connections between Education, Research, and Practice]
DLIST 2005 Survey

Take our survey and help us better improve DLIST.

Browse

Browse - the archive by Subject or Yr-

Subscribe to RSS feed

View the latest items in the archive via RSS

Latest Additions

View items added to the archive in the past week

Simple Search

Search the archive using the most common fields

Advanced Search
More information

- Cheryl Malone, Co-Editor
- Advisory Board
- Is Indexed in
  - DL-Harvest
  - Google & Google Scholar
  - OA1ster
Creation Origins

- Mapping IS/IT – sharing informetrics datasets
  - Sustainable information behaviors
  - Not everybody may want to or be able to afford an institutional repository
- Software – open source or proprietary
  - Digital libraries, digital repositories – is there a difference? Greenstone, dSpace, Eprints
- Choice of metadata frameworks
Self-Archiving

Self-archiving is the practice of depositing digital copies of one’s papers (works) into an OAI-PMH compliant digital repository.

- Self-register with an open access archive
- Create metadata
- Deposit your papers
- Include the link (url) in your website
Welcome to the registered user area DLIST. Please select one of the options below.

Items In your Workspace

Begin a New Item

This will create a new item, allowing you to attach files. You must deposit the item for it to be submitted to the archive. Deposited items will not appear until they have been checked by someone with full responsibility. You should review your pending items if you are a member if you have deposited an item or not.

There are items you are currently in the process of depositing. These will not be considered for the archive until you deposit them.

Pending Items

You currently have no pending items.

View/change your user record

Select this option to see your user record, and to correct or update your user information.

Change your subscription options

Select this option to change your subscription. This allows you to instruct the archive to automatically email you with lists of documents deposited that match your criteria every day, week, or month.

Change your Email Address

Change the email address which appears on your

Change User Login

Login to DLIST as a different user. There is...
Reasons to self-archive

- Global Impact
- Wider visibility
- Open research
Issues we’ve tackled

- How does the LIS field practice Open Access?
- Privacy, Copyright Transfer Agreements
  - CTAs of LIS Journals for the presence of Self-archiving
- Focused crawling and harvesting; Research communities; Federated searching; other (programmatic & manual)

Services
- Internships & Coursework
- Promotion, Outreach
- Business models - OA
Just what are sustainable information behaviors?
Sample RQ & RA

✦ Replication, Cumulation, Prediction
✦ Information Behaviors
  ✦ Replicate the Instruments of Cognition study
  ✦ Develop the line of research further – focus on use and non use
✦ Scholarly Communication
  ✦ Replicate the SA (OA) study in other disciplines
✦ Usability studies – Evaluation of User Interfaces (example, dLIST interface)
Discussion

- Non-users (of libraries)
  - Studying non-users
  - Example:
    - Practice: Roving reference - Residence Halls Reference
    - Design and conduct a information behavior study by observing students in the halls

- The tragedy of reinventing new roles for librarians
- Loyalty to discipline vs. institution
Self-discipline

- Do research as an integrated, synergistic, activity with daily practice
- Integrating research with practice requires self-discipline (professionals already have these skills)
  - **Motivation** (use intrinsic/extrinsic rewards)
  - **Small** is beautiful - start with small projects (example: design one semester & do it the next) accomplishments towards a larger agenda
- Set **daily** time even if only 30 minutes, to read + write “research”
Qualitative Research

Creswell, John W. Qualitative inquiry and research design: Choosing among five traditions.

Five traditions: Biography, Phenomenology, Grounded theory, ethnography, case study

Theoretical assumptions – e.g. postmodernism

Page 112-113 – Data collection activities and the five traditions

References

Information Behavior (similar model for Scholarly Communication)

1) Coleman, home page, http://www.u.arizona.edu/~asc/

2) Information Seeking Behavior - A Bibliography. URL:
   http://www.u.arizona.edu/~asc/isbbib.html.

3) Information Seeking Behaviors, Syllabus, Fall 2001. URL:
   http://www.u.arizona.edu/~asc/isbsyllabus.pdf

4) Information Seeking Behaviors, Schedule (with lecture notes), Fall 2002. URL:
   http://www.sir.arizona.edu/faculty/coleman/587/schedule.html

5) SIRLS Students work in the LIS Learning Showcase. Fall 2001 - 2004. URL:
   http://rani.sir.arizona.edu/~sirls/fall01/587/
   http://rani.sir.arizona.edu/~sirls/fall02/587/
   http://rani.sir.arizona.edu/~sirls/fall03/587/
   (pilot project proposals - for conducting ISB studies)

Last viewed: 16 November 2005
CI Research References


More References


DLIST References

* DLIST – an open access archive for LIS – http://dlist.sir.arizona.edu/
* About DLIST – http://dlist.sir.arizona.edu/information.html
* DLIST Advisory Board: http://dlist.sir.arizona.edu/advisoryboard.html
* DLIST Internships: http://dlist.sir.arizona.edu/pubs/interns/dlistinterns.html
* RSS subscription to DLIST: http://dlist.sir.arizona.edu/perl/latest_tool?output=rss
* DLIST Papers and Publications: http://dlist.sir.arizona.edu/pubs/
* DLIST Services & Forms: http://dlist.sir.arizona.edu/forms.html
* DL-Harvest – open access aggregator for LIS – http://dlharvest.sir.arizona.edu/
* About DL-Harvest – http://dlharvest.sir.arizona.edu/service_provider.php
* DLIST test environment – http://genie.sir.arizona.edu/
More dLIST references

★ What’s in it for LIS? Materials from three posters on dLIST:


★ Student Reports

★ Mark Kelly. http://rani.sir.arizona.edu/~sirls/spring02/699/


★ Youfen Su. http://rani.sir.arizona.edu/~youfen/dlist.html

★ Daniela Solomon – in progress.

The End!

🌟 Thank you!
🌟 Q & A
🌟 Contact: asc at u dot arizona dot edu