Learning by Searching

Shippensburg University of Pennsylvania
Department of Education

Han Liu, Ph. D.

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Searching and Leaning

- **What is searching?**

    —Searching by flipping library index cards
    —Searching by browsing the library database on the keyboard (by author, by tile, etc.)
    —Searching by search engines (digital libraries database and the Internet with advanced searching features)
    —Searching by subscribing to targeted sources

Searching and Learning

- **What is learning?**

    - Learning by attending classes
    - Learning from informal incidents
    - Learning by doing
    - Learning by gaming
    - Learning by searching
    - …

A Chain Reaction of Change

- Technology is altering (rewiring) our brains. The tools we use define and shape our thinking.
- Know-how and know-what is being supplemented with know-where (the understanding of where to find knowledge needed).
- When knowledge, however, is needed, but not known, the ability to plug into sources to meet the requirements becomes a vital skill. As knowledge continues to grow and evolve at a speedy pace, access to what is needed is more important than what the learner currently possesses. **(George Siemens)**

Limitations of Behaviorism, Cognitivism, and Constructivism

- A central tenet of most learning theories is that learning occurs inside a person (i.e. brain-based)

- These theories do not address learning that occurs outside of people (i.e. learning that is stored and manipulated by technology)

- They also fail to describe how learning happens within organizations **(George Siemens)**

Connectivism Principles

- Learning and knowledge rests in diversity of opinions.
- Learning is a process of connecting specialized nodes or information sources.
- Learning may reside in non-human appliances.
- Capacity to know more is more critical than what is currently known.
- Nurturing and maintaining connections is needed to facilitate continual learning.
- Ability to see connections between fields, ideas, and concepts is a core skill.
- Currency (accurate, up-to-date knowledge) is the intent of all connectivist learning activities.
- Decision-making is itself a learning process. Choosing what to learn and the meaning of incoming information is seen through the lens of a shifting reality. While there is a right answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision. **(George Siemens)**

Collectivism

- People learn interactively in a connected learning environment

- Wisdom of the Crowds - Blogging

- Learning opportunities or distractions?

- New Frontiers – Chaos or Order?

Searchology

- New concepts and new strategies for search.

- Google's most recent presentation on searchology.

- [Watch the Webcast with Marissa Meyer, Craig Silverstein and others.](#)

Web2.0

- Web2.0 provides the platform for connectivist and collective learning

  – Blogging
  – Wiki
  – Social Bookmarking
  – RSS feed
  – Podcasting
  – ...

One Dilemma

- **Dilemma:**
  - Information explosion
  - Limitation of information processing capability of the human brain

- **Solution:**
  - Raise learning efficiency by applying technology – let the machine do more and more and more for learners…

How Mellinials Learn Today?

- Online information are webbed and interactive. Mellinials today like to read webs and searching in the flowing with reading activities.
- Learning is organized based on their own learning interest, preference, momentum, and questions in mind.
- Multitasking becomes the norm in their learning process
- Searching is no longer a separate cognitive process, but immersed as a natural learning behavior like reading or writing.
- Learning by searching, searching is learning.

Special Search Strategies

Subscribe to SDI Serves

- Digital Libraries offer SDI services (Selective Dissemination of Information) that automatically distribute information to individual users, who Subscribe to Digital Library Database Alerts, or RSS.

- Example

Subscribe to Search Engine Alerts

- Google Alert
- Yahoo Alert

Subscribe to News letters

- Listserv subscription e.g. ASCDSmartBrief   Results

- Newsletter subscription e.g. Globalization 101

Subscribe to Listserv

- Tomorrow's Professors sponsored by [Stanford University](#)

- [Mailing list](#)

Subscribe to iPod Feed

- Install iTune and download subscribed resources.

Subscribe to RSS

- Microsoft 2007 Vista has embedded RSS reader in it. It is very easy to subscribe and read RSS feeds.

Share Social Bookmarks

- "My friends have done it for me."
  - Use of Social Bookmarks
    - Delicious
    - Diig
    - Digg
  - Blog websites
  - Facebook
  - MySpace

Pick up Windfalls

- Click on or search for the interested entries in reference list in papers
- EX. Use of references on academic papers
- Use of specific databases

Be a Sniffer Dog

- There are many incidental learning opportunities in the Internet learning environment. Form the habit of sniffing every corner of the screen as the digital natives do.

- Example – next slide

Be an Archaeologist

- Uncover the "Antiques"

"You Can Find Anything Online"

- Example
- [TV commercial: "Save Big Bucks"]

Building Personal Database of Databases

- Build Your External Brain
  - Personalized Database Examples
    - PPT templates
    - Search Engine Tutorials
    - Statistics
      - SPSS Tutorial
      - Survey Monkey
      - Experiment Design
    - Use of Gadgets:
      - PDA
      - iPod
      - How Stuffs Work

Indicators of Quality Search

- Immediacy
- Currency
- Relevancy
- Accuracy
- Efficiency

Reference

- [What is Web 2.0? Ideas, technologies and implications for education](#)

- [Connectivism Web2.0](#)

- [Association for Educational Communications and Technology](#)

- [Global awareness and education: America's test for the 21st century](#)