library orientation

library user education

bibliographic instruction

information literacy
Information Literacy

• Information literacy is a set of abilities requiring individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information."

  — ALA President Committee on Information Literacy. Final Report 1989
A person who is information literate will possess **most** of the following abilities:

1. Recognise the **need** for information.
2. Recognise that **accurate and complete information** is the basis for intelligent decision making.
3. Identify potential **sources** of information.
4. Develop successful **search** strategies.

5. **Access** sources of information, including computer-based and other technologies:
   - Evaluate information.
   - Organise information for practical application.
   - Integrate new information into an existing body of knowledge.
   - Use information in critical thinking and problem solving.

**Source**
Search Process

What are you looking for?
- I want *any* information on the Utilization of biofuel for environment sustainability

Identify keywords
- Utilization
- Biofuel
- environment sustainability

Identify search engine/databases
- FindMore@NUSL
- Academic databases eg ACM, Scopus, IEEE Xplore etc

Apply Search Techniques
- Broaden/narrow search
- Advanced search techniques

Look at results
- Apply evaluation criteria

Satisfied?
- NO

End
- Get full-text
- Subscribe to alerts

Change keywords

Change database

Change search techniques
Evaluation Criteria

- Timeliness
- Relevance
- Review Process
- Objectivity & Purpose
- Accuracy

[Diagram with pie chart showing the evaluation criteria]
Online collaboration: Scientists and the social network

Giant academic social networks have taken off to a degree that no one expected even a few years ago. A Nature survey explores why.

Richard Van Noorden

13 August 2014 | Corrected: 15 August 2014

Interactive: Why scholars use social media

In Nature's survey, a subset of scholars who said they 'regularly visited' social media sites were quizzed in detail about their activities.
Media literacy = Deconstruction of media message
Major shifts in news media
The new players

- Shrinking newsroom & lack of knowledgeable specialists
- Citizen journalists
- Newsmakers influence over first impression
- Growing cohort of vested interest and non journalistic players (companies think thanks, activists, business professionals, government, lobbyist and partisan NGOs)
- Power of celebrated journalists
Participatory Culture

• **Affiliation** – membership formal and informal in online communities centred around forms of media. - Low barrier to social and civic engagement

• **Expressions** – low barrier in creative expression, support for creating and sharing one’s creation and members believed their contributions matter
• **Collaborative problem solving**: working together in teams formal and informal to complete tasks and develop new knowledge.

Informal mentorship of passing on knowledge and experience

• **Circulations**: shaping the flow of media – sharing and dissemination of knowledge and information
Participatory Culture

3 Core Concerns

- Participatory gap
- Transparency gap
- Ethical gap
Education
Critical literacy

knowledge is mediated by cultural and subcultural systems of signs and symbols
knowledges and truths are localised and partial, contested and dynamic social constructions
• corpi of knowledge and their affiliated social fields and disciplinary communities are, like cultures and subcultures, heterogeneous and heteroglossic, multiple and diverse
The formation, production, regulation and critique of knowledge necessarily entails relations of power and capital.

There is no power relation without the correlative constitution of a field of knowledge, nor any knowledge that does not presuppose and constitute at the same time power relations.

Michel Foucault
an approach to literacy which focuses on variations in language use according to different social and cultural situations (multi-semiotic) and the intrinsic multimodality of communications.

- Luke and Freebody, *Four resources model in literacy education*
From scalable efficiency to scalable learning

21st C infrastructure: no stability in sight driven by continual exponential advances in computation

In a world of increasingly rapid change, the half life of a given stock/skill is constantly shrinking.

Stocks ===> Flows
- protecting/delivering authoritative knowledge assets
- participating in knowledge flows
- transferring old knowledge
- creating new knowledge (strong tacit component)
- needing new modes of value creation
- Scalable efficiency
- Scalable learning
Disruptive technologies

“The technology is the easy part. The hard part is figuring the social and institutional structures around the technology”.

From content to context

How do we move from the transfer model of fixed assets (authoritative knowledge and skill sets) to model that requires participation in an ever changing flow of activities and knowledge.
Playful tinkering, play of imagination

In a world of rapid change and constant flux, much of what is created is basically tacit. It has not had time to be crystallized out as explicit knowledge.
Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning. ACRL Board February 2, 2015
Key Ideas

information literacy as an educational reform movement through a richer, more complex set of core ideas.
cluster of interconnected core concepts, with flexible options for implementation, rather than on a set of standards, learning outcomes, or any prescriptive enumeration of skills.

Knowledge practices

Dispositions
metaliteracy, ...as an overarching set of abilities in which students are consumers and creators of information who can participate successfully in collaborative spaces.
• Metaliteracy demands behavioral, affective, cognitive, and metacognitive engagement … or critical self-reflection, as crucial to becoming more self-directed in that rapidly changing ecosystem.
Authority Is Constructed and Contextual
Information Creation as interactive processes vary. Resulting product reflects these differences.
Information possesses several dimensions of value
Research as inquiry is iterative... asking complex or new questions... new lines of inquiry.
• Scholarship as Conversation sustained discourse ...as a result of varied perspectives and interpretations.
• Searching as strategic exploration...nonlinear and iterative
...mental flexibility to pursue alternate avenues as new understanding develops.
Cultural competencies and social skills for new literacies

Play
Performance
Simulation
 Appropriation
Multitasking
Distributed cognition
Collaborative intelligence
Judgement
Transmedia navigation
Networking
Negotiation
• **Play** The capacity to experiment with the surroundings as a form of problem solving.

• **Performance** The ability to adopt alternative identities for the purpose of improvisation and discovery.

• **Simulation** The ability to interpret and construct dynamic models of real-world processes.
• Appropriation  The ability to meaningfully sample and remix media content.

• Multitasking  The ability to scan the environment and shift focus onto salient details.

• Distributed cognition  The ability to interact meaningfully with tools that expand mental capacities.
• **Collective intelligence** The ability to pool knowledge and compare notes with others toward a common goal.

• **Judgment** The ability to evaluate the reliability and credibility of different information sources.

• **Transmedia navigation** The ability to follow the flow of stories and information across multiple modalities.
• Networking The ability to search for, synthesize, and disseminate information.

• Negotiation The ability to travel across diverse communities, discerning and respecting multiple perspectives, and grasping and following alternative norms.
Deeper connections to the curriculum, adapting to new modes of pedagogy, linking technology-rich and collaborative spaces in libraries to learning.
NYPL Labs

An interdisciplinary team working to reformat and reposition the Library's knowledge for the Internet age. Labs combines core digital library operations (digitization, metadata, permissions/reproductions, etc.) with a publicly engaged tech, design, and outreach team focused on enabling new uses of collections and data, collaborating with users on the creation of digital resources, and applying new technologies to library problem-solving.
“The game is designed to empower young people to find their own futures by bringing them face-to-face with the writings and objects of people who made an extraordinary difference,” says McGonigal.
Embracing roles that include laboratory, museum, gallery, performance space, and civic meeting site
Crowdsourcing and collaborative projects
REMARKABLE REACH

More than 3,000 scientists and engineers told Nature about their awareness of various giant social networks and research-profiling sites. Just under half said that they visit ResearchGate regularly. Another 480 respondents in the humanities, arts and social sciences were less keen on ResearchGate.

- I am aware of this site and visit regularly
- I am aware of this site but do not visit regularly
- I am not aware of this site

**Science and engineering**

- Google Scholar
- ResearchGate
- LinkedIn
- Facebook
- Google+
- Twitter
- ResearcherID
- Mendeley
- ORCID
- Academia.edu
- BiomedExperts
- Microsoft Academic Search

**Social sciences, arts and humanities**

- Google Scholar
- Facebook
- LinkedIn
- ResearchGate
- Academia.edu
- Twitter
- Google+
- Mendeley
- ResearcherID
- ORCID
- Microsoft Academic Search
IDLE, BROWSE OR CHAT?

Nature asked a subset of regular users of social networks how they used the sites professionally. Each person was asked to tick all activities that applied. The results suggest that Facebook is not widely used professionally, that researchers on Twitter are very active and social, and that many users of Academia.edu and ResearchGate signed up in case someone wants to contact them — but are not charity themselves.

Full results are available at nature.com/j/j72p.

Each wedge in the circular charts corresponds to a question on the right. The answers are grouped by the intensity of user engagement they imply: low (green), medium (yellow) and high (blue).

**ResearchGate**
- 1,589 regular visitors
- **How do you use this site professionally?**
  - Approximately how often do you visit this site about a professional capacity?
  - How long have you used this site?
  - Extremely useful in conference settings
  - Great way to keep up-to-date on what is happening NOW in the research community
  - Very useful for job hunting
  - It is too much like Facebook — flabby forwards and such that are not scientific or related to professional issues

**Academia.edu**
- 283 regular visitors
- **How do you use this site professionally?**
  - Approximately how often do you visit this site about a professional capacity?
  - How long have you used this site?
  - Very useful for job hunting
  - It has led to invitations to influence papers/external assessments
  - I have been able to post old papers which otherwise would be inaccessible to people

**Mendeley**
- 184 regular visitors
- **How do you use this site professionally?**
  - Approximately how often do you visit this site about a professional capacity?
  - How long have you used this site?
  - Very useful for professional networking
  - It is the only useful community website for research purposes

**Twitter**
- 830 regular visitors
- **How do you use this site professionally?**
  - Approximately how often do you visit this site about a professional capacity?
  - How long have you used this site?
  - Extremely useful in conference settings

**LinkedIn**
- 389 regular visitors
- **How do you use this site professionally?**
  - Approximately how often do you visit this site about a professional capacity?
  - How long have you used this site?
  - Very useful for job hunting

**Facebook**
- 340 regular visitors
- **How do you use this site professionally?**
  - Approximately how often do you visit this site about a professional capacity?
  - How long have you used this site?
  - Facebook has been important in my professional life
  - The (relatively) active groups for professional astronomers have become vibrant discussion fora
Crowdsourcing  

Daren C. Brabham, 2013

- **Knowledge Discovery & Management** – Organization tasks a crowd with finding and collecting information into a common location and format.

- **Broadcast Search** – Organization tasks a crowd with solving empirical problems.

- **Peer-Vetted Creative Production** – Organization tasks a crowd with creating and selecting creative ideas.

- **Distributed Human Intelligence Tasking** – Organization tasks a crowd with analyzing large amounts of information.
• An online, distributed problem-solving and production model that leverages the collective intelligence of online communities to serve specific organizational goals. - *Crowdsourcing* Daren C. Brabham, 2013
Participatory Culture

3 Core Concerns

- Participatory gap
- Transparency gap
- Ethical gap
Participatory culture

• Low barrier to artistic expression and civic engagement
• Support of creating and sharing one’s creations
• Informal mentorship of passing on knowledge and experience
• Members believed their contributions matter
• Some degree of social connectedness
Participatory Culture
Multiliteracies. an approach to literacy which focuses on variations in language use according to different social and cultural situations (multi-semiotic) and the intrinsic multimodality of communications.

- Luke and Freebody, 1999, *Four resources model in literacy education*
Four resources model in literacy education *Luke and Peabody*

- Coding competence
- Semantic competence
- Pragmatic competence
- Critical competence

**Multiliteracies**. an approach to literacy which focuses on variations in language use according to different social and cultural situations (multi-semiotic) and the intrinsic multimodality of communications.
Newspaper of Records

- Newspaper of public records
  - Paper authorised by government to publish public records eg Straits Settlements Government gazette, Republic of Singapore Government gazette

- Newspaper of records by reputation
  - Archival chronicle of past events and a reference source of societal opinions at the time of printing
Life Beneath The Platforms

For over 30 years, Brunei Shell Petroleum’s offshore installations have slowly been turning into the most magnificent artificial reefs. They have been called the biggest protected marine park in the South China Sea.

An environmental study of the diversity and abundance of life beneath the platforms have been carried out by the Brunei Shell Petroleum’s Penang Sub Aqua Club, through a project called ‘Life Beneath the Platforms’.

This project has received a prestigious accolade, The Duke of Edinburgh Award in 2005. This is an example of sustainable development in action, nature and industry in harmony.
Blurring of lines

- Lines have blurred between commentary and reporting and between entertainment and news.
- Punditry overwhelming reporting
Shallowness

News media pay “too little attention to complex issues,”
Errors and sloppy reporting

- A growing number of reporters, editors and news executives also say that news reports are full of factual errors and sloppy reporting.
Credibility

• Lack of credibility is the single issue most often cited by the news media as the most important problem facing journalism.
Metaliteracy (Mackey and Jacobson, 2011)

- Metaliteracy promotes critical thinking and collaboration in a digital age, providing a comprehensive framework to effectively participate in social media and online communities. It is a unified construct that supports the acquisition, production, and sharing of knowledge in collaborative on-line communities.
Leveraging on diversity

The world came together so quickly in this network age. We have little understanding of its true diversity...Understanding how to leverage on diversity is going to be increasingly important”
Big shift and Scalable learning

- From scalable efficiency to scalable learning
- From explicit to tacit knowledge
- From individual learning to social participation
- Form emphasis on content to context
- Passive learning to playful tinkering and play of imagination
• the importance of decisions being made today about information – who has access, who controls it, how we can participate in creating it, and whether information is a public good or private property.
“Metaliteracy expands the scope of traditional information skills (i.e., determine, access, locate, understand, produce, and use information) to include the collaborative production and sharing of information in participatory digital environments... requires an ongoing adaptation to emerging technologies and an understanding of the critical thinking and reflection required to engage in these spaces as producers, collaborators, and distributors”

Mackey and Jacobson 2014