# Information literacy and access to knowledge

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### Access to knowledge Vision

"All citizens, anywhere, anytime can use any internet-connected digital device to search all of human knowledge ...... In this vision no classroom, group or person is ever isolated from the world's greatest knowledge resources"

"Digital libraries: Universal access to Human Knowledge"

US President's Information Technology Advisory Committee, panel on digital libraries, 2001



#### **Open content**

- In scholarly communication open access is well established
  - 3622 open access journals
  - 1220 open repositories
  - 22 universities (15 countries) with open access mandates
  - 27 funding agencies (14 countries) with open access mandates

Source - Peter Suber (A2K3 September 2008)



## Different models amongst open access publishers

- PLoS (Public Library of Science)
  - 6 journals + PLoS one
- BiomedCentral
  - 180+ journals, 35,000+ articles
- SciEIO
  - 550+ journals, 180,000+ articles
- Hindawi Publishing
  - 130+ journals, 250+ staff
- Medknow Publications
  - 65+ journals (fee-less)



#### Open access remains comparatively small

- Harvard library system
  - Largest and most well-funded academic library in the World
  - gives access to nearly 100,000 journals and serials
- Yale library 74,000 journals and serials
- Average ARL library 50,000 serials
- India
  - Best funded library access to 10,000 journals
- Many repositories are quite empty

Source - Peter Suber (A2K3 September 2008)



#### Online Search vs Print Browsing

- In library usage
  - Print use is declining as electronic use increases
  - Users prefer online material to print
- Search by topic in online database increasing
  - Browsing has decreased
- More comprehensive online indexing
  - Facilitates avoidance of older and less relevant literature
- Hyperlinking through online archives
  - Facilitates retrieving articles that are widely discussed and referenced



## Electronic Publication and the Narrowing of Science and Scholarship

- Evans JA (2008) Science 321:395-399
  - Using a database of 34 million articles and online availablity
  - As more journal issues come online
    - Articles referenced tended to be more recent
    - Fewer journals and articles were cited
    - More of those citations were to fewer journals and articles
  - Forced browsing of print articles
    - Stretched scientists to anchor findings in past and present scholarship
  - May accelerate consensus and narrow the range of findings and ideas built upon
    - Cf Darwin and Newton



#### **Impact**

- Scholarly impact
  - Impact Factors, Citations
- Media impact
  - Newspaper reports, TV interviews, hits on the Web
- Policy impact
  - Knowledge transfer, Know-do gap
- Social impact
  - Social determinants of health
- Economic impact
  - Patents, profits, GDP



### **Information Literacy**

- Many definitions
  - Set of skills or competencies an individual needs to participate actively in the information society
- These skills involve technological, social, and conceptual aspects as well as critical analysis e.g.
  - Accessing information resources
  - Understanding how information is produced
  - Ability to use IT based tools
  - Critical evaluating emerging innovations
- Ability to publish research and ideas electronically, in textual and multimedia forms



### Use of internet as an instrument of mass collaboration not mass self expression

#### Richard Smith BMJ blog (4 August 2008)

- Charles Leadbetter in his book We-Think: Mass Innovation not Mass Production
  - traces intellectual roots of Web 2.0
  - must use "we think" to organise the explosion of information generated by "I think."
  - "The web will work best for us" he writes, "when the power of mass collaboration orders the chaos of mass self-expression."
- Roland Barthes, the French structuralist urged "the death of the author" to allow for "the birth of the reader."
- Ivan Illich
  - People learn mostly from each other
  - information would be available everywhere anytime

#### Medpedia

- Medical version of wikipedia
- Supported by the universities of Harvard, Stanford, and Oxford



## Publication of health information for developing countries

- How to increase access to international health information for readers in developing countries
- How to increase the relevance of topics in international health to the interests and needs of developing countries
- How to increase the contribution by authors from developing countries to the global discourse on health
- How to increase the quality and visibility of health information products produced developing countries



### **Example from music industry**

- Music in Brazil
  - Largest music company in Brazil (Sony-BMG)
    - Last year produced 13 CDs of Brazilian music
  - Tecnobrega in Para
    - 100 DVDs and 400 CDs (original music)
      - Sold commercially at concerts, street vendors etc.
  - Trauma Virtual website
    - 58,000s Brazilian artists
    - 200,000 songs
- Similar phenomenon in many other countries

Source – Ronaldo Lemos FGV (A2K3)



#### **Example from Cinema**

- Nigeria (Nollywood)
  - Largest movie industry (by number of titles) in the World
  - 1000 to 2000 a year
    - Bollywood 934 films, Hollywood 611 films
  - Averge cost per film 10,000 -100,000 USD
  - Industry generates 5.5 billion USD per year
  - Employs about 1,000,000 workers
  - 24 DVD replication factories, 5 24-hr TV film channels
  - Most of the output is not in English but global demand
  - Folklore, storytelling, hospitality, respect for elders
- Brazil, 94% of films shown in cinemas are from Hollywood

Source - Charles Igwe & Ronaldo Lemos (A2K3)



#### Open business models

- More than just Open Access
  - Open content, Open code, Open standards
- Diversity of models
  - Mozilla, Linux, WordPress
  - Innovation and creativity
  - Revenue from services and customization
    - IBM gets more income from Linux services than patents
  - Free basic product, Pay for upgrade
  - Pay what you want (community donations)
    - Online music (Radio Heads)
  - Free on-line, sell physical copy
    - Nine Inch Nails 1.6 million USD from limited edition vinyl disks

