

Viewpoints on digital library issues

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Digital libraries: economics and archiving

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Digital libraries face three key issues—interaction with humans, economic viability, and the long-term archiving of contents.

Interaction

The user interfaces for most digital libraries fail in key aspects. Many assume that some form of search strategy is the best way to discover contents and do little to take context, organization or cognitive linkages into account. The help systems for these interfaces tend towards the verbose and somehow generally fail to answer the user's question. Colour, image, structure, and shape are treated as if they are purely decorative issues and not integral parts of a human information system. Cultural assumptions also permeate the interfaces with a very strong emphasis on the verbal over the visual or oral.

Economics

Gobinda Chowdhury raises the question of economics in his article on MEDLIS and for most institutions, this issue is both critical and invisible. With the exception of JSTOR,

· arguably, no contemporary digital library can
· pay its own way. This is true of conventional
· libraries too, of course, but conventional
· libraries have funding in place, while digital
· libraries tend to subsist from project to
· project and slide slowly into technological
· obsolescence, once the project funding ends.
· OPACs, in so far as they could be considered
· digital libraries, escape this fate because they
· have become so integral to conventional
· library operations, and this may be one reason
· why OPACs continue to expend to support
· more digital library functions.

Archiving

· The problem of data loss is well known and
· broadly discussed. The solution does not lie
· in finding a long-lasting medium but in the
· timely copying of digital objects. With
· enough copies and sufficient distribution,
· digital objects can in theory exist indefinitely
· – a distinct advantage over any purely
· physical medium. This form of archiving
· raises issues about integrity, authenticity, and
· readability, which need to be solved and
· perhaps redefined over a period of time.
· Above all, digital archiving needs to emerge
· from the phase where multiple systems claim
· to handle all problems. Rigorous and
· reproducible testing needs to become a key
· component of any archiving program.

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Digital libraries: European approaches

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2008 is the European Year of Intercultural Dialogue. In 2006, the European Commission set up a Media Literacy Expert Group with the aim of analysing and defining media literacy objectives and trends, highlighting and promoting good practices at European level, and proposing actions in the field. The analysis and assessment of the European Commission's previous activity (for instance, media literacy projects funded within the eLearning programme) were also discussed and examined. The work of this group was used for the communication 'A European approach to media literacy in the digital environment' by the Commission of the European Communities in December 2007 (COM(2007) 833 final).

A study on 'Current trends and approaches to media literacy in Europe' was commissioned in May 2006 (I was in the steering committee). It maps current practices in implementing media literacy in Europe, confirms the tendencies that emerged in the public consultation, and recommends some measures to be implemented at community level to help foster and increase the level of media literacy. Finally, it briefly outlined the possible economic and social impacts of an EU (European Union) intervention in this field.¹

The concept of digital literacy in a broad sense is a way of thinking but it can also be understood as complementary to the concept of media education and even synonymous with media literacy. Digital literacy as media literacy aims to develop both critical understanding of, and active participation in,

the media. Digital and media literacy is about developing people's critical and creative abilities. Using a computer requires diverse and complex knowledge. It also introduces the individual and humanity to new contexts, which demands mental, intellectual, profound, and complex changes. In essence, digital literacy is a complicated process that consists of acquiring a new tekne, ability of art or craft. Creativity and culture become essential raw materials for the knowledge economy.

The introduction of eLearning requires new competencies. A competency is an area of knowledge or skill that is critical for producing key output. The competencies can be grouped into generic categories such as general, management, distribution method, and presentation method, which help illustrate the relationship among certain competencies.

The definition on digital competence as from the key competencies of life long learning recommendation of the EU is as follows.

Digital competence involves the confident and critical use of IST (information society technology) for work, leisure, and communication. It is underpinned by basic skills in ICT (information and communication technology): the use of computers to retrieve, assess, store, produce, present, and exchange information, and to communicate and participate in collaborative networks via the Internet.

The use of ICT is quite a basic skill. We think it is about a combination of basic ICT skills, innovation ability and domain-specific knowledge (such as education) which makes innovations happen. The question is what are the real skills one needs in eSociety, where all

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¹ (http://ec.europa.eu/avpolicy/media_literacy/index_en.htm)

the services and commerce are web based? Those skills differ quite a lot from the 'old' world's ICT basics.

We are facing a major educational invention in technology after phonetic alphabet, the and printing. It is telematics, which means computers connected to networks. There is a need for a new global strategy for promoting the role of ICT in different fields of the working life of the emerging knowledge societies and developing educational and training approaches on how to learn the use of ICT and become digitally literate in the spirit of sustainable development.

Traditional alphabetical competencies include basic operational competencies related to texts, psycho-cognitive competencies related to alphabetic signs, basic reading and writing, basic mathematical and textual comprehension, and socio-communicative competencies. Digital competence includes basic operational competencies related to screens and computers, psycho-cognitive competencies related to computer signs, basic computer competence,

interactive media and on-line competence, and global socio-communicative competence associated to cyberspace.

Digital literacy is a fundamental element of the knowledge society. In Europe, it is now seen as a right for all. Ensuring that everyone has the necessary skills, competences, experiences, and attitudes to make effective use of ICT is probably the biggest challenge of all. The illiterates of the 21st century are not those who cannot read and write but those who cannot unlearn, learn, and relearn.

It is widely understood that the most important skills of the future would be communication skills. Today everyone is able to access vast amount of data without a mediator. Critical thinking skills are needed as a productive and positive activity. Critical thinkers see the future as open and malleable, not as closed and fixed. They are aware of the diversity of values, behaviour, social structures, and artistic forms in the world. Critical thinking is a process, not an outcome, and it is emotive as well as rational.