http://www.learned.co.uk

learned information
Learned Information Europe Ltd

Online & CD-ROM review

THE INTERNATIONAL JOURNAL OF ONLINE, OPTICAL & NETWORKED INFORMATION

Edited by Martha E. Williams
and Alison McNab (Europe)

December 1998 Vol. 22 No. 6

Commercial development of the Internet and WWW in Eastern Europe
New database products in Business and Law
Virtual Community

1353-2642(199812)22:6;1-T

COMPUTER AND INFORMATION LITERACY: CHALLENGES FOR THE MODERN INFORMATION PROFESSIONAL AT THE ADVENT OF THE XXI CENTURY

V. Sreenivasulu

Librarian, National Institute of Agricultural Marketing, Jaipur, India

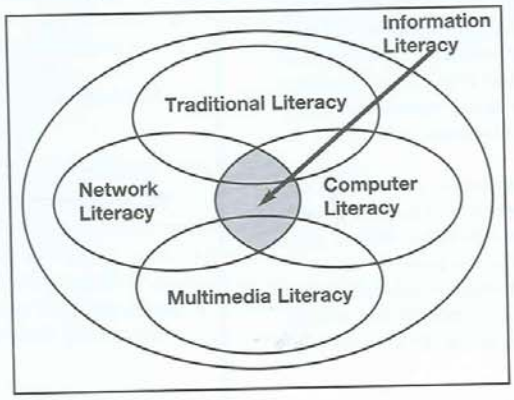
[Editor's note: this contribution is a presentation given by the author at the International Federation for Information and Documentation Education and Training Pre-Conference held in Jaipur, India, 12-13 October, 1998. The complete paper in the FID/ET Proceedings was co-authored by Dr. S.P. Sood and Smt. Prabha Krishnan. The matrix showing the knowledge base and the required computer and information literacy skills is recommended for use as a checklist by all institutions involved in education for library and information science].

In order to understand the ideas presented, some definitions will be helpful. **Computer and information literacy** is the level of expertise and familiarity with computers. It generally refers to the ability to use applications rather than to program. People who are sophisticated users of computers who are very computer literate are sometimes called **power users**. The modern information professional is typically someone who has considerable experience with computers and utilizes the most advanced features of information technology application in accessing information world-wide.

Literacy concepts that need to be understood are the following:
Computer literacy - an extension of traditional literacy which requires that individuals can complete basic tasks on a computer such as computer software packages; library software packages; CD-ROM databases; online databases; and networked information on the Internet.
Information literacy - the ability to locate, process, and use information effectively. Individuals are equipped to take advantage of the opportunities inherent in the global information society. This means that a person must be literate with both print and electronic formats. Information literacy should be a part of every student's educational experience.
Media literacy - this expands the notions of literacy to include the powerful post-print media that dominates our informational landscape; helps people understand, produce and negotiate meanings in a culture made up powerful images, words and sounds. A **media literate** person (everyone should have the opportunity to become one) can decode, evaluate, analyze, and produce both print and electronic media.
Network literacy - this includes **knowledge** which means being aware of the range and uses of global networked information resources and services; understanding the role and uses of networked information in problem solving and in performing basic life activities; and understanding the system by which networked information is generated, managed and made available. The **skills** needed are the ability to retrieve specific types of information from the network using a range of

information discovery tools and manipulation of electronic and networked information by combining it with other resources. In addition the ability to enhancing information to increase its value in particular situations and use of networked information to analyze and resolve both work-related and personal decisions and obtain services that will enhance the quality of life are also required.

The **knowledge** and **skills** identified should not be seen as supplemental to traditional literacy but rather as part of a reconceptualized notion of literacy in an electronic society. These **skills** and **knowledge** should be the targets of the modern information professional in order to achieve network literacy. The Venn diagram developed by McClure in his article on



network literacy (*Information Technology and Libraries*, June, 1994, p.117-119) is a good illustration of literacy concepts that shows that the definition of information literacy comes where the concepts of traditional literacy, network literacy, computer literacy, and multimedia literacy overlap.

The table overleaf illustrates the **knowledge base** and the requisite **computer** and **information literacy** needed for the modern information professional in the 21st century.

Conclusion:

Modern information professionals will be the future **cybrarians**, as communication and the transfer of information in the 21st century will be via cyberspace. The rising usage of electronic communication media and world-wide networking will make the role of the future modern information professional and library and information science personnel more challenging. They will require the unique competencies expected from them including in-depth knowledge of print and electronic information resources in specialized areas and the design and management of information services to meet the strategic information needs of individuals as well as groups.

As we move towards the millennium, information professionals are facing at least three major paradigm shifts - the transition from paper to electronic media; the increasing demand for accountability; and new forms of organization. All these shifts are related to a combination of factors such as global competition; new computing and communication technologies; and the perceived need to measure the productivity of knowledge and service workers.

The competency of modern information professionals is represented by different sets of skills, attitudes and valued that will enable them to become cybrarians who will work as information or knowledge workers as well as communicators.

EXIT THE LIBRARIAN - ENTER THE CYBRARIAN/DIGITAL LIBRARIAN.

The author

V. Sreenivasulu

V. Streenivasulu is a librarian at the National Institute of Agricultural Marketing in Jaipur, India. Previously he worked in three British Council libraries in India and served as technical assistant at the Indian Institute of Management, Bangalore. His MLISc is from the Sri Venkteshwara University, Tirupati.

KNOWLEDGE BASE	REQUIRED COMPUTER AND INFORMATION LITERACY
Systems software PC packages Application software Library packages Data administration	Mastering authoritatively PC packages such as MS Office, Unix OS, Wordstar, Windows, WordPerfect, dBase. High degree of computer literacy in PC packages. Literacy in library packages such as LIBSYS, CD/ISIS, TECHLIBplus, etc.. DBMS, ORACLE, RDBMS.
INTERNET WWW Email	Navigation, browsing, filtering. Retrieving and accessing, digital document analysis. Searching network databases in a number of sources and Web sites. Creating Home Pages, content conversion, downloading techniques Electronic publishing, electronic messaging
NETWORKS	Archiving digital documents, locating digital sources, print techniques. Digital presentation and storage, connectivity skills, inter-operability. Searching literacy of electronic information efficiently includes full-text.
CD-ROM databases truncation.	Searching skills: indexes, abstracts against keywords, Boolean logic. Literacy to install CD-ROMs. Interfacing on-line and off-ramps, twists and turns of electronic information
Online databases OPACs Library automation	Creating and maintaining Online Public Access Catalogues. Knowledge of library automation Design and development of databases.
MULTIMEDIA Multimedia Integration Tech Hypermedia/Multimodels sys Mul. Network protocols	Multimedia indexing. Searching, retrieval of text, images, other multimedia objects. Image processing, object oriented processing speech recognition. Advanced processing capabilities of exploiting digital medium. Creating, maintaining indexes and OPACs. Interactive digital communications an visualizations.
Digital Information Systems Digital Technology (DT) DT Media Processing Hardware, Equipment Tools Telecommunications	Input of data resources. Processing data into information. Output of information products, storage of data resources. Desktop publishing, monitoring system. Maintenance of modems, telephone links, system analysis. Switching techniques.
Virus Protection Security of Data	Virus scanning packages. Comprehensive scanning of virus, adhering.
Training support	Educating and training the new users, explaining how to use electronic models.