EAHIL WORKSHOP
Kraków, Poland
12th–15th of September 2007

LIBRARIANS AND INFORMATION LITERACY IN THE HEALTH SCIENCES: A BIRD'S EYE VIEW

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Definition of Information Literacy

A broad conception defines information literacy in terms of ***a set of competencies that an informed citizen of an information society ought to possess to participate intelligently and actively in that society*** (AASL: "Information power…", 1988).

The American Library Association's (ALA) Presidential Committee on Information Literacy, Final Report states that, "***To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information"*** (1989).

History of the concept

The related term ‘Information Skills’ was first introduced in 1974 by Zurkowski to refer to people who were able to solve their information problems by using relevant information sources and applying relevant technology (Zurkowski, 1974).

Since then, in the 70’s and 80’s a number of events in the USA discussed the growing roles of librarians in the information literacy process.

History of the concept

A seminal event in the development of the concept of information literacy was the American Library Association's Presidential Committee on Information Literacy in 1987:

- to define information literacy within the higher literacies and its importance to student performance, lifelong learning, and active citizenship;
- to design one or more models for information literacy development appropriate to formal and informal learning environments throughout people's lifetimes;
- to determine implications for the continuing education and development of teachers.

History of the concept

In 2000 the ACRL (Association of College and Research Libraries) established *Information Literacy Competency Standards for Higher Education:*

1. "*Information literacy forms the basis for lifelong learning. It is common to all disciplines, to all*
2. *learning environments, and to all levels of education.*
3. *It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their own learning*"

The Standard

An information literate individual is able to:

- *Determine the extent of information needed;*
- *Access the needed information effectively and efficiently;*
- *Evaluate information and its sources critically;*
- *Incorporate selected information into one's knowledge base;*
- *Use information effectively to accomplish a specific purpose;*
- *Understand the economic, legal, and social issues surrounding the use of information, and access and use information ethically and legally.*

Europe & Information Literacy

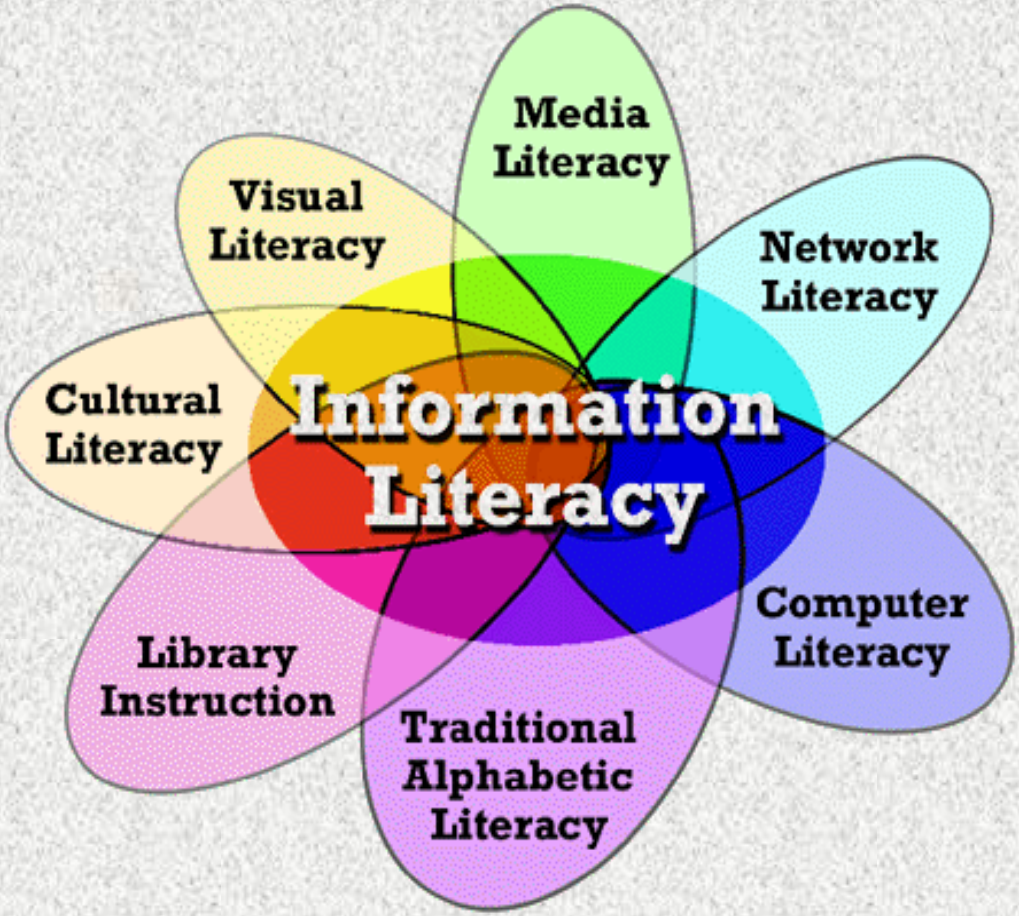
In European countries the information-literacy movement has evolved from precursors such as library instruction, bibliographic instruction and user/reader education.

In 2000 the European Commission's draft document *A Memorandum on Lifelong Learning* using the term "digital literacy" appeared. It launched a European-wide debate for a comprehensive strategy to implement lifelong learning.

A Memorandum on Lifelong Learning

- New basic skills especially IT & social skills, foreign languages, technological culture, entrepreneurship;
- Raising levels of investment in human resources;
- Innovation in teaching and learning;
- Valuing learning;
- Guidance and information;
- Bringing learning closer to home.

Information Literacy



Other terminology used

- informacy
- information empowerment
- information competence
- information fluency
- information mediacy
- information handling skills
- information problem solving
- information mastery

Global Digital Divide

Along with information overload, another problem to be tackled at the global level is digital divide, which is less and less thought in terms of “have” and “have-not”. Information literacy is recognized as the key factor in bridging the divide, because the emphasis is not on “information” as such, but rather on “access to information”.

"Hole in the Wall" Experiment, India

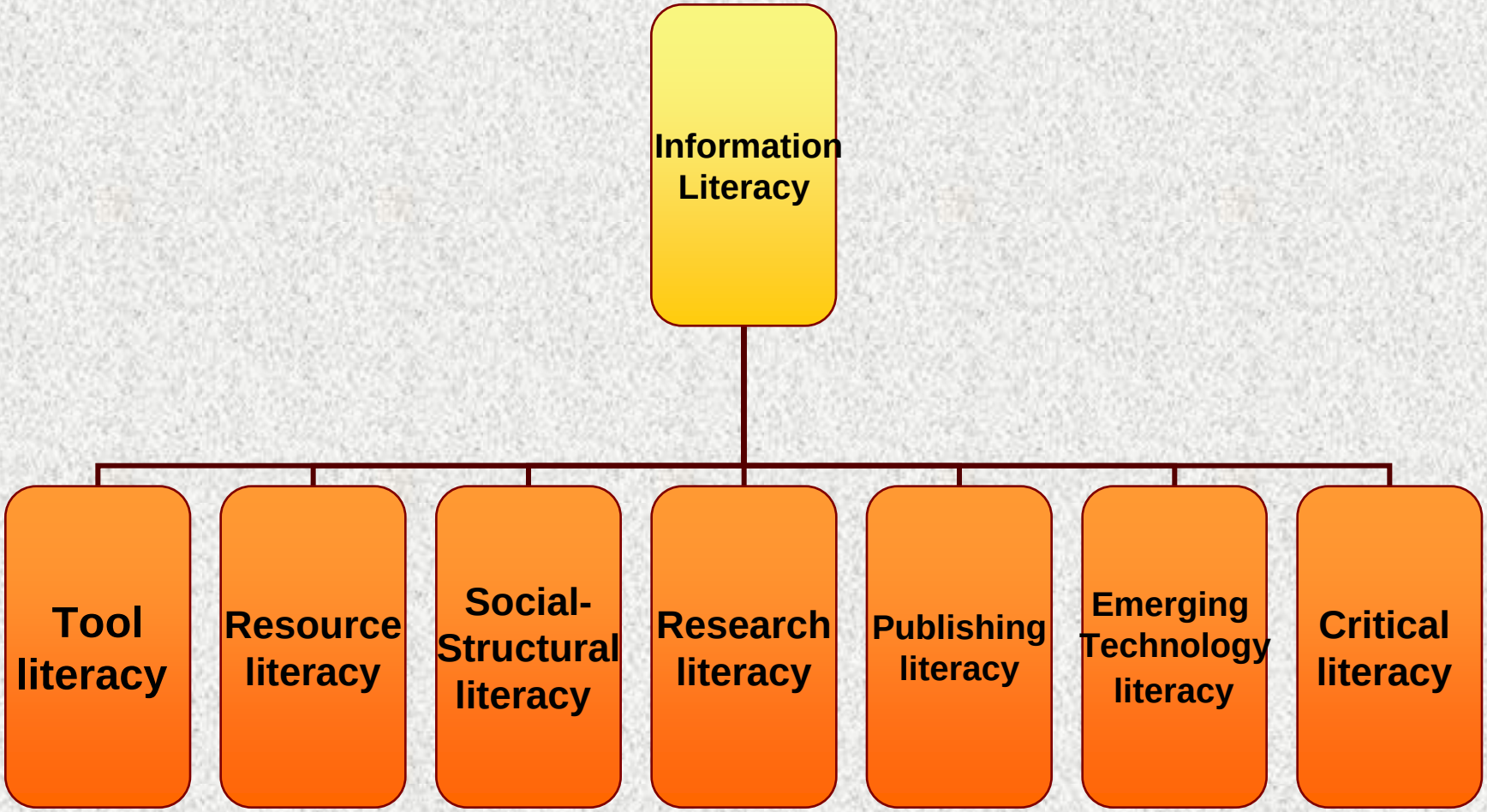
In 2000, the Government of New Delhi, in collaboration with an information technology corporation, established a project, known as the "Hole-in-the-Wall" experiment, to provide computer access to the city's street children.

An outdoor five-station computer kiosk was set up in one of the poorest slums of New Delhi. The concept was called *minimally invasive education* whereby children were allowed unfettered 24-hour access, to learn at their own pace and speed, rather than tie them to the directives of adult organizers or instructors.

"Hole in the Wall" Experiment, India

- The program was hailed by researchers and government officials alike as a ground-breaking project that offered a model for how to bring India's and the world's urban poor into the computer age.
- However, the educational reality was somewhat different. The Internet access was of little use since its functioning was seldom checked. No special content was provided in Hindi, the only language the children knew. Children did learn to manipulate the joystick and buttons, but almost all their time was spent drawing with paint programs or playing computer games.

Specific Aspects of Information Literacy



Health Information Literacy…

…. to distinguish from **"health literacy"** which is:

- *the ability to read, understand, and act on health information. [Pfizer, 2002]*

- *the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions.*

  [Healthy People 2010, 2000]

Health Information Literacy…

MLA Working Definition:

Health Information Literacy is the set of abilities needed to:

- *recognize a health information need;*
- *identify likely information sources and use them to retrieve relevant information;*
- *assess the quality of the information and its applicability to a specific situation;*
- *analyze, understand, and use the information to make good health decisions.*

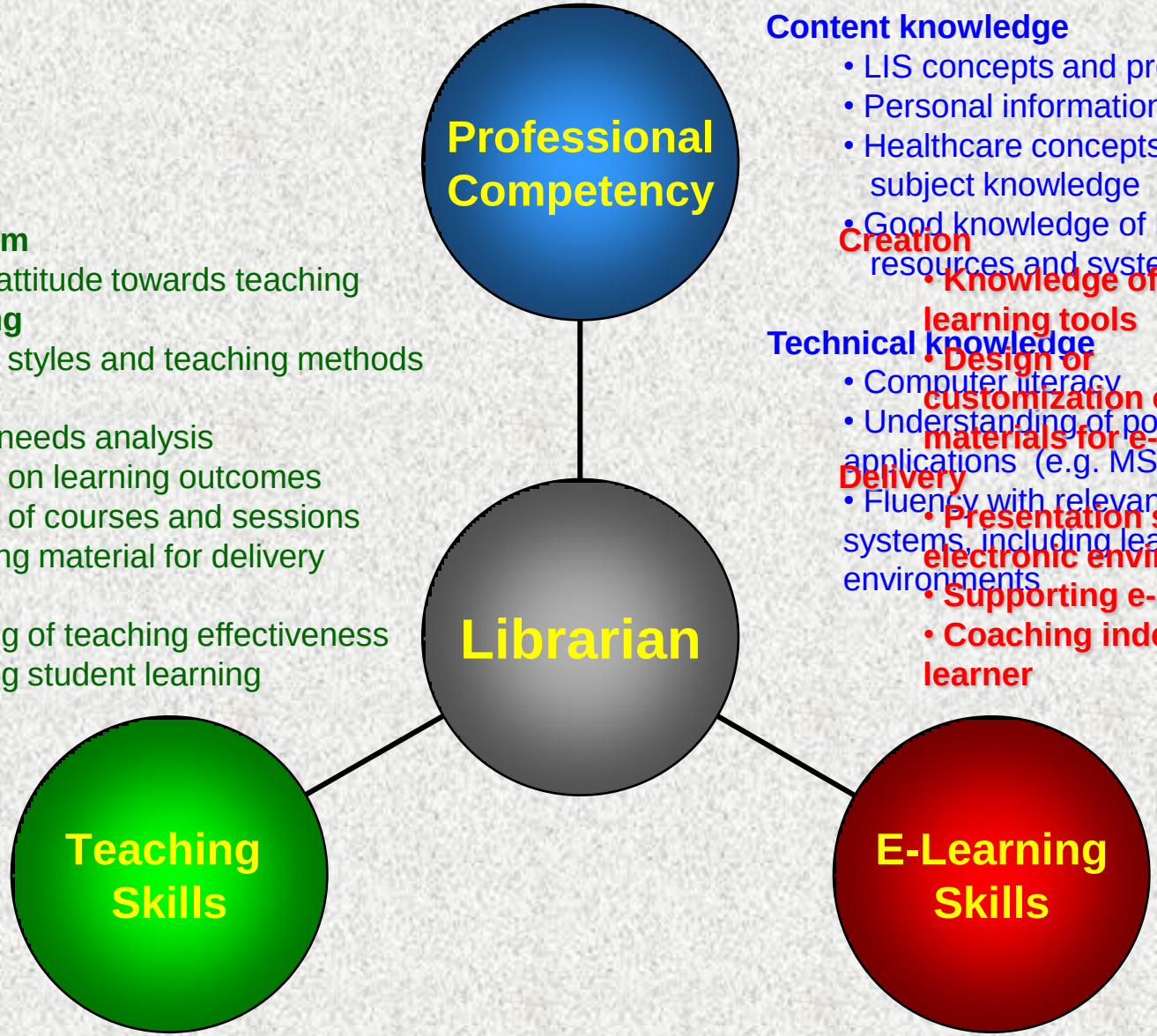
Health Information Literacy Development

The process of information literacy development, no matter what we call it (user education, library instruction etc.), is a very complex one, involving several factors and players. The process can only be modeled taking into account the features and interactions of all these factors.

Information Literacy Development
– Librarians -

- Librarians have to be information literate themselves, with a high degree of professional competence; this will make them confident in their abilities to teach, assist and advise others;

- Lyn Robinson *et al*., in their article "Healthcare librarians and learner support: a review of competences and methods", published in the ***Health Information and Libraries Journal*****,** vol. 22, supplement 2, December 2005, proposed a list of competences:



Professionalism
- Positive attitude towards teaching

Basis of training
- Learning styles and teaching methods

Design
- Training needs analysis
- Deciding on learning outcomes
- Planning of courses and sessions
- Structuring material for delivery

Evaluation
- Assessing of teaching effectiveness
- Assessing student learning

Content knowledge
- LIS concepts and processes
- Personal information literacy
- Healthcare concepts, vocabulary, subject knowledge
- Good knowledge of relevant resources and systems

Technical knowledge
- Computer literacy
- Understanding of popular applications (e.g. MS Office)
- Fluency with relevant information systems, including learning environments

Creation
- **Knowledge of e-learning tools**
- **Design or customization of materials for e-learning**

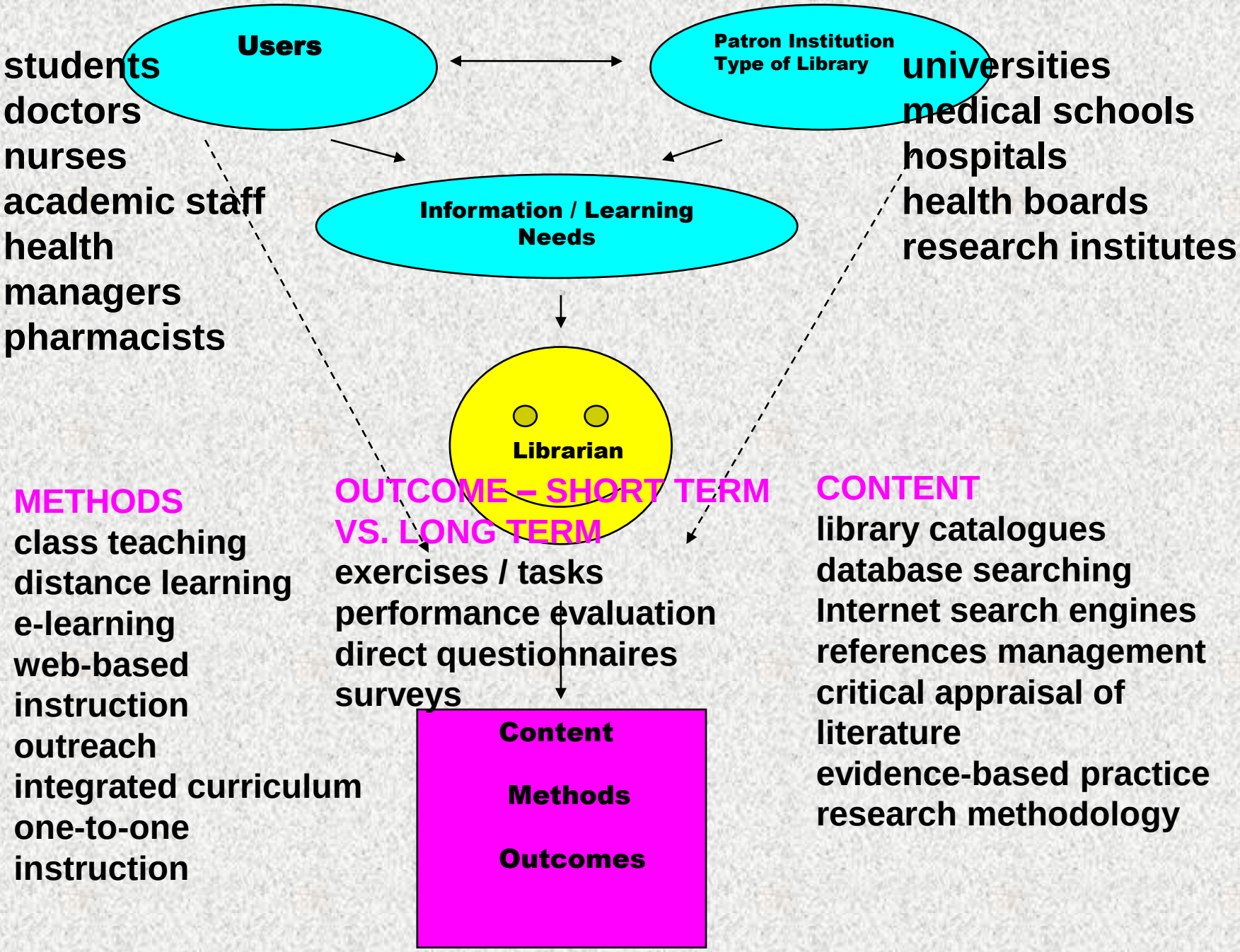
Delivery
- **Presentation skills for electronic environment**
- **Supporting e-learning**
- **Coaching independent learner**

Users

Users belong to a variety of health professions or are-to-become health professionals, with an even wider range of information literacy knowledge and skills.

However, there will always be a difference between instructing senior doctors or first year students in using PubMed for instance.

The younger generation already know a lot about Blogs, Wikis, Podcasts etc. For them studies have gone even to the extent to affirm that Google Scholar is a tool for developing information literacy.



students
doctors
nurses
academic staff
health
managers
pharmacists

universities
medical schools
hospitals
health boards
research institutes

METHODS
class teaching
distance learning
e-learning
web-based
instruction
outreach
integrated curriculum
one-to-one
instruction

OUTCOME – SHORT TERM VS. LONG TERM
exercises / tasks
performance evaluation
direct questionnaires
surveys

CONTENT
library catalogues
database searching
Internet search engines
references management
critical appraisal of
literature
evidence-based practice
research methodology

Cluj University of Medicine and Pharmacy

In 1997 user training activities became an integral part of library activities. There were two main reasons for this:

- The advent of **PubMed**, which made MEDLINE searchable from anywhere, made user training and especially the development of independent searching skill a necessity.
- **Internet**, made available for the public on library workstations which increased requests from the users for training.

Cluj University of Medicine and Pharmacy user training activities

Training sessions were organized according to a fixed timetable twice a week, one session in the morning, the other in the afternoon/evening; the duration of a session was two hours.

Problems:

- They were under-attended because of users' lack of time;
- Often users were late therefore disrupting sessions.

Therefore, training sessions were often frustrating for all parties involved: users who were on time, those who were late, and trainers.

Solution - Integration of user education into the university curriculum

In 1999 the Senate approved an optional course of Introduction to Medical Documentation for 1st year undergraduate students, which included 28 hours of lectures and practical seminars.

The course was very popular; about 50 students enrolled each year

Integration of Medical Documentation in postgraduate courses

In 2001 a compact intensive module of 60 hours, over a period of 2 weeks was proposed and included in the postgraduate courses offered by Cluj Medical university. This course was not free, but paid by the participants. It gave the participants continuing education credit points, as established by the Ministry of Health.

The course included the following additional themes from the First Year course:

- Evidence Based Medicine – Cochrane;
- Guidelines – definition and searching for EBM;
- NLM databases;
- Other specialized databases;
- Advanced Internet searching.

Integration of Medical Documentation in the Doctoral School

In 2005 *Medical Documentation* became one of the 6 compulsory courses of the Doctoral School. The course comprises 20 hours lectures and seminars / practical work and represents 30 credit points out of a total of 150.

The course for PhD students does not include the introductory elements, except PubMed and MeSH, and it kept the themes added for the Postgraduate course and added others, such as:

- Science Citation;
- The Impact Factor;
- Other ISI databases;
- Publication ethics – copyright;
- Plagiarism;
- Accurate citing etc.

Web-based, Distance Learning

In 2006 the first step toward web-based, distance learning was made. All the courses included in the Doctoral 1st year curriculum were made available online, using an interactive package designed by the Cluj computing services, called ImaTest:

http://imatest.graffco.ro/admin/

Results were poorer than in the previous year – even the final satisfaction questionnaire evidenced less enthusiasm as compared to the previous year.

Problems were:

- The online content is just a “pale” reflection of the lecture;
- Not all the exercises, mostly problem-solving, yield themselves to the ImaTest frame;
- Attendance has been poor – students believed that participating in the course and seminars was superfluous, given that the course was available on the Internet.

Why ?

? lack of experience with designing online content
? poor motivation of the students
? limitations of the online package used

One thing is certain: there is no magic success formula in designing an information literacy program. It is dependent on too many variable factors.

It is the librarian's competence and knowledge that will balance all these variables and choose the best solution.

"A review of the research relating to instruction and learning in the modern media centre reminds us that to accept responsibility for teaching library and information skills is not for the faint heart"

Information Literacy and Information Skills Instruction:
Applying Research to Practice in the School Library Media Centre
2nd ed., 2004
by Nancy Pickering Thomas

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Thank you !

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